The Precarity of Nonhuman Livelihoods:
Rethinking Speciesism in a Genocidal State

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Abstract

This thesis explores wildlife-human relations in the United States during the years of the Trump Administration. It is a multispecies, multi-sited ethnography that focuses on the gray wolf (*Canis lupus*), which repatriated much of the western U.S. after 66 wolves were reintroduced to Yellowstone National Park and Central Idaho in 1995-6. I chose the wolf for its ability to evoke strong reactions from most humans. This provided insight into wildlife-human relations in a myriad of legal, social, economic, and political settings. Discourse about wolves was rarely about a particular individual, or pack. Wolf (as a species) was commonly reduced to Euro-American symbolic portrayals of myth, warrior, or villain in popular discourse. Euro-American culture and folklore dating back 500 plus years continue to permeate wolf discourse, media, and ecosystem governance today, and is intertwined with the colonization of the western U.S. in the mid-1800s. I explicate how human exceptionalist views, where ideals of 'Nature', or 'wild' materialized in the subjugation of subaltern wildlife.

The key theoretical frameworks that informed this study include social-ecological systems, posthumanism, postcolonial studies (particularly subaltern and decolonial ecology), environmental anthropology, biopower, historical ecology, Science, Technology, and Society (STS) studies, compassionate conservation, and multispecies justice. Methods included common multispecies ethnography approaches (e.g., participant observation, semi-structured interviews, archival data, etc.), as well as a unique choice to leverage my position as a tenure-track faculty to train my students as research assistants (see Chapter 3). Primary research questions included: what are humans' moral obligations to nonhumans (flora and fauna), and how do we coexist with nonhuman 'Others' given the contemporary ecological crisis? Interviews were conducted over 15 months from 2019-2021. The primary study site location was the Cascadia Bioregion (present-day Oregon and Washington). Due to Colorado Proposition #114, a ballot initiative to reintroduce wolves to the State by the end of 2023, I moved to Colorado to conduct the second half of the study. Wolf discourse proliferated leading up to the vote, which passed on 2 November 2020.

Nearly all interlocutors discriminated against at least one species (what I call speciesism), where Euro-American sociocultural dynamics affected how humans speak for and about nonhumans in the abstract. This actualized in several key themes that emerged from the study and included nonhuman animal genocide, that biopower relations reproduce colonial dominion over subalterns, and how the ethical decisions of scientists have implicit and explicit consequences for nonhumans. These findings, coupled with my positionality that all nonhumans are deserving of rights, welfare, and agency, situate this study as one of deconstructing biopower relations in multispecies relations. I build on the emerging fields of compassionate conservation and multispecies justice to challenge how knowledge is produced, particularly in conservation biology, and how that knowledge reinforces biopower relations over nonhumans, where billions of nonhumans are killed worldwide annually. Throughout the thesis, I develop the core argument: *all* nonhumans deserve equal rights, welfare, and agency as humans – legally, and ideally socially. My argument culminations in Chapter 9, where I call for nonhuman legal personhood and a new paradigm of ecological rehabilitation.

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Statement on Integrative Thesis Format and Collaborations

This thesis is an integrative thesis, in that it includes chapters that are either published or under review. Submitted manuscripts are included as appendices as some changes were made to make the thesis more coherent. I published Chapter 4, *Wolf Ecotourism: A posthumanist approach to wildlife ecotourism*, as a sole-author in Routledge's *Handbook for Ecotourism*, edited by Prof. David Fennell (2021). Chapter 8, *Posthumanist Pluralities: Advocating for nonhuman species' rights, welfare, and agency in ecosystem governance*, is currently under review in the book-style journal, *Advances in Ecological Research*. I was the primary author and accounted for approximately 90-95% of the writing in Chapter 8. However, as I detail in Chapter 3, my supervisors and research assistants earned authorship based on McNutt et al.'s (2018) guidelines for authorship. My research assistants were made up of 17 students and my wife, Dr. Jennifer Thomsen. Chapter 3 fully explains how I leveraged my position as a tenure-track academic faculty (staff) to conduct the research and train my students, all while learning from my supervisors. Though students contributed to minor portions of the writing in Chapters 5, 7, 8, and 9, I wrote approximately 95-98% of the total word count in this thesis. I gained permission from each individual to include their work. They will be credited on any publications that arise from their efforts to this work as appropriate.

Introduction

Throughout North America's history of intense persecution of wolves, the animal has been a powerful barometer of changing attitudes toward the natural world.

- Kellert et al. 1996: 980

What image do you conjure when you hear the word wolf? Do you recall stories of the 'big bad wolf' from your childhood that were immortalized in *Little Red Riding Hood* or *Peter and the Wolf*? Or were you encultured to alternative perspectives from John Scieszka and Lane Smith's *The True Story of the Three Little Pigs!*? Wolves (*Canis lupus*) engender polarizing responses from humans, yet most people have never met one, even those confined to captivity. On one side of the wolf imagery spectrum, a majestic creature symbolizes Western ideals of 'wild' and represents why 'Nature' should be protected. But was does it mean to be wild? On the opposite side, 'devil eyes' pierce imaginations to represent evil, evoking a visceral reaction to protect your loved ones and your livelihoods. But why does this fear exist? How can those inundated with Euro-American culture and folklore overcome the relentless subliminal messaging where wolf is reduced to myth, warrior, or villain in nearly any T.V. show? 'He's a wolf in sheep's clothing'. 'They threw her to the wolves'. 'She was raised by wolves'[1]. In contemporary storytelling negative wolf depictions are analogous to product placement for their ubiquity and subconscious-targeted messaging. How we speak for and about one another contributes to the lived experiences of particular beings, no matter the species. As one interlocutor of this study quipped, 'the wolf doesn't have a Winnie the Pooh'. In this dissertation, I illustrate the effects of speaking for wolves, and wildlife generally, in the abstract. I show how human sociocultural dynamics produce state

[1] This was originally seen as a positive correlation to R. Kipling's *The Jungle Book* but has since morphed to signify 'uncivilized' or improper.

sanctioned violence, and what animal rights activists, critical animal studies, feminist animal studies, and (some) postcolonial studies scholars consider 'murder' and 'genocide' of nonhuman 'Others' (see Antonio 1995; Donovan & Adams 2007; Roy, 2015; van Sittert 2016).

Animal studies has sought to redress human exceptionalism within biopolitics, as Stanescu (2013) states that "the line drawn between the human animal and other animals is one of the, if not the most, important divisions in the biopolitical terrain" (2007: 135). I unpack anthropocentric terms employed to justify and distance us as humans from the mass killing of nonhuman animals, which I find myself opposed to (see Chapter 8). I also present a pluralistic posthumanist approach to equitably attend to the rights, agency, and welfare of particular humans and nonhumans who are often marginalized in biopower relations (see Chapters 4, 5,7, 8, and 9) (see Holloway et al. 2009; Vint 2010; Clark 2012). In animal studies, biopower considers the effects of institutional governance over nonhuman bodies, such as implementing nets to prevent Lorikeets from flying away at the Aquarium of the Pacific in the U.S. (Lloro-Bidart 2014). "This new political relevance of the body forces us to confront our continuity with other animals, and to rethink the nature of governance in a biopolitical era in which power acts upon bodies and forms subjects through this action" (Vint 2010: 444). I consider the role of biopower and biopolitics in entangled multispecies relations and more specifically in multispecies ethnography. In her article, *Beyond Multispecies Ethnography: Engaging with violence and animal rights in anthropology*, Helen Kopnina critiques anthropology for its mainstream defense of human exceptionalism when prioritizing human interests over those of nonhumans (2017). She details the exorbitant amount of nonhuman animal deaths at the hands of humans annually.

> Empirically, the mere scale of use, abuse, and dispossession of nonhumans has only intensified as human population and consumption increased. It has been estimated that every year about 100 million vertebrates are globally experimented on (Taylor et al., 2008). In the United States, 1 million animals (excluding rats, mice, birds, reptiles, amphibians, and animals used in agricultural experiments), and an estimated 100 million mice and rats are used in medical experiments (US Department of Agriculture, Animal and Plant Health Inspection Service, 2015; PETA)…In comparison to those used in research, over 1800 times the number of pigs are consumed for food, with 340 chickens consumed for each animal used for medical testing (National Agricultural Statistics Service, 2016). More than 9,000,000,000 farm animals in the United States are used annually to produce meat, dairy, and eggs (Humane Society) …for biodiversity extinction rates, statistics widely vary, but the WWF estimates that the loss of species is between 1000 and 10,000 times higher than the natural extinction rate (WWF) (2017: 338-339).

Kopnina challenges anthropology's, and all human-dominated multispecies relations that favor the institutionalization and cultural relativism of violence, suffering, and killing of nonhumans, even amongst traditionally marginalized peoples and their cultures. Her appraisal of multispecies ethnography concludes that anthropology must embrace the same political activism for nonhumans as they do for other marginalized groups. "The well-meaning but essentially apolitical academic excursions into multispecies ethnography may need to address multispecies injustice, suffering, and unidirectional violence. An ethical vigor and clear commitment characteristic of the tradition of social advocacy in anthropology is urgently needed" (2017: 351). I attempt to answer her call for action in this dissertation and embrace the controversial and uncomfortable tensions between humans concerning the rights, agency, and welfare of nonhumans, as they cannot speak for themselves in human verbal language (Taylor and Twine 2014). To begin, I share what inspired me to study wolves from a sociocultural lens, then detail the existential crisis they face, before outlining my thesis: I argue that the production of knowledge is entangled with moral choices and coupled sociocultural dynamics that manifest in the habitual suffering and death of wildlife. A more careful examination of applied animal ethics and biopower in

ecosystem governance is necessary to foster wildlife-human coexistence and stave off species extinction.

Why Study Wolves?

In autumn 2014, I first met a pack of domesticated wolves in a southern California wolf sanctuary. The nonprofit's primary focus was to educate humans about wolves, and guests were able to pet them like they would any domesticated dog (*Canis lupus familiaris*) while learning about their ethology. Though I unpack the ethics of this model in Chapter 4, it was infectious to experience a breeding female's incessant kisses. My curiosity for the species was solidified by my 35-minute-long grooming session and I fantasized that this was my initiation into the pack. I wanted to learn everything I could about them, so when I finally had the opportunity to go from an interested, self-proclaimed citizen scientist to a full-fledged academic, I embarked on a 15-month multi-sited, multispecies ethnographic study of wolf-human relations during the years of the Trump Administration. This study's original intent was to learn what factors facilitate or inhibit wolf-human coexistence, at least in a North American context, and to understand how sociocultural dynamics influence the perception of wolves against the backdrop of the ecological crisis.[2] However, as the study progressed it was evident that wolf-human relations were rarely governed by any tangible interactions with individuals or packs of wolves, and was instead an exercise in the human capacity to manipulate symbols, exercise power, and discriminate against non-human species (what I call "speciesism"). Throughout this dissertation, the biological term for 'wolf'

[2] Earth has entered its sixth mass-extinction epoch, in what geologists deem the 'Anthropocene', and is characterized by humans' unsustainable activities that are believed to cause the current ecological crisis that is punctuated by biodiversity loss and species extinction (Crutzen 2002, 2016). Climate scientists have studied the wide array of contributing factors (e.g., greenhouse gas emissions, livestock production) and its results (e.g., changing weather patterns).

is used without an article to signify the species rather than a particular wolf; 'wolves' refers to a group of actual individuals rather than the species.

Wolf Data: The Return of Bounties and Systematic State-Sanctioned Murder

Following World War II, attitudes toward wolf became increasingly positive after they had been eradicated from the landscape over the prior half-century (Mech 2012). Following the Endangered Species Act (ESA) in 1973, wolf was listed on the ESA in 1978 (Ripple et al. 2014; Carroll et al. 2021). It took another 20 years before 66 wolves were successfully reintroduced to central Idaho and Yellowstone National Park (YNP) in 1995-6 (Wilson 1997; Foreyt et al. 2009). The species' population began to rebound, and individuals subsequently dispersed to repatriate their former territory in the neighboring states of Montana, Wyoming, Oregon, and Washington, with some wolves believed to cross the border from British Columbia, Canada (Wiles et al. 2011). In 2011, under the Obama Administration, wolf was controversially delisted from the Endangered Species Act (ESA) in Idaho, Montana, Utah, and the Eastern third of Washington and Oregon (east of the Cascade Mountain range) (Miller 2012). Wolf was delisted in Wyoming in 2012, and court challenges reinstated its ESA protections from 2014-2017 before it ultimately lost them in 2017 (Earth Justice 2021). Wolves can now be legally killed in more than 85% of Wyoming for any reason if it is reported to State authorities within 10 days (Brasch 2020a). The species' 'management' was turned over to these individual states, who were tasked with creating and implementing wolf management plans.

Wolf's plight in the U.S. became dire due to the Trump Administration's '11th hour' announced delisting from the ESA on October 29, 2020. The species lost its federal legal

protections when the removal took effect on January 4, 2021 (Root 2020). Wolf management was returned to all individual U.S. states, and the consequences have been catastrophic for the species. In February 2021, the Wisconsin state legislature quickly authorized a legal wolf 'harvest' (culling program) and issued 2,380 permits to kill 119 wolves. In Chapter 8, I analyze the effects of word choices that propagate sociocultural norms of accepting widespread wildlife death. In less than three days, 218 wolves were killed, and an additional 102 were believed to be 'cryptically poached' (illegally killed) without human consequence in the three months following the delisting announcement (Treves et al. 2021).

Wolves didn't fare much better in Montana. The State's 2021 legislature passed a 'slate of new bills' to aggressively hunt wolves that were not based in scientific evidence. For example, ecological findings suggest that the removal of individual predators from a population can significantly increase genetic drift and decrease the genetic diversity of ungulates, which risks evolutionary vulnerability (Miles et al. 2019; Schell et al. 2021). Predators, including wolf, control disease spread and newly introduced pathogens in prey populations and can result in healthier herds and more resilient ecosystems (Packer et al. 2003; Brandell 2020). Climate induced predation patterns highlight the importance of understanding year-to-year and seasonal prey population changes based on a suite of environmental and demographic factors, rather than solely investigating predator-prey population dynamics (Wilmers et al. 2020). Woodruff and Jimenez (2019) studied wolf predation on elk feedgrounds, a wildlife management intervention to sustain elk population throughout the winter. They state that "managers in areas with elk feedgrounds should be mindful of their reporting and avoid actions such as moving and piling dead elk on the feed

ground and sending photos to media outlets, which serves only to exacerbate the fear and fuels the public perception of surplus killing" (2019: 1363). A greater herd presence is believed to deter wolf predation suggesting that more concentrated feed may be appropriate and that leaving carcasses results in less overall predation.

Following the bills' passing, Montana's Fish and Wildlife Commission voted 3-2 to 'aggressively' hunt wolves, despite a majority of more than 26,000 respondents opposing the measures during a public comment period. Hunters can now use methods of 'night hunting on private lands, neck snaring, and trap bait setting'. Commissioner Pat Byorth opposed the measure stating that "my largest concern is that we are selling our souls and our fair chase in order to provide methods that are unnecessary and more likely to have repercussions" (Mott 2021: 1). This anxiety materialized, when in September 2021 hunters took advantage of the laxed wolf hunting regulations outside of Yellowstone National Park (YNP). Hunters shot two female wolf pups and a female yearling from the famed Junction Butte pack who briefly crossed the invisible, arbitrary park boundaries (AP News 2021); I question the efficacy of protected areas in Chapter 5.

In Idaho, conditions for wolf existence are arguably worse. In spring 2021, backed by the powerful livestock and hunting industries, the Idaho state legislature rushed bill *SB1211* through without the opportunity for public comment, and Governor Brad Little signed it into law on May 5th (Machemer 2021). The ranching and hunting communities' arguments were not rooted in scientific data (Siler 2021), but contemporary 'cattle ranching culture' perceptions (Knight et al. 2002). Popular discourse amongst hunters in Idaho entail tropes of

wolves taking 'prized' elk or deer from them. However, elk populations have remained relatively stable in Idaho over the past 25 years since wolf's reintroduction:

> Despite all those pesky wolves, elk populations in Idaho are actually at or above management objectives. The outright number of elk in the state currently stands at 120,000, just 5,000 fewer than the all-time high of 125,000. That's also 8,000 more elk than were counted in 1995, the year wolves were reintroduced to Idaho (Siler 2021: 1).

Similarly, wolves accounted for only 102 sheep and cattle depredations in 2020, whereas an estimated 40,000 cattle are lost annually to non-predator losses (e.g., health issues) in Idaho (Machemer 2021). This suggests that the animosity toward wolves is a complex assemblage of feelings, practices, and contexts where wolf is blamed for (perceived) human hardships (e.g., cattle loss, political strife). In this part of the world, wolf symbolizes the fears of Euro-American cultural imaginations and is typically represented in the contemporary U.S. by an aging, white, conservative ranching culture. The social construction of 'boot-wearing cowboys' in the Intermountain West of the U.S. (geographical range between the Rocky Mountains and the Cascade/Sierra Mountains) is comprised of urbanites, suburbanites, and even ruralites with little ranching experience. Most people who identify with the cowboy identity have never actually 'choused a cow' (Knight 2002), but nonetheless regurgitate common lines that 'the federal government shoved these wolves down our throats' (Dubuc 2008). Wolf is most often a political scapegoat, and in the case of *SB1211* it will most likely have grave effects.

In early 2021, Idaho had an estimated 1,556 wolves within its borders, but a record 570 individuals were killed between 2019-2020 (Plank 2020). *State Bill 1211* allows for an unlimited number of wolves to be killed on a single hunting license (tag), and the state has been authorized to increase its culling program through a variety of means against the

recommendations of the Idaho Department of Fish and Game. This included an increased budget for private contracting and the implementation of a $200,000 fund to reimburse wolf hunters for up to $2,000 of accrued costs per confirmed wolf kill through an intermediary nonprofit hunting organization (Ridler 2021). In this way, the federal government further condones the killing of wildlife by granting this nonprofit, the *Foundation for Wildlife Management*[3], tax-exempt status through the Internal Revenue Service.

The Idaho legislature, which many people consider to be highly conservative, aims to reduce the wolf population back to the federal target of at least 150 wolves in the State, though if this is obtained, wolf management could be transferred back to the federal government. The Idaho government did not just authorize the killing of up to 90% of its wolf population; it lifted any 'humane' hunting methods (defined here as an animal not suffering when wounded) (Lie 2021). Hunters can now use methods employed to kill other canids in the state, including the coyote (*Canis latrans*). This means they can bait wolves, use inhumane snares to trap them, shoot them, gas puppies in dens, use night-vision goggles, chase them on snowmobiles or other motorized vehicles, and even shoot them from helicopters (Moore 2021; Ridler 2021). The effects of this new law swiftly materialized. An October 12, 2021, the BBC ran an article titled, *Wolf pups 'adopted' by Idaho high schoolers killed by federal agents*. Students at Timberline high school in Boise, Idaho studied the 'Timberline pack' since 2003, and without public notification, the pack, including its pups, were murdered overnight to 'control (arbitrary) population levels' (BBC 2021). In Chapter 5, I detail wolf's

[3] I caution readers that if you look up this organization's website, you will be subjected to images of several hunters that includes children, showcasing their murdered wolves' bodies.

historical numbers and territory pre-Euro-American colonization of the U.S. in the mid-19th-century. Where one locates the hunter's ethic of fair chase within Euro-American culture (i.e., prey has a reasonable chance to elude a human hunter and his or her weapons) (Morris 2013), may now be obsolete with *SB1211's* passing. Why are these hunting methods legal and why are they socially tolerated? Where is the outcry for coyotes? The ESA, while imperfect, was effective to some degree and the delisting of wolves demonstrates the critical importance of providing legal protections for wolves and other wildlife.

Framing the Study

Foucault's philosophical concept of biopower "exposes the structures, relations, and practices by which political subjects are constituted and deployed, along with the forces that have shaped and continue to shape modernity" (Cisney and Morar 2015: 1). Foucault's biopower privileges humans' interests over those of nonhumans in biopolitics (Vint 2010; Clark 2012) and are expressed through historical Euro-American dominance-oriented ethics of utilitarianism (Manfredo et al. 2020; Thomsen et al. 2021a). Animal studies challenges this paradigm, and North American attitudes are shifting toward a mutualism values-orientation where the majority of people now hold more positive attitudes toward nonhumans and believe that they are deserving of improved welfare and rights (Manfredo et al. 2016). Nonetheless, human-exceptionalism persists in exercises of biopower over nonhumans and dominates global wildlife-human relations through policy and management. It is shaped by the historical legacies of colonialism and the persistence of the Euro-American dichotomization of humans from nature (Vint 2010; Clark 2012; Thomsen et al. 2021a).

The gray wolf is a prime species to study wildlife-human relations and the precarity of nonhumans' livelihoods for its enigmatic fame and ability to serve as proxy for interhuman discord. Negative depictions of wolf have permeated wolf discourse and led to their historical (1860s-1940s) (Mech 2012), and contemporary extirpation (2011-present) (see Ridler 2021), akin to the suffering of other subaltern marginalized groups (e.g., indigenous, women, ethnic, or racial minorities) in the United States. Subaltern is a postcolonial term that refers to any subject who endures systematic exertions of dominance, violence, and oppression from another due to their entrenched power or status - no matter the species (see Spivak 1988; Mitchell 2002; Roy 2015; Arcari 2019; Thomsen et al. 2021a). This multispecies, multi-sited ethnographic study of wolf-human relations elucidated binary human attitudes and perceptions toward wolves and other wildlife, and was driven by the primary research questions: what are humans' moral obligations to nonhumans (flora and fauna), and how do we coexist with nonhuman 'Others' given the contemporary ecological crisis?

Humans and our livelihoods are inextricably linked to our environment and other species that inhabit it:

> The ongoing sixth mass extinction may be the most serious environmental threat to the persistence of civilization, because it is irreversible. Thousands of populations of critically endangered vertebrate animal species have been lost in a century, indicating that the sixth mass extinction is human caused and accelerating. The acceleration of the extinction crisis is certain because of the still fast growth in human numbers and consumption rates. In addition, species are links in ecosystems, and, as they fall out, the species they interact with are likely to go also. In the regions where disappearing species are concentrated, regional biodiversity collapses are likely occurring (Ceballos et al. 2020: 13596).

Inspired in part by a Science, Technology, and Society (STS) studies theoretical perspective (see Jasanoff et al. 2001; Best and Kellner 2020), I sought to learn what wildlife ecologists

and conservation biologists know about the 'science of wolves', how they acquire that knowledge, and how to negotiate the (mis)communication between science, popular culture, and ecosystem governance. What I learned is that in practice biological scientists inside and out of academe are just as susceptible to cultural and ethical influences as anyone else, no matter how well intentioned. Technocratic power relations are intertwined with our epistemological and ontological decisions, and however objective we try to be as scientists, we are human and a production of our lived experiences. Though this perspective is not new, nor do I claim it to be, it is imperative to foreground when studying wildlife-human relations because anthropology offers a sociocultural perspective that natural scientists are often taught to dismiss. By owning our positionality, it frees us, as humans, as scientists, and as citizens to question why we think what we do and how we know what we know. Only by recognizing our positionality can we account for our implicit and explicit biases and redress the ethical choices that inform our science about wildlife and their relations with humans.

In Chapter 7, I argue that if conservation biologists confront their moral stances and the subjective influences that shape their studies than an ethic of coexistence can be seen to emerge through translational ecology. I do not criticize particular scientists for their perspectives in this study and appreciate that disciplinary norms are deeply engrained. Anthropology is currently confronting its historical role in reproducing colonial practices (see Williams 2018; Jobson 2020; Patterson 2020), which inspires my critiques of the natural and social sciences in this study. For these reasons, I initially approached this study from a social-ecological systems (SES) perspective that is a semi-recent attempt to integrate the sciences (Ostrom 2009; Harrington et al. 2010). My original aim was to contribute to the theoretical

social aspects of the framework and address questions of power, its production, and who is privileged in instances of resiliency (see Chapters 1 and 8 for a detailed discussion of SES). Postcolonial and posthumanism theories address certain aspects of the social components of SES (Thomsen et al. 2021a). However, attempting to reconcile pragmatic epistemological and ontological issues suggested that a pluralistic approach to wildlife-human relations may be a more effective resolution to this conundrum (see Chapter 8). Throughout this study, I challenge the *status quo*, which includes social scientists, because our collective efforts to stave off species extinction is not working at scale, and in the process, we condemn individual nonhumans to their death. As humans, why should we care? It's just a bird. It's just a wolf. It's just a…

I should state my positionality up front. This dissertation isn't written for the type of person who, quite frankly, doesn't give a damn about nonhumans. Instead, it is targeted at the individuals who produce and consume knowledge about wildlife through academic discourse and popular media, and want to rethink our treatment of wildlife, but don't know where to begin. This isn't to exclude historical indigenous perspectives, their traditional ecological knowledge, or other parts of the world, as the Nez Perce in present day Idaho describe wolf as symbolic of family and community (Cortes-Vazquez and Zedalis 2013). In Chapter 5 I detail certain aspects of U.S. colonial history of subaltern Native Americans and their entanglement with protected areas and 'Amerindian reservations' that arose out of the arbitrary ideals of 'wilderness' (Spence 1999). The principal reason for focusing on Euro-Americans (and I am part of this cultural construct) and Western science is that they (we) have historically and contemporarily sought to distance them/ourselves from nature and wildlife, as colonialism persists to privilege key stakeholders who hold (bio)power. Only by

challenging these power relations can subaltern wildlife, indigenous peoples, and other marginalized individuals (e.g., racial, and ethnic minorities, women) be treated as equals, legally and socially. In Chapter 5, I discuss how indigenous peoples and their cosmologies, and cultural systems inform their traditional ecological knowledge (Ramos 2018), and suggest that by equitably representing their (non-homogenous) interests in environmental policy, alternative and more sustainable solutions to wildlife-coexistence could emerge. In Chapter 9, I describe a few select examples of how indigenous cultural beliefs and attitudes toward nonhuman entities can inform alternative models for environmental governance. Findings from this study reinforce previous ones that suggest that the North American model of wildlife management is unsustainable, antiquated, and prioritizes the power of the few at the expense of millions (see Feldpausch-Parker et al. 2017; Peterson and Nelson 1027; Eichler and Baumeister 2018).

For these reasons, I readily acknowledge that my ambition to conduct basic research is to produce sound theory based on robust evidence so that practitioners can consider its merits through translational ecology in ecosystem governance. Translational ecology provides citizens and scientists a conduit to include science-based decision making when creating environmental policy and reinforcing it in practice (see Enquist et al. 2017; Hallet et al. 2017). I take the position that all nonhuman animals are citizens of earth and deserve the same rights, agency, and welfare as humans. This perspective is supported from postcolonial and subaltern studies, where Timothy Mitchell embraces the 'Otherness' of a nonhuman species – the mosquito- to ask if they can speak, and if not, who speaks for them (2002)? This dissertation builds off the work of scholars who ushered in the posthumanist 'animal-turn' in the social sciences (see Whatmore 2002; Wilkie 2015; Bull et al. 2017), and more

specifically, multispecies ethnographies (see Haraway 2013; Kirksey 2014; Tsing 2015; Hamilton and Taylor 2017), to collectively question if anthropocentric tendencies to privilege humans and decouple culture from nature leaves us vulnerable as a species in the current ecological crisis?

Since all ecosystem governance (i.e., policy, management) is socioculturally produced, there is no reason why wildlife can't be legally protected – we did this for business corporations (see Chapter 9). It is simply a human choice, and I will argue that we must shed our anthropocentric laws and biases to coexist with wildlife and stave off species extinction. However, several complications currently inhibit this from materializing. Western scientific assumptions regarding the limits of interspecies communication situate this study as one of deconstructing power relations between humans and nonhuman actors. This leaves us, as humans, to debate and negotiate the relationship between humans and wolves, between all species, as well as each other. If we cannot communicate through verbal language with a wolf, at least in human terms, then how can we ever adequately, or justly represent their thoughts, emotions, or desires? In this way, multispecies ethnography's methodological 'kryptonite' is that any social study about nonhumans remains an exercise in speaking for and about them without their consent (Hamilton and Taylor 2017). However, this has led to a growing inclusion of animal ethology into the multispecies ethnographic literature (Hartigan Jr. 2021), and shows promise for transdisciplinary approaches to wildlife-human coexistence research. This study is not an attempt to anthropomorphize the wolf to persuade others to 'see' wolf in a positive light; though if it helps so be it, isn't it anthropocentric to assume that anthropomorphizing nonhuman animals is a bad thing if it can protect them? Perhaps it's a simple attempt to empathize with other species. The fact

that wolf is a sentient being with feelings and emotions aides us as humans to contemplate the wolf as a species with rights, a consciousness (soul?), and agency (Wallach et al. 2020a). How then, can we treat wolves, or any nonhuman species as equals?

This dissertation is informed by 126 interviews, participant observation, archival data, and environmental education conducted as part of my academic job. It originally commenced in the Cascadia Bioregion (see Chapter 2) and concentrated on Oregon and Washington with plans of conducting research in British Columbia, Canada as well. However, three months into the study the COVID-19 pandemic started. The pandemic, coupled with Colorado's state ballot initiative, *Proposition #114*, turned national focus of wolf-human relations to Colorado (Brasch 2020a). I moved to Colorado to complete the final nine months of the study. Across the nine chapters, I draw on theoretical positionings of posthumanism from animal ethics (see Cohen 2019; Thomsen et al. 2021a), compassionate conservation (Wallach et al. 2015, 2018, 2020a), and subaltern and decolonial ecology from postcolonial studies (see Spivak 1988; Mitchell 2022; Arcari 2019; Ferdinand et al. 2020). I couple these with critical theory to analyze wildlife-human relations, condemn state-sanctioned nonhuman animal genocide, and interrogate the direct and indirect biopower relations that govern wildlife. In this study, I applied an inductive, critical philosophical assumption that utilized a bottom-up approach to understand the context in which the actors faced, and then coded the results using thematic analysis (Creswell and Creswell 2017).

Co-producing Knowledge

I led this study and sufficiently met the requirements of the University to submit this work as my own original contribution, but I would be disingenuous to claim that I conducted this

project alone. In Chapter 3, I unpack debates concerning co-authorship in the anthropology discipline and describe how I leveraged my privileged position as a tenure-track faculty member to co-produce this knowledge with my students and supervisors. I utilized a Vertically Integrated Project (VIP) model in my Multispecies Livelihoods Lab (MLL) (Coyle et al. 2006; Cullers et al. 2017), which allowed me to efficiently collect and analyze data, while training my students to perform high-level mixed methods research[4], all while simultaneously learning from my supervisors. The VIP model is "a transformative approach to enhancing higher education by engaging undergraduate and graduate students in long-term, large-scale, multidisciplinary project teams that are led by faculty. Students earn academic credits, while faculty and graduate students benefit from the design/discovery efforts of their teams" (VIP Consortium 2020). I describe how the VIP model was implemented throughout this project in Chapter 2.

In this dissertation-by-publication, I am the primary author, and the research is guided by my ideas and decisions. However, I credit my co-researchers because they individually helped to collect and analyze data, contributed to certain (minor) portions of the write-up and edits, and aided me in my thinking while providing students a platform to learn how to navigate academe. In short, they earned authorship and deserve to be recognized. The merits of this methodological choice proved invaluable to me, as it forced me to recognize my positionality, and perhaps more importantly, made me realize that the only way to write up this study is to be authentic, call out injustice where I see it, and proffer theoretical frameworks based on evidence that could be materialized in practice through translational

[4] This is my second Ph.D. I earned my first in Management with a focus on Social Innovation from Central Queensland University

ecology. Claude Lévi-Strauss opined that 'animals are good to think with' (1963), and so are students. For example, three questions burned in my conscience as I grappled with what I had learned: who are we to determine the fate of other living beings, why is the most common 'solution' to wildlife-human conflict death, and why aren't nonhumans represented legally in every decision that affects them?

Nearly all dialogue was constructed in the abstract, and rarely concerned an individual wolf, its rights, agency, or welfare. I triangulated my results with archival data to thematically analyze several topics that emerged from the study. Primary themes include nonhuman animal genocide, biopower relations that reproduce colonial dominion over subalterns, and how the ethical decisions of scientists have implicit and explicit consequences for wildlife. I address each of these questions and themes as I develop this dissertation's core argument that nonhumans deserve equal rights, welfare, and agency as humans – legally, and ideally socially. The dissertation structure contours how each chapter builds on the previous. I ultimately suggest in Chapter 8 that the only way to stave off species extinction while attending to the interests of individual subaltern wildlife is to grant *all* living nonhumans personhood, accompanied by all the legal rights it affords, to usher in a new paradigm of what I call 'ecological rehabilitation' (see Chapter 9). How radically would North American wildlife management change if nonhumans were truly considered equals, with designated human guardians to represent their interests in any decision that affects them?

Dissertation Structure

This dissertation is structured into four parts. Part 1, titled, 'Preparing for the Field', consists of three chapters to situate the study in the field. Chapter 1 follows the introduction and provides the required holistic literature review, and Chapter 2 develops the critical survey of the work done in the geographical sites of the study. Chapter 3, 'Co-producing Knowledge', is included in Part 1 due to the unique methodological choice of leveraging my position as a tenure-track faculty member to use this opportunity to train my students while learning myself. It is set against the backdrop of anthropology's reconciliation with recognizing the work of all contributors who earned authorship in a study. Following Part 1, the thesis examines the inadequacies of contemporary ecosystem governance, especially in geographical places where humans interact with wildlife purposefully.

Part 2, 'Current Wildlife Governance Paradigms and their Limitations', consists of two chapters. It presents current paradigms of wolf (eco)tourism, purposeful wolf-human interactions, and the shortcomings of protecting wolves in practice. Chapter 4, 'Wolf ecotourism: A posthumanist approach to wildlife ecotourism', was published in September 2021 in *Routledge's Handbook of Ecotourism*, edited by Professor David Fennell. The contribution ethnographically describes the five opportunities I had during the study to interact with wolves in person, not just in the abstract when speaking about them. I ethically analyze each wolf sanctuary model from a posthumanist lens to develop a framework that considers the complexity of protecting individual wolves. Wildlife ecotourism is promising for its ability to equally consider the wellbeing of humans and wildlife, particularly from a multispecies livelihoods approach (see Thomsen et al. 2021a, 2021b). In Chapter 5, 'Invisible Cages: Confronting the efficacy of protected areas', I draw upon my participant observation

with two research assistants in Yellowstone National Park where I 'glassed' wolves and other wildlife through telescopes in December 2020. The contradictions of legal protections for wolves inside the park compared to Montana's laxed hunting regulations directly outside of its boundaries offered a thick set of data to reconceptualize how protected areas could be improved.

Part 3, 'Invoking Agency for Change', also consists of two chapters to elucidate the power that individual humans can make concerning wildlife's interests. Chapter 6, "Democratizing Conservation: A new paradigm in conservation management", analyzes Colorado's groundbreaking democratic vote that committed Colorado Parks and Wildlife to reintroduce wolf to the State by the end of 2023, following the species eradication in the state over 70 years ago. This is believed to be the first known instance where a species' reintroduction has been democratically voted on, and it passed by a margin of less than 1% (Brasch 2020a). This chapter ideally sets up Chapter 7, 'Compassionate Conservation & Multispecies Justice: Rethinking conservation biology's moral responsibilities toward wildlife'. This chapter challenges technocratic biopower dynamics, and implicit and explicit ethical choices that biologists make about wildlife daily. It unpacks the tensions that conservation biologists face when deciding whether to engage politically about an issue, or if it questions their legitimacy as 'objective' scientists. I make the case for all scientists to own their positionality and present a non-binary, *Interspecies Harm Prevention Framework* that foregrounds nonhumans' interests in studies and decisions that affect them. The transition from Part 3 to Part 4 is crucial to the argument of this dissertation, legal nonhuman personhood and ecological rehabilitation, as it morphs from critiquing current paradigms and their shortcomings, to proffer a new paradigm of ecosystem governance.

Part 4, 'Reimagining a Future of Multispecies Justice & Equality', provides new pathways for wildlife-human coexistence that equitably considers *all* species' rights, welfare, and agency. In Chapter 8, 'Posthumanist Pluralities: Advocating for nonhuman species' rights, agency, and welfare in ecosystem governance', I present a pluralistic ethical approach to overcome the nonhuman genocide that has transpired in the U.S. over the past 25 years, which aligns with the compassionate conservation movement (see Bekoff 2010, 2013; Wallach et al. 2020a, b). The United States Department of Agriculture's Wildlife Services 'killed or euthanized' 68,360,467 individual wildlife, including 7,123 (Timber) gray wolves, and 19 Mexican gray wolves (*Canus lupus baileyi*) (USDA, 2021). As of fall 2020, there were only an estimated 6,000 gray wolves in the lower-48 U.S. States – the population should be at least twice as much. This chapter briefly considers the potential of nonhuman personhood through translational ecology, and at the time of writing, is under consideration for publication in the monograph-style journal, *Advances in Ecological Research*.

Chapter 9, 'Ecological Rehabilitation: A new paradigm for multispecies justice', is perhaps the most critical chapter of this dissertation. It builds on the evidence presented throughout this work to suggest that granting nonhuman personhood to all wildlife is a final resort to protect individual nonhumans, stave off species extinction, halt biodiversity-loss, and prevent ecosystem collapse. It is purposefully brash, lays out the argument for legal nonhuman personhood, and is unapologetic. It completes the fundamental argument of this dissertation: urgent intervention is required to stop state-sanctioned nonhuman genocide and stave off species extinction. If we don't intervene now, we may not have the chance to change our minds.

Part 1: Preparing for the Field

Part 1 includes three chapters. Chapter 1 provides the background to the study and includes the theoretical and methodological bases for the study. Chapter 2 discusses the primary study site location and background, including the sociocultural dynamics that influence the western U.S. Chapter 3 examines how I co-produced knowledge in this study, and discusses my unique methodological choice of including my students as research assistants in a vertically integrated project model. Chapter 3's focus on methods serves as a transition from pre-field to fieldwork.

Chapters in Part 1:

Chapter 1- Literature Survey

Chapter 2- Study Location and Background

Chapter 3- Co-producing Knowledge

Chapter 1- Literature Survey

1.0 Theoretical Background Introduction

This project is not a typical socio-cultural anthropological thesis, per se, in that it draws on an archive of anthropological studies of human societies and their relationships to their environments (e.g., Steward 1955; Stocking 1974; Ingold 1990; Descola and Pálsson 1996), as well as their interactions with, fears of, and emotions and attitudes towards gray wolves (*Canis lupus*). The study questions contemporary theoretical and practical issues regarding concerns of how to legitimize and account for wolf rights, in an attempt to comprehend what affects coexistence between humans and large carnivores. However, since scientific understanding of interspecies communication is limited, as the wolf cannot speak a human language (Taylor and Twine 2014), and Euro-American assumptions about the capacity of wolves to speak and act exclude such agency, questions of who speaks for the wolf will be examined. The inclusion of a nonhuman species necessitates the exploration of alternative theoretical approaches that include frameworks from the ecological sciences, to complement the social theories that are required to conduct the research. I survey the merits of the social-ecological systems framework, and then engage criticisms from scholars grounded in social theory, which include disparagements by critical theorists of systems and resilience theories that developed out of complexity theory (e.g., Olsson et al. 2015).

The subfield of environmental anthropology and the posthumanism 'animal-turn' within the social sciences sign posts a shift towards multispecies ethnographic approaches, which may or

may not proffer bedrock theoretical foundations that underpin multispecies relations within the social lens of the social-ecological systems (SES) framework. Harrington et al. define SES as "a system that includes societal (human) and ecological (biophysical) subsystems in mutual interactions" (2010: 2773). This study investigates the ecological and sociocultural conditions that influence wildlife-human conflict. I originally focused on the Cascadia bioregion and the gray wolf. 'Wolf politics' exploded into public discourse in the Cascadia bioregion (Nie 2001, 2003; Yuskavitch 2015), where wolf management programs have divided pro-environmentalists and (often) anti-wolf and generally rural citizens alike.

I conducted a multispecies, multi-sited ethnography akin to the works of Anna Tsing (2015) in her seminal book, *The mushroom at the end of the world: on the possibility of life in capitalist ruins*. Tsing's work has been widely lauded for her use of feminist political ecology as a critique of late-stage neoliberal capitalism. In her longitudinal ethnography, Tsing followed the Matsutake mushroom and Lao refugee mushroom foragers in the Cascadia bioregion, as well as the global Matsutake supply-chain for the mushroom's cultural prominence to Japan. Similar to Tsing, this multispecies, multi-sited study leverages a theoretical framework grounded within environmental anthropology (see West 2005; Dove and Carpenter 2008; Lockyer and Veteto 2013; Orr et al. 2015; Townsend 2017), (feminist) political ecology (see Elmhirst 2011; Rocheleau, Thomas-Slayter, and Wangari 2013), anthrozoology (human-animal studies) (see Hurn 2010; Lorimer 2013, 2015; Hosey and Melfi 2018), and multispecies ethnographies (see Rose et al. 2012; Kirksey 2014). The study also draws on historical ecology frameworks to consider how ideas of cultural heritage inform socioeconomic and socioenvironmental

perspectives of contemporary Euro-American assumptions. By multispecies livelihoods, I mean the right for human and nonhuman species to not only (co)exist, but to not infringe on another species' right to live with the exception of sustenance hunting or 'real', not just 'perceived', safety concerns (Thomsen et al. 2021a).

1.1 Social-ecological Systems

The emerging academic field of social-ecological systems (SES) materialized in the ecological discourse two decades ago in Berke et al.'s (1998) seminal edited volume *Linking Social and Ecological Systems: Management practices and social mechanisms for building resilience*. The SES approach is novel for its attempt to produce an interdisciplinary framework that combines the natural and social sciences in relation to human and natural systems, challenging the predominant "utilitarian views in natural resource management and the commodification of nature" in ecological discourse in the 1990s (Fabinyi et al. 2019: 2). SES also presents a contemporary analytical framework for environmental management and the "linkages between ecosystems and institutions" (Colding and Barthel 2019: 2), where Folke and Berkes emphasized that "the challenge is to find ways to match the dynamics of institutions with the dynamics of ecosystems for mutual social-ecological resilience and improved performance" (1998: 4).

The emphasis on institutions as the hegemonic component of human dimensions in the 'social' component of the SES framework (see Ostrom 1990; Young 2002; Westley et al. 2006), developed as a response to Garret Hardin's (1968) pivotal yet highly controversial essay,

Tragedy of the Commons. Hardin hypothetically argues that when individuals have open access to communal farming areas, participants will act in their own best interests by adding one more unit to the bounded system to maximize return on investment. Without regulation each individual will act selfishly, ignore what is best for the shared communal space, as well as the ecological carrying capacity of the bounded system, resulting in the collective destruction of the commons. In response to Hardin, Ostrom criticizes his argument as lacking any empirical evidence to posit,

> Garrett Hardin earlier argued that users were trapped in accelerated overuse and would never invest time and energy to extract themselves. If that answer were supported by research, the SES framework would not be needed to analyze this question. Extensive empirical studies by scholars in diverse disciplines have found that the users of many (but not all) resources have invested in designing and implementing costly governance systems to increase the likelihood of sustaining them (2009: 420).

Ostrom presents a framework for SES that examines the relationship of four core subsystems that interact to produce complex and variable outcomes, which include governance system, resources system, resource units, and users (see Figure 1.1.1 below). She contends that "all humanly used resources are embedded in complex, social-ecological systems' and further claims SESs are 'composed of multiple subsystems and internal variables within these subsystems at multiple levels" (2009: 419). Ostrom sees the relationship between institutions and the environment as interdependent and that sub-variables related to each of the four core subsystems in a SES as crucial to determining the resilience of the SES.

FIGURE 1.1.1 OSTROM'S SES FRAMEWORK

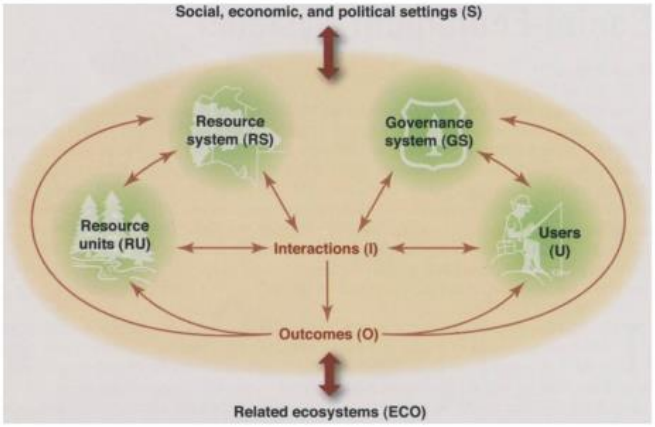


Fig. 1. The core subsystems in a framework for analyzing social-ecological systems.

In particular, she refers to 10 sub-variables that impact each individual within the system (See Table 1.1.1 below), and asserts that data collection is challenging as the relationship between sub-system variables ebbs and flows depending on spatial and temporal conditions.

TABLE 1.1.1 OSTROM'S TEN SECOND-LEVEL VARIABLES

Table 1. Examples of second-level variables under first-level core subsystems (S, RS, GS, RU, U, I, O and ECO) in a framework for analyzing social-ecological systems. The framework does not list variables in an order of importance, because their importance varies in different studies. [Adapted from (*12*)]

Social, economic, and political settings (S)
S1 Economic development. S2 Demographic trends. S3 Political stability. S4 Government resource policies. S5 Market incentives. S6 Media organization.

Resource systems (RS)	*Governance systems (GS)*
RS1 Sector (e.g., water, forests, pasture, fish)	GS1 Government organizations
RS2 Clarity of system boundaries	GS2 Nongovernment organizations
RS3 Size of resource system*	GS3 Network structure
RS4 Human-constructed facilities	GS4 Property-rights systems
RS5 Productivity of system*	GS5 Operational rules
RS6 Equilibrium properties	GS6 Collective-choice rules*
RS7 Predictability of system dynamics*	GS7 Constitutional rules
RS8 Storage characteristics	GS8 Monitoring and sanctioning processes
RS9 Location	
Resource units (RU)	*Users (U)*
RU1 Resource unit mobility*	U1 Number of users*
RU2 Growth or replacement rate	U2 Socioeconomic attributes of users
RU3 Interaction among resource units	U3 History of use
RU4 Economic value	U4 Location
RU5 Number of units	U5 Leadership/entrepreneurship*
RU6 Distinctive markings	U6 Norms/social capital*
RU7 Spatial and temporal distribution	U7 Knowledge of SES/mental models*
	U8 Importance of resource*
	U9 Technology used
Interactions (I) → outcomes (O)	
I1 Harvesting levels of diverse users	O1 Social performance measures (e.g., efficiency, equity, accountability, sustainability)
I2 Information sharing among users	
I3 Deliberation processes	
I4 Conflicts among users	O2 Ecological performance measures (e.g., overharvested, resilience, bio-diversity, sustainability)
I5 Investment activities	
I6 Lobbying activities	
I7 Self-organizing activities	O3 Externalities to other SESs
I8 Networking activities	

Related ecosystems (ECO)
ECO1 Climate patterns. ECO2 Pollution patterns. ECO3 Flows into and out of focal SES.

*Subset of variables found to be associated with self-organization.

Biggs et al.'s (2014) attempt to redress the difficulties of changing sub-system variables outlined by Ostrom through their edited volume *Principles for Building Resilience: Sustaining Ecosystem Services in Social-Ecological Systems*. Their seven principles include 1.) Maintain diversity and redundancy, 2.) Manage connectivity, 3.) Manage slow variables and feedbacks, 4.) Foster complex adaptive systems thinking, 5.) Encourage learning, 6.) Broaden participation, 7.) Promote polycentric governance systems. This endeavor to coalesce individual variables within a larger system context further developed the SES field to examine actors and governance between the natural and social sciences. For example, Carter et al. (2019) argue that a social-ecological systems approach may facilitate understanding of how to mitigate conflict and coexist with large carnivores, especially considering the urgency of increasing environmental crises (Crutzen 2002; Grooten and Almond 2018). They define SES "as an integrated system of ecosystems and human society with reciprocal feedback and interdependence" (384). A social-ecological systems framework thus attempts to amalgamate the natural and social sciences to create a "dialogue on human/nature relations" (Glaser et al. 2008: 77), and Becker posits it as central to the "international discourse on human/nature interactions" relative to the environmental crisis of the Anthropocene (2012: 55). Social-ecological systems theory is also referred to as 'coupled human-environment systems' (Turner et al. 2003; Young et al. 2006), and grew out of the ecosystems management literature to cease the ontological de-coupling of natural resources from the social or ecosystem in which they exist (Berkes et al. 2000).

Gunderson (2000) reviews ecological resilience theory and application, proffering an insight into how it contributes to the collective understanding of SES. He recognizes C.S. Holling (1973)

for introducing “resilience into the ecological literature as a way of helping to understand the non-linear dynamics observed in ecosystems. Ecological resilience was defined as the amount of a disturbance that an ecosystem could withstand without changing self-organized processes and structures (defined as alternative stable states)’” (2000: 425). The concept has since evolved to the “study of nested cycles of adaptive change in SESs in which persistence and novelty are intertwined, and finally to transformations that can cascade up scales when small, fast events trigger big, slow ones” (Young et al. 2006: 304). A resilience framework, combined with studies of vulnerability and adaptability (Young et al. 2006), “proposes a systems approach to human-environmental relations that fits well with attempts to predict or model socio-ecological change. However, it has mainly evolved through the application of ecological concepts to society, problematically assuming that social and ecological system dynamics are essentially similar” (Cotes and Nightingale 2012: 475). Rounsevell, Robinson and Murray-Rust (2012), appear to concur with Cotes and Nightingale in that human behavior should play a greater role in “models of complex socio-ecological system” (259), but contend that new empirically grounded approaches to SES studies can be produced by applying an agency-based modeling framework that combines human dimensions and biophysical factors.

For example, one of the most pertinent biophysical dynamics related to this study concerns continental habitat connectivity, which is ecologically required for the long-term viability of many nonhuman animal populations and their ecosystems. This is particularly paramount in large carnivore species that rely on seasonal migration, a variety in food supply, specific breeding grounds, or to overcome rapid degradation of their natural habitat (Bennett 1999; Donald and Evans 2006; Bowers and McKnight 2012; Keeley et al. 2018). Kuijper et al. (2016)

assert, “we lack a coherent framework to predict the effects of large carnivores in these anthropogenic landscapes” (1), and Carter and Linnell (2016) attempt to redress this deficit through the framework of coexistence. They define the concept as a “dynamic but sustainable state in which humans and large carnivores co-adapt to living in shared landscapes where human interactions with carnivores are governed by effective institutions that ensure long-term carnivore population persistence, social legitimacy, and tolerable levels of risk” (575). Pooley et al. (2017) echo Carter and Linnell’s concerns that current methodologies of how to accomplish coexistence through co-adaptation is lacking. They contend that the field of conservation management requires a new transdisciplinary research agenda to mitigate human-predator (e.g., large carnivore) conflict, and promote mutually beneficial outcomes for sustainable conservation management. Madden points out that “numerous factors, including biological, geographic, political, economic, social, institutional, financial, cultural, and historical features, make each conflict or coexistence situation unique” (2004: 249).

Social-ecological systems, and in particular the social theoretical components of it, are highly criticized by critical theorists for the use of value-laden language (e.g., resilience), lack of consideration of human adaptations to environmental conditions, social diversity, agency, and power dynamics redolent of ecological anthropological debates of functionalism in the 1960s (Fabinyi et al.2014). Similarly, Olsson et al. (2015) suggest that SES is too reliant on institutions, which ultimately raises essential questions concerning the social dynamics of SES such as ‘whose resiliency, whose agency, and whose power?’, and they suggest that methodological pluralism may better occupy the theoretical space between the social and natural sciences

when working collaboratively. Like all theoretical frameworks, SES has its own biases and limitations, but is arguably the best framework to consider the ecological components of this study for its attempt to bridge the theoretical and disciplinary gaps between the social and natural sciences. To better reflect why the social theoretical contributions of SES are highly critiqued, it is imperative to turn to the environmental anthropology literature, its development, and relation to this study.

1.2 Environmental Anthropology and Political Ecology

Ecological anthropology developed out of Julian Steward's (1955) work on cultural ecology that examined human adaptations to the environment through the use of material culture (technology) for human sustenance and survival. Frake defines cultural ecology as "the study of the role of culture as a dynamic component of any ecosystem of which man is a part. Unique among organisms, man carves his ecological niches primarily with cultural tools of his own invention rather than with biological specializations" (1962: 2). The systems approach gained traction (see Rappaport 1968; Piddocke 1969; Vayda 1974), and was referred to as functionalism or neofunctionalism for its reliance on ecological and biological concepts of energy, calories, carrying capacity, etc. (Sahlin 1978; Orlove 1980). The main criticism leveraged was that ecological anthropology was too consumed with biological factors, or ecological reductionism, where society and culture was said to be determined as a response to the environment. This view was rebuked for not factoring in individuals' or groups' social diversity, agency, and power relations that affected how humans adapt to the environment (Wolf 1982),

or that groups of “people whose histories were shaped by capitalism, colonialism, and change” (Fabinyi et al. 2014: 28).

Although the term political ecology was first coined by Thorne in 1935, it did not become popular until the early 1970s as a response to cultural ecology, as well as radical development geography (Bryant 1998). Wolf elaborated on Steward’s work to account for embedded ownership to “mediate between the pressures emanating from the larger society and the exigencies of the local ecosystem” as well as power relations and social diversity in human-environment ecosystems (1972: 202). Wolf’s approach maintained ecological components but presented a neo-Marxist framework based in political economy that considered culture as embedded within the global neoliberal capitalist system rather than separated from it. Walker contends that political ecology largely maintained a structuralist approach during the 1970s-1980s, but moved on to a post-structuralist era in the 1980s-1990s that “increasingly turned attention to local-level studies of environmental movements, discursive and symbolic politics, and the institutional nexus of power, knowledge and practice”, to question “what happened to the ecology in political ecology?” (2005: 75). This sentiment is embodied in Robbins’s *Political Ecology: A critical introduction*, where he postulates “political ecology, [is] a field that seeks to unravel the political forces at work in environmental access, management, and transformation…politics is inevitably ecological and…ecology is inherently political” (2011: 3). Nonetheless, in a subsequent essay Walker posits “that the most fundamental role of political ecology is to question the oversimplifying and misleading conventional views of human-environment relations” (2006: 385). However, political ecology is not the only sub-field of

environmental anthropology. Townsend asserts that the splintering of various subsequent approaches within environmental anthropology collectively include "evolutionary ecologists, historical ecologists, political ecologists, or ethnoecologists" (2017: 12). She argues that no matter the specific approach, environmental anthropology is focused on humans' interactions with the environment, particularly concerning environmental crises (such as those defining the Anthropocene), and that environmental anthropology can be distinguished from allied fields such as environmental sociology or environmental history for the field's tradition of using ethnography as its primary research methodology (Heatherington 2016).

1.3 Posthumanism and the Animal-turn

The Euro-American separation model of removing humans from nature reinforces anthropocentric approaches in the social sciences that long sought to dichotomize 'Nature' and 'civilization' (Descola and Pálsson 1996). To address this conundrum, it is necessary to not only consider the cultural and ecological conditions that affect coexistence, but also to explore the concerns of competing human-human stakeholders, as most spatial land areas are co-utilized by humans and wildlife. In this project, I refer to wildlife to signify nonhuman, non-domesticated species, but will ultimately explore if labeling a nonhuman, non-domesticated species 'wild' or 'wildlife' segregates them into an opposing 'Other' categorization. In the social sciences, the posthumanist 'animal turn' emerged out of changing attitudes towards human exceptionalism (Whatmore 2002; Wilkie 2015; Bull, Holmberg, and Åsberg 2017), and "has expanded the range of possible research topics in a number of disciplines...[and] has also

suggested new relationships between scholars and their subjects, and new understandings of the role of animals in the past and at present" (Ritvo 2007: 119).

In his article, *Multinatural geographies for the Anthropocene*, Jamie Lorimer declares, "the recent diagnosis of the Anthropocene represents the public death of the modern understanding of Nature removed from society" (2012: 1). He reviews current debates at the nexus of conservation biology, and biogeography for conservation in the Anthropocene. Lorimer suggests that a multinatural ontology facilitates the opportunity to engage the space between conservation and environmentalism, especially in regard to capitalistic ecology and its neoliberal dominance in contemporary society beyond 'Nature', through the lens of political ecology. Hodgetts and Lorimer (2015) argue that since Philo and Wilbert's (2000) re-centering on animals in geography during the late 1990s, the field of human geography has unequally focused on the lived experiences of humans' perspectives regarding animals, leaving a dearth of knowledge regarding the pluralistic 'animals' geographies'. They suggest that methodological approaches entrenched within the discipline limit our collective human understanding of nonhuman animals' experience in multispecies relationships. Buller argues that posthumanism proffers contemporary nonhuman social scientists an alternative approach, ontologically and epistemologically, to move beyond the 'Durkheimian emphasis' on anthropogenic social constructs, coupled with Mead's (1962) 'symbolic interactionism' that deemed language as a necessary component of what it means to be social (2015: 375). Animals of geography "must reach beyond the all-too-easy collective and abstract categorisations of the non-human (such as orderings of species, function, or location, common to both natural and social science

approaches to the animal)" to focus rather upon nonhumans as "embodied individuals living their lives entangled with humans and their own wider environment" (Buller 2015: 376; Taylor 2012: 40).

Ogden et al. (2013) credit the 'animal turn' within the academy, and more specifically the arts and social sciences, over the past few decades as partially indebted to the animal rights and animal welfare discourse, and for elucidating the exploitative human behaviors towards nonhuman animals. Kirksey and Helmreich's (2010) pivotal review of the 'animal turn' within anthropology, explores the anthropological record of multispecies ethnographies to date based in part on surveys from the 2008 American Anthropological Association (AAA) meeting and co-running program, the Multispecies Art Salon at the PLAySPACE Gallery Art Exhibit Gallery of the California College of the Arts. They leveraged this event as a platform to engage an emerging field of multispecies ethnography, and to explore key terminologies such as 'becomings', where "new kinds of relations emerg[e] from nonhierarchical alliances, symbiotic attachments, and the mingling of creative agents" (546; via cf. Deleuze and Guattari 1987: 241–242). When referring to '*becoming with'*, Haraway describes how two individual living creatures can never become a new fixed unit, but rather that both can emerge changed from the relationship when experiencing "a subject- and object-shaping dance of encounters? (2008: 4). However, the contouring of symbiopolitical multispecies ethnography is arguably the most pertinent aspect of Kirksey and Helmreich's essay to foreground in this study. For instance, they build on the work of Margulis and Sagan's s symbiogenesis (2002), Foucault's biopolitics (see Lemke 2001), and Helmreich (2009) and Marcus (1995) to signify,

> A symbiopolitical multispecies ethnography turns out to have a good deal in common with the traveling methods of multisited ethnography…with animals, invasive plants, and microbes on the move, anthropological accounts ramify across places and spaces, entangling bodies, polities, and ecologies (555).

They cite the works of Tsing (n.d.; 2009) and Hayward and Kelley (2010), among others, to proffer a new era of 'human-animal studies', multispecies ethnographies that embraces a renewed appreciation of interdisciplinary scientific inquiry to transcend the bridge between the natural and social sciences, and examine what responsibility, if any, humans have over, to, -or with- nonhuman species.

The contemporary geo-political neoliberal world order often discounts the rights or existence of other species, redolent of neocolonialism (Willems-Braun 1996; Misoczky and Böhm 2013; Darkoh 2018), subjugating non-human animals into 'subaltern' status, in what Narayanan (2017) calls 'subaltern animism', privileging neoliberal capitalist consumption (Adelman 2018), ultimately resulting in what geologists have deemed the earth's sixth mass extinction event, the Anthropocene (Crutzen 2002, 2016). The term subaltern generally refers to any individual or group who is considered to be in a subservient class or status in relation to another in terms of power, be it based on race, ethnicity, gender, species, etc. Subaltern studies examine how power shapes who has the authority to speak, and for whom, where 'Others' (e.g., indigenous populations, women) are not seen as equals to the dominating, often male and or (post)-colonial rulers (Spivak 1988). In his book *Rule of experts: Egypt, techno-politics, modernity*, Timothy Mitchell's (2002) chapter *Can the Mosquito Speak?* was influential for rendering the concept of the subaltern to include non-human species. He details the World War II and post-war global techno-power neoliberal capitalistic development of Egypt that transpired at the

same time as a new Malaria outbreak occurred. The *Anopheles gambiae*, a sub-Saharan Mosquito, emigrated from sub-Saharan Africa where it had not been prevalent in Egypt before, carrying "the malignant form of the malaria parasite, *Plasmodium falciparum*" (19). Mitchell ultimately declares that the Mosquito cannot speak, at least in human terms, but proffered a new line of theoretical inquiry for posthumanists that considered the role of a nonhuman species, the 'Other', as well as humans' relationship with the Mosquito. In this study, I recognize that subaltern and postcolonial scholars showed that the use of the term 'human' might flatten the history of the struggle of many individuals and groups to be considered 'human'; however, I do not intend to discount this history and only refer to 'human' to differentiate between humans as a species and other nonhuman species (flora and fauna).

Hamilton and Taylor (2017) explore the extent to which ethnography can embrace and potentially transform its 'asymmetrical' power that privileges humans in relation to nonhuman animals. They argue that due to obvious limitations of how to conduct research, understand, or justifiably 'speak' for nonhuman animals, multispecies ethnography is not, and may never be, fully capable of shedding the anthropocentric tendencies of speaking about the 'Other' (animals) to humans, by humans, and primarily for the benefit of humans. Although they do not fully embrace the term multispecies ethnography, they do seek to foster discourse amongst social scientists, practitioners, and natural scientists to engage with potential alternatives to conduct human-nonhuman animal research that adequately represents nonhuman animals, by working alongside animals in an attempt to comprehend how they may think, feel, or adapt to human encroachment, colonization, and dominance over other species. However, if humans

are to attempt to engage with nonhuman species in terms of equality, it is necessary to consider the historical ecology of humans' attitudes towards nonhumans. In particular for this study, wolves and popular Euro-American beliefs and attitudes towards the 'Other' species will be explored as they may be culturally constructed.

1.4 Historical ecology and the wolf

The reintroduction of the gray wolf into the Greater Yellowstone Ecosystem and the greater Northern Rocky Mountain Region starting in 1995 was the first-time wolves existed in the area for more than 50 years (Wilson 1997), a highly controversial topic that still persists. At first glance, the conflict appears to consist of cattle ranchers' desire to protect livestock versus environmentalists seeking to rewild natural habitats; the issue may originate, however, in Euro-American myth, culture, religion, and ritual dating to pre-polis Greece. Kunstler describes how the wolf was respected for its intelligence, demeanor, hunting abilities and dominance, stating that "the wolf has always been viewed by humans as a boundary crosser due to several factors: its craft and cunning; its highly developed social nature; its familiarity with the dark, forbidding forests that covered most of Europe well into historical times; and its masterful skill as a hunter. This liminal nature accords well with the under worldly character of animal demons in Indo-European myth" (1991: 201). In Greece, the evidence for negative perceptions toward wolves appear to only relate to its symbol as a tyrant, and it may not have been until later in the Middle Ages that the wolf began to appear as a representative of evil.

For example, in the early 1600s, Guernsey was a highly conservative Calvinist community that shunned young people's mischievous behavior, including promiscuity. They referred to such hooligan individuals as werewolves and the term was used in daily language to judge acts that did not conform to the rigid religious norms of the community. The Guernsey people arguably viewed the wolf in a dichotomic perspective as well, namely as a warrior and as an outlaw. The "wolf/warrior/outlaw relationship may be echoed in the mention by Olaus Magnus in his *Historia de Gentibvs Septentrionalibvs* (1955) that at Epiphany in Prussia, Livonia and Lithuania great bands of men designated werewolves ran amok, consuming foresters and their livestock, violently breaking into cellars and stealing and drinking dry barrels of beer and mead" (Ogier 1998: 58). This depiction of the wolf represents human behavior and may have contributed toward a negative attitude of the wolf that is perhaps untrue, as it is representing human behavior and not the wolf's. Similar reflections and depictions of wolf have been seen in examples across Europe including Germany, Spain, and Portugal (Alford 1942: 163-164).

German, Flemish, and Dutch myth and lore are arguably the most influential of all Euro-American wolf myths regarding perspectives of the wolf in contemporary Western societies. The werewolf legend became popular in northern Europe around 1590, following trials in Cologne, Germany where "because of particular rules of evidence in trials, it was easier to determine whether someone was a werewolf than a sodomite, even if his actions had been the same. Werewolves thereby merged with, but did not necessarily replace, existing notions about male deviancy" (Blécourt 2007: 42). There were many versions of the werewolf story; however, the werewolf *back rider* was arguably the most prevalent one. Concurring with the 1590 trials,

this description of the werewolf was utilized to describe sexual assault on boys or girls by a dominant and aggressive male member of the society. The story was used as a tool to warn neighbors, friends, and family to avoid certain members of the community who were believed to be werewolves. In reality, they were 'male deviants' who took advantage of the weak, typically on poorly lit roads at night. The brothers Grimm popularized the werewolf myth, and they may be considered to be the leading authority of the tale, in spite of scores of different recordings of the story by other writers or folklorists. The popularization of the story by the brothers Grimm has subsequently transformed over time to be less explicit in contemporary children's fairy tales that are perhaps less terrifying today compared to the original stories (Blécourt 2007: 23-43).

William Lynn (2010) advocates a hermeneutics approach to discourse concerning wolves from three perspectives: science, society, and ethics. He outlines the underlying symbolic conflict between various stakeholders where,

> Wolves are particularly symbolic animals: they stand in for something else happening in human society. Thus, wolves may symbolize the endangered species or wild landscapes that people believe should be protected or exterminated. They may become flashpoints of political tension between branches or levels of government, regulatory agencies, or corporate and nonprofit pressure groups. Wolves may be seen as exemplifying the threats to rural economies, or the prospect of economic growth and diversification in the form of ecotourism. They may represent the loss of political control by established communities of 'insiders' and the garnering of political power by new communities of 'outsiders.' They may be associated with an oppressed social group, like the First Nations. Conversely, oppressed people may see wolves as fellow travelers and stand in solidarity with their well-being. This symbolic, values-laden, politically charged aspect of human-wolf relations has been eclipsed over the years (82-83).

Symbolism within cultures may resonate between opposing worldviews, as humans have been shown to value nonhuman animals that are symbolically represented in their own culture. For

example, in Hopper et al.'s (2019) study on bird symbolism in culture they produced a social survey of primary school children's perception of magpie (*Pica pica*) conservation. They compared students who received only scientific reasoning to conserve the magpie, versus students who were exposed to numerous ways in which the magpie permeates British culture. Perhaps surprisingly, students who were able to resonate with symbolic cultural connections to the magpie responded more favorably and stated that the magpie was worth conserving, suggesting that cultural factors are imperative in bridging the (arbitrary) divide between society and nature.

The cultural symbolism approach to interspecies conflict within anthropology, combined with ecology's co-adaptation framework in this study aims to amalgamate the two literatures through multispecies ethnography. Returning to Tsing's (2015) influential multispecies ethnography, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, her investigation of the symbiotic relationship of human-nonhuman species provides new insights into human destruction caused by late-stage capitalism endeavors (e.g., exploitative timber harvesting). Her multi-sited, multispecies ethnography follows Matsutake post-World War II consumer demand, to the harvesting of the mushrooms in various regions around the world, and the supply chain back to Japan where the mushroom is considered an intrinsic part of the culture. The Matsutake mushroom is not merely a treasured (albeit acquired taste she suggests) food commodity, but one that is culturally symbolic in that it conjures up a sense of 'autumn' within Japan. I draw on Tsing's methods and concepts for my

study was also conducted in the same Pacific Northwest region of North America, and was also rife with conflict and contestation between humans, wolves, and competing human groups.

I consider these theoretical approaches in light of a range of multispecies ethnographies, but align myself with Kopnina (2017) who critiques multispecies ethnographers for remaining apolitical in their writing about nonhumans compared to common positionalities within the discipline that oft question power relations for *human* subjugated groups. Collectively, this study aims to contribute to two key literatures: firstly, the multispecies studies literature, and secondly to a subfield of environmental anthropology, in order to examine what role, if any, such an approach may add to the social theoretical components of the SES framework. Other theoretical underpinnings will most likely develop as I progress, but the literature presented here enabled me to approach the field with an understanding of what it means to examine the precarious nature of wolf-human conflict, and why coexistence between humans and wolves may be more difficult to achieve than with other multispecies relations.

1.5 Research Design

This study draws on ethnographic methods in the field of anthropology, which follows an inductive, emic approach and thematic analysis in an attempt to theorize new multispecies livelihoods frameworks that equitably attend to the rights, agency, and welfare of all species (Creswell and Creswell, 2017). However, multispecies ethnography is a relatively new research paradigm within the social sciences, and will be explored here for its usefulness. Hamilton and Taylor (2017) claim that multispecies research that does not privilege humans in human-

nonhuman animal relations may never truly develop, primarily due to limitations of inter-species communications. However, they explore how to better consider the comingling of humans and nonhuman animals in an attempt to develop the emerging multispecies ethnography research paradigm. Technological advances may aid the development of new methodological approaches to multispecies ethnography, however. Mancini et al. (2012) explore the use of GPS dog tracking devices in an attempt to examine how humans and their pets interact, and what assumptions each makes to affect behavior through the use of the technology. This co-insides with a more developed theoretical framework of 'ethnographies of encounters' that foreground the multispecies ethnography research paradigm.

Faier and Rofel (2014) argue that the ethnography of encounters literature no longer investigates culture from a lens of "cultural identification and classification of features" within one culture, but rather examines cross-cultural encounters, and human to nonhuman animal encounters, to "distinguish themselves by considering how culture making occurs through everyday encounters among members of two or more groups with different cultural backgrounds and unequally positioned stakes in their relationships" (2014: 364). They consider how the ethnography of encounters aligns with discourse in the multispecies ethnographies literature, as deconstructing unequal power dynamics amongst groups of different cultures from a postcolonial perspective, whereas human agency is analogous to the colonial power in relation to nonhumans (animals). Instead, multispecies ethnography looks at mutual dependencies, influences, and hybrid ontologies involving human and nonhuman actors (see Kohn 2007; Haraway 2008). Building on colonial and postcolonial studies, such work focuses on

'middle grounds' (Kohn 2013, p. 148; from White 1991), 'contact zones' (Pratt 1992), or 'naturalcultural borderlands' (Kirksey & Helmreich 2010, p. 548), where lines between nature and culture are blurred to illuminate how human and nonhuman animal lives and worlds mutually emerge through multispecies relationships.

Pooley et al. (2017) similarly call for an alternative approach to conservation management from a transdisciplinary framework, championing a multispecies ethnographic methodological framework to contend,

> Multispecies ethnography uses methods from ethnography and ethology to document human and animal behaviors, sociabilities, and emotional states (Kirksey & Helmreich, 2010). The novelty and utility of multispecies ethnography is its focus on uncovering the detailed and multifaceted interactions between humans and animals; the emphasis is on mutual influence rather than one-way relationships. There is great potential for developing this research through existing technologies for monitoring, tracking, and governing animal movements (e.g., Valeix et al. 2012; Kuiper et al. 2015).

George Marcus' (1995) seminal article, *Ethnography in/of the world system: the emergence of multi-sited ethnography*, reviews the emerging methodological trend in anthropological research of multi-sited ethnographies and their unique ability to "cross-cut dichotomies such as the 'local' and the 'global', the 'lifeworld and the system'" (95). He posits that while there are certainly trade-offs of embracing a multi-sited ethnography such as the de-emphasis of the subaltern, this methodological choice provides social science researchers the opportunity to obtain a holistic view of the relationship and impact that the 'local' vs. 'global' system have on each other, but also provides the ethnographer the ability to capture the movements between the two dichotomies. Multi-sited ethnographic sites therefore may not betray the traditional context of what it means to conduct ethnographic research, and Marcus argues, "the object of

study is ultimately mobile and multiply situated, so any ethnography of such and object will have a comparative dimension that is integral to it, in the form of juxtapositions of phenomena that conventionally have appeared to be (or conceptually have been kept) 'worlds apart'" (102). Nonetheless, there exists genuine philosophical reflection where,

> Multispecies ethnographers [should] follow Dan Segal's observation that 'whether or not anthropology passes muster as 'real science,' it today operates from a position in the sciences broadly construed, and, beyond this, that this is something we must learn to negotiate if we wish to participate in more fruitful dialogues with other disciplines and diverse publics' (2001:452; see also Fischer 2007).

Smart (2014) discusses how the refocusing of ethnographic fieldwork in regard to multispecies ethnography returns anthropology to the pre-postmodern turn when nonhuman species were part of the quotidian foci of ethnographic research. Akin to most new terms in the academic record, multispecies ethnography has a myriad of definitions, with slightly different applications. Ogden et al. (2013) build on Haraway's (2008) influential work, *When Species Meet*, to refer to multispecies ethnography as "ethnographic research and writing that is attuned to life's emergence within a shifting assemblage of agentive beings. By 'beings' we are suggesting both biophysical entities as well as the magical ways objects animate life itself" (2013: 6). Moving beyond human exceptionalism (see Haraway 2008, 2010) it is imperative to transcend the contours of posthumanism that (artificially) separate nature and culture. Locke (2018) takes a less 'speculative' perspective,

> Multispecies ethnography represents a more-than-human approach to sociocultural anthropology that contends that we cannot adequately understand humanity in isolation from nonhuman species implicated in human life. It is concerned with the limitations of anthropocentric thinking, with recognizing the agency of nonhuman species, and with socially, historically, and ecologically integrating them into accounts of life in environments shaped and shared by humans and other species (2018: 1).

However, the effort within multispecies ethnography to dehumanize the anthropocentric approach is an epistemological challenge, as Pacini-Ketchabaw et al. declare "attempting to de-centre the human in research is disconcerting as it literally displaces the certitudes of humanist intellectual work" (2016: 165). An agency framework may help to overcome this challenge. For example, Maurstad et al.'s (2013) multi-sited ethnographic work of more than 60 open-ended interviews with horse riders in Norway and the Midwestern USA suggest that humans and nonhuman animals co-domesticate through what they call 'co-being as intra-acting', to describe how spending time together and the intimacy of touch and mutual experience fosters mutual becoming. They explore Barad's (2007) "concept 'intra-acting' speaks better for focusing on how parties meet and change as a result from their meeting, as opposed to 'interacting', which refers to parties meeting and leaving each other unchanged" (Maurstad et al. 2013: 323). This critique is analogous to Ortiz's (1947) coining of the term acculturation, signifying how cultures can and will change through interactions with other cultures. Rouse (1986) contends that Ortiz's use of acculturation referred to the negative aspects of intercultural dominance, be it 'hard' interactions such as warfare, where the dominant entity may consume local culture and customs, or through 'soft' interactions such as asymmetrical trade. Instead, Rouse leveraged transculturation to mean the inevitable change in culture when both entities maintain its own identity, but is enhanced by the new interaction (1986: 11-14; Thomsen et al. 2020). Intra-acting may therefore refer to the agency of individuals at the micro-level when two or more parties (human-human, human-nonhuman animal, nonhuman animal-nonhuman animal) meet, and the transculturation of species may be considered as a framework for how cultures or intra-species interact.

Crate (2011) builds on Tsing's multi-sited ethnographic methods related to the environment to introduce the term 'climate ethnography', where environmental ethnography diffuses the focus into many places and many issues. Climate ethnography, by contrast, is tied to the global phenomenon and communicates a sense of immediacy and of 'ethnography with a mission'. Put another way, this is ethnography for the world—whereas ethnography has its roots in describing the local for those specifically interested in that group or in making comparisons with other groups, climate ethnography has a different mission and works across multiple scales, similar to Tsing's ethnography (2011: 185). This study, though not solely concerned with climate change, does aim to build upon the works of Tsing and Crate in relation to the urgency to understand the conflict between humans, wolves, and other wildlife, following the gray wolf's recent re-emergence in the Cascadia bioregion.

1.6 Research Methods

This study ultimately employed ethnographic methods, but also drew on secondary Global Information Systems (GIS) data of wolf sightings to identify where wolves had been sighted (e.g., ODFW 2019), and an understanding of gray wolf ecology and their (constructed) forest biome habitat. This research aims to address Lynn's call for qualitative wolf research, through the use of multispecies ethnography.

> The impact on methodology is…equal in scope to that of theory. Sit in on a wolf conference, and one quickly discovers the importance of numbers. Quantification is a touchstone of most presentations, whether they are from advocates, managers, politicians, and/or scientists. What distinguishes them is their skill and the purpose of using these numbers, not the emphasis on quantification itself. For the reasons outlined above, discourses cannot be studied using the techniques of the natural and resource sciences so familiar to wolf biologists—radio and global-positioning collars, mathematical modeling, genetic testing, etc. To plumb the depth and power of a discourse requires qualitative, not quantitative, methods—interviews, participant observation, documentary analysis, etc. (Lynn 2010: 85).

This qualitative study employed traditional anthropological methods of archival data, participant observation, and semi-structured interviews (Schensul & LeCompte, 1999), for their inherent ability to explore the fluid dynamics within sociocultural landscapes, and triangulate data collected. Key stakeholders interviewed included seven different groups with varying perspectives of gray wolves. The first was indigenous tribes (e.g. Nez Perce who helped reintroduce wolves into Idaho and Yellowstone National Park), which are often referred to locally as Native Americans in the U.S. and First Peoples in Canada. However, due to the COVID-pandemic, only a handful of indigenous interviews transpired, and I sought out secondary data where available. The second group consisted of pro-environmental actors, such as nonprofits (e.g., Shadowland Foundation); the third group included livestock ranchers in the western U.S., though this was also limited due to stated political reasons that I unpack in the second-half of this thesis. The fourth group consisted of 'other interests in the use of natural habitats other than ranchers' such as urban developers and business owners in peri-urban periphery locations. The fifth group consisted of governmental wildlife biologists or state wildlife managers. The sixth included university researchers related to the topic (e.g., ecologists, agricultural economists, etc.). The seventh was comprised of local citizens who had some interaction with large-carnivores (e.g., on their land, tourism based, etc.). Established contacts were leveraged first, followed by sending my CUREC (ethics approval # SAME_C1A_19_073) advert calling for research participants; however, a snowballing technique (Creswell and Creswell 2017) was used to gain access to other participants that met the research inclusion criteria, as outlined in my CUREC forms.

1.7 Data Collection

The study was conducted over 15 months in Oregon, Washington, Idaho, Montana, Wyoming, Yellowstone National Park (YNP), Colorado, and California, U.S. Archival research included document analysis from publicly available sources (e.g., Idaho State Wolf Management plan) and internal organizational documents shared with the first author. More than 120 formal and informal interviews were completed with the aforementioned stakeholders. Snowball sampling techniques were used to gain access to key stakeholders actively involved in wolf discourse and governance (Acharya et al. 2013). Collective demographic information of the informants included age ranges from 22-78 years old, gender representation of approximately 60% male to 40% female, about 85% had at least a bachelor's degree, but greater than 90% of interlocutors appeared to be racially white or predominantly white. However, I did not ask participants to self-identify and this was a calculated estimate based of my observations and best estimates. This lack of diversity could possibly be attributed to a potential implicit bias, but efforts to engage more minority voices were not successful, indicating a possible failure on the part of the research or a resistance to engage in this research, as well as a more general underrepresentation of indigenous and other minority perspectives. Perhaps, it may reflect the underrepresentation of ethnic and racial minorities in the conservation field, which was also addressed in Colorado Parks and Wildlife's (CPW) January 2021 public meeting streamed on YouTube.

Nearly half of all interviews were conducted online, e.g., via *Zoom*, to permit a greater distribution of informants across the western U.S., and to account for lockdown restrictions

during the COVID-19 pandemic (Hanna 2012). Hand-written field notes were completed by the first author during and or immediately following interviews, and at the end of each day of participant observation. This allowed me to later reflect and conceptualize the study by considering past perceptions and observations, as "so much of ethnographic fieldwork depends on the researcher's own experience and perspective—i.e., the 'I' must be acknowledged—it really does matter where you as that researcher 'stand' relative to the process of your own fieldwork and ultimately to the subject of your study" (Hoey 2014: 4).

1.8 Data Analysis

Except for public figures who agreed to be publicly identified, all research participants were anonymized to facilitate open discourse and protect individuals' identities. Formal interviews lasted between 26 and 106 minutes and were digitally recorded and transcribed. About 60% of interviews were conducted during participant observation and were rarely digitally recorded, as ethnographic methods include informal and spontaneous interviews during participant observation where recording is not always possible, but often leads to more candid responses (Reeves et al. 2008). Research assistants earned authorship (see Chapter 3 for a discussion on the methodological choice to include students in my research), and helped me to ensure that digitally recorded transcriptions were accurate and were then loaded into *NVIVO* software for coding and analysis. Data were coded using an inductive 'bottom-up' approach where codes were data-driven, rather than fitting the data to preestablished theoretical codes (Clarke & Braun 2014; Creswell & Creswell 2017). Findings were coded thematically, with saturation reached prior to finishing the interviews. In Chapter 2, I explore the study-sites' cultural contexts in greater depth that informed the data collected and analyzed.

Chapter 2- Study Location and Background

2.0 Study Location

In this section, I situate the study within its ecological and political context, review the ecological literature, explore the idea of the culturally constructed 'Cascadia bioregion' and its potential to open up the social and environmental dimensions of the study, as well as engage various narratives of 'competing' human cultures in the region to consider how conflict between human groups and humans and wildlife may arise. I commence with a description of the ecological context in the region before pivoting to the conflict in question between humans and gray wolves. The proposed Pacific Wildway corridor intends to connect natural habitats along the mountain ranges of the Pacific Coast of North America, stretching from Prince William Sound in Alaska to Baja Coast, Mexico (Wildlands Network 2018). The conservation management project would link vital ecological habitats for migratory species, and specifically large carnivores that rely on extensive tracks of land to find food, shelter, and mating partners (Bowers and McKnight 2012), in attempt to mitigate biodiversity fragmentation risk (Chapin et al. 2009; Parr et al. 2017).

Large carnivores in the Pacific Wildway corridor include strict carnivores of cougars (*Puma concolor*) and gray wolves, as well as omnivores such as brown bears (*Ursus arctos*) and black bears (*Ursus americanus*). These species are arguably the most at risk of human-nonhuman animal conflict, as they require large areas of land outside of protected areas; urban sprawl and industry use of habitats are expanding, increasing the potential for human-animal conflict

(Chapron et al. 2014). Large carnivores were nearly eradicated in most of Europe and the United States (U.S.) in the early 20th century (Ripple et al. 2014), and the extirpation of species including the gray wolf has had detrimental effects on local ecosystems (Beschta and Ripple 2009). As detailed later in this section, popular Euro-American cultural heritage may have perpetuated the eradication of the wolves in the U.S. (Fritts et al. 2003), contributing to the current ecological crisis (Brook et al. 2008), as 60% of vertebrate animal populations have declined worldwide since 1970 (Grooten and Almond 2018).

Gray wolf rewilding efforts in central Idaho and Yellowstone National Park (YNP) in the U.S. have nonetheless proven to be ecologically and economically impactful (Trouwborst et al. 2017; Pettorelli et al. 2019). The ecological success of the gray wolf reintroduction program of 66 Canadian wolves, 35 in central Idaho and 31 in YNP in 1995-1996 following a 60-year hiatus (Wilson 1997; Foreyt et al. 2009), has led to the species' recovery, causing the gray wolf to exceed local carrying capacities and expand beyond the park's boundaries. This has resulted in conflict with some local humans and their livestock in nearby towns, amplifying political discourse amongst pro and anti-wolf perspectives (Killion et al. 2019). This issue has been highly contentious in the Intermountain West region of the U.S.; a geographical region located between the Rocky Mountain range and the Pacific Coast Mountain ranges (largely made up of the Cascades, Blue Mountains, Strawberry Mountains, and Sierra Nevadas).

Following the wolves' planned reintroduction, they naturally dispersed into other territories in the central section of the Pacific Coast Wildway. This central corridor is known as 'Cascadia', a

constructed bioregion consisting of parts of British Columbia, Canada and predominantly Oregon, Washington, and Idaho of the U.S., bordering YNP on its eastern demarcation (see Figure 2) (Oregon Department of Fish and Wildlife 2019a). The gray wolf is native to most of North America, including Cascadia, where they originally migrated to the area approximately 750,000 years ago (Wayne and Hedrick 2011; Busch 2018). The gray wolf's Cascadian territory used to include coastal Northern California and the west side of the Cascade Mountain Range (Bailey 1936), until "human settlement patterns, including the gold rush of the 1850s, that briefly made the area one of the most densely populated in the Western United States" (Carroll et al. 2001: 27).

Gray wolves had not resided on the U.S. side of the Cascadia bioregion for nearly a century due to humans 'deliberately eliminating them', largely by the mid-1930s (Bangs 2016: 92). Adolph Shultz claimed that this was due to:

> Monetary losses to ranchers caused by wolves, after the buffalo had been replaced by cattle and sheep, reached huge sums. It led to the relentless pursuit of the killers by means of all sorts of devices, backed by high bounties, devices ranging from baited fishhooks, suspended from trees, to dead- falls, pits, wolf-scented traps, drives, and, most deadly of all, poisons. Wolf pelts repay only a small part of the cost of wolf control. Between 1738 and 1747 the Hudson's Bay Company alone sold over 10,000 wolf skins at prices varying between 9 and 18 shillings apiece, but in 1938, when few skins reached the markets, the price had risen to as high as 65 dollars for a prime pelt (1945: 93).

The Cascadia bioregion was no different than the rest of North America, where territorial, state, and federal programs promulgated wolf extirpation by offering bounties for their pelts.

> The first wolf bounty in the Oregon Territory was established in 1843 at an Oregon Wolf Association meeting in the Willamette Valley. The bounty for a large wolf was $3 and was paid from "subscriptions" to the association. In 1913, the Oregon State Game Commission offered a $20 wolf bounty in addition to the regular $5 paid by the state at the time…From 1913-1946, 393 wolves were presented for payment in Oregon (Olterman and Verts 1972). Many of these wolves were taken prior to the mid1930s—no more

> than two wolves per year were bountied after 1937. The last records of wolves submitted for bounty in Oregon were in 1946 (Oregon Department of Fish and Wildlife 2019a: 2).

Human perspectives of wolves shifted positively in the 1970s, with new federal protections ultimately leading to their planned reintroduction in central Idaho and YNP (Boitani 2003; Kuhl 2018). Wolf dispersal occurred naturally, resulting in the first documented pack of wolf pups confirmed in Washington State in 2008 (Washington Department of Fish and Wildlife 2019a), and wolf repatriation in Oregon also occurred in 2008 (Oregon Department of Fish and Wildlife 2019a). This immediately produced similar political controversies between human stakeholder groups and livestock akin to those near YNP, despite polls conducted in 1999 showing support for wolf habituation in the region at 70 percent in Oregon, and 75 percent in Washington (Yuskavitch 2015: 130). Conversely, in 2006, Ron Gillett founded the Idaho Anti-Wolf Coalition, and "referred to [wolves] as an animal of mass destruction" and stated that "the only way to manage Canadian wolves in Idaho is to get rid of them' (Yuskavitch 2015: 58). Environmental groups, however, continue to champion the gray wolves' return, but trepidation amongst certain human groups such as cattle ranchers (Eaton 2013; Lappalainen 2019), proliferated, as the political controversy surrounding gray wolf management and conservation in the Cascadia bioregion grew increasingly contentious (Kuhl 2018).

After the passing of the U.S. Endangered Species Act (ESA) in 1973, wolves were listed as endangered by 1978 throughout the 48 contiguous U.S. states, except in Minnesota where, with an estimated population of 1,200, wolves were listed as threatened (Mech 1977; Bath 1989). Gray wolves were still protected under the U.S. ESA in the contiguous 48 states outside

of Minnesota, “except for a few western states where Congress delisted them: Montana, Idaho, northern Utah (where no breeding population is known to exist), eastern Oregon and eastern Washington” (Mech 2017: 311). In 2011, after President Obama signed off on a budget deal that included the provision of turning over wolf management to the aforementioned western U.S. states (Miller 2012: 5). However, as stated in the introduction, the 2021 delisting of wolf proved catastrophic for the species in the western U.S. Even though wolf populations are recovering in the U.S., they remain predominantly isolated to the northern U.S. (e.g. near the Great Lakes, Pacific Northwest), and have only resettled 15% of their historic territory (Newsome and Ripple 2015; Bruskotter et al. 2014). Increasing wolf population numbers inevitably result in increased human-nonhuman animal interaction and, at times, conflict, prompting the necessity to investigate how humans and large-carnivores may coexist.

The SES-based coexistence framework can generally be understood as structured human attempts that use some type of framework to mitigate conflict between humans and non-human animals, as well as between competing human groups in relation to nonhuman animals in an effort to enable coexistence (see Karanth and Gopal 2005; Kerlinger et al. 2013). The factors that facilitate a coexistence framework have been extensively studied from a scientific lens, albeit principally in Europe (see Chapron et al. 2014; Chapron and Lopez-Bao 2016; Swan et al. 2017; Woodroffe et al. 2005), and explore how humans and large carnivores may co-habit shared landscapes. Pooley et al. (2017) contend:

> Conservationists may use economic power to encourage humans to change their behavior toward predators. They offer compensation for predated livestock (Boitani et al. 2011), reward payments for

> coexisting with healthy populations of predators (Persson et al. 2015), or, more indirectly, encourage locals to engage in predator-based ecotourism enterprises (516).

The coexistence framework is contrasted in much of North America by the 'separation model', promulgated in many wildlife management policies across the continent constructing a dichotomy between livestock and wildlife, their role in society, and how they are managed federally (du Toit et al. 2017). Systematically isolating large carnivores to 'wild' protected spaces away from human settlement (e.g., Yellowstone National Park) has been popular due to the (perceived) vast open spaces in western North America (see Chapter 5), yet development encroaches on these spaces further fragmenting ecological corridors (Ewing et al. 2005). However, gray wolves neither know, nor care, about the arbitrary human delineations of protected territories and invisible boundaries (Jones 2010). Wolf migration inevitably results in increased encounters with humans, most often in rural areas with humans who rear livestock, harvest timber, and compete for the same ungulate prey such as elk (*Cervus canadensis*), as wolves (Farrell 2017).

If action to ameliorate the human-human, and wildlife-human conflict in the Pacific Wildway and specifically in the Cascadia bioregion, is not taken soon, populations of large carnivores within it may drop precipitously without ample habitat and security, thus increasing biodiversity fragmentation risk (Abel et al. 2011; Cunningham 2012). For example, the British Columbia government recently published their plan to continue to cull wolves by inhumane aerial shooting methods in order to increase caribou (*Rangifer tarandus*) numbers, even though caribou population numbers remain above satisfactory provincial and federal levels (Serrouya

and McLellan 2016). Conversely, caribou numbers decreased primarily due to human activity, such as logging and laying oil pipeline and roads, increasing biodiversity fragmentation risk, and leading to controversial culling of gray wolves (Parr et al. 2017). This study responds to calls from the conservation ecology literature (see Carter and Linnell 2016; Jacobsen and Linnell 2016; Lute et al. 2018), and the human-nonhuman animal studies literature (see Ericsson and Heberlein 2003; Campion-Vincent 2005; Best 2018), to better understand the context of sociocultural factors enticing conflict, and explore how to redress conflict when it occurs; action that should benefit all stakeholders, including wildlife.

2.1 The Cascadia Bioregion

Cascadia is an unofficial political geographic area with no clear consensus on its physical or sociocultural boundaries, and varies depending on which popular narrative is employed to construct its boundaries and meanings. However, it is a popular idealistic concept among contemporary groups living within the region, where values of nature, culture, and independence contribute to the assemblage of identity for many (see McCloskey 1994; Smith 2008; Moothart 2016). The Cascadia bioregion, however, is not immune to polarizing dichotomies that are rife within the contested geographical boundaries. For example, the high-desert 'conservative', and often anti-environmental, political majority east of the Cascade Mountains, versus the coastal range 'progressive', often pro-environmental, political majority to the west, in addition to quotidian culture and political dynamics that permeate urban and rural North American society alike, between Canada and the U.S. (e.g., universal healthcare, Tim Horton's in Canada compared to Starbucks in the U.S.).

Shobe and Gibson (2017) suggest a contemporary contour of what demarks Cascadia as a region, and in their account, how soccer (football outside of the U.S.) aids in the cultural construction of the bioregion for its unique ability to bring various subgroups together. To construct their argument, they present three distinct 'competing narratives' of geographical place-based boundaries drawn from popular literature, including 'Cascadia as Ecotopia', 'Cascadia as Bioregion', and 'Cascadia as a globally competitive free trade region' (2017: 957). They refer to Garreau's (1981) book *Ecotopia* to outline Cascadia from the Alaska Kanai Peninsula along the western Cascade Mountain chain and its coastal region, to Point Conception mid-California (see Figure 2.1.1 below). Shobe and Gibson describe 'Cascadia as Bioregion' as a place where contemporary culture values an alternative economic model to global capitalism, where "the link between culture and nature" is emphasized (959). They credit McCloskey for his use of watersheds to demarcate Cascadia, engulfing lands much further inland compared to Garreau's *Ecotopia.* Alper (1996) further delineates the environmental boundaries claiming,

> From an ecology perspective, the region's boundaries are defined by the natural environment which includes the Georgia Basin/Puget Sound inland sea, the lush rain forests of Vancouver Island, and the Olympic Peninsula and the wilderness 'perimeter' that includes the Coast Range Mountains to the east and north of Vancouver and the Cascade range to the south in Washington and Oregon. However defined, Cascadia is based on the idea that in today's world, global economic logic and environmental and social interdependencies require regionalist approaches and solutions (4).

FIGURE 2.1.1 GARREAU'S CASCADIA ECOTOPIA



Figure 1. Garreau's Ecotopia.
Cartography: Jon Franczyk.

The Cascadia as McCloskey's Bioregion map traces from the Alaska Panhandle to the northern California coast, but goes east of the Cascade mountain chain to include most of western and southern British Columbia, a small portion of southwest Alberta Province, most of Idaho, and parts of western Montana, northern California, western Wyoming including Yellowstone National Park (YNP), and sections of northeastern Nevada (960; see Figure 2.1.2 below).

Figure 2.1.2 McCloskey's Cascadia Bioregion



Figure 2. Cascadia as McCloskey's Bioregion.
Cartography: Jon Franczyk.

Shobe and Gibson de-emphasize "Cascadia as a globally competitive free trade region" when referring to culture, but note that this delineation of Cascadia simply makes up existing political boundaries of British Columbia, Canada and Washington and Oregon, U.S., which together would be among the 20th largest economies in the world (959; see Figure 2.1.3 below).

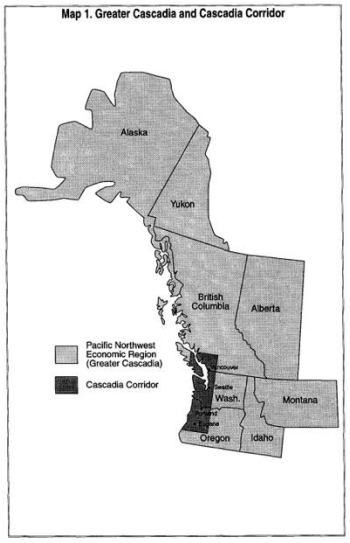
Figure 2.1.3 Shoe and Gibson's Cascadia Demarcated by Current Political Boundaries



Figure 3. Cascadia as British Columbia, Oregon and Washington.
Cartography: Jon Franczyk.

Alper, however, suggests that the Cascadia region is an imaginary "binational construction…beginning to take shape" as an economic and ecological region in the Pacific Northwest and western Canada (1996: 1-2). Alper utilizes a Journal of Borderlands Studies map titled, *Greater Cascadia and Cascadia Corridor*, similar to McCloskey's bioregion as the Greater Cascadia. He emphasizes the Cascadia Corridor stretching along the western Cascade Mountains from approximately Eugene, OR, U.S. to just north of Vancouver, BC, Canada (see Figure 2.1.4).

FIGURE 2.4 ALPER'S GREATER CASCADIA AND THE CASCADIA CORRIDOR



As this is a multispecies study, it is critical to account for all these geographical perceptions of Cascadia, to situate human cultural perceptions against those of large carnivores, specifically gray wolves, and their interaction with humans within the constructed geographical territory. The cultural contrasts within the bioregion enhanced the potential for conflict, and basis for this research. Known wolf geographies, therefore, determine the multiple locations that will be

examined as part of the study, predominantly east of the Cascade Mountain range in eastern Washington, eastern Oregon, central Idaho, and southern British Columbia. It is prudent to commence with central Idaho and Yellowstone National Park, including a small portion of Montana and Wyoming, for its focused rewilding efforts that spawned the wolves' resurgence in the Cascadia bioregion, particularly on the U.S. side of the 49th parallel north, dividing Canada and the U.S. in the Cascadia bioregion.

2.2 Wolf Population Data

As of 2010, 705 wolves were present in Idaho, 566 located in Montana and 343 were found in Wyoming, 21 in Oregon and 16 were recorded in Washington. Following the 2011 ESA delisting, biologists documented in 2012 that there were 117 packs in Idaho, and 23 border packs documented by Montana, Wyoming, and Washington. Of these, 66 packs were known to reproduce, 35 qualified as breeding pairs, and 187 wolf pups were produced (Idaho Department of Fish and Game and Nez Perce Tribe 2013). Below, I show how wolf populations expanded over the past decade, prior to the return of state-sanctioned wolf bounties that have swiftly curbed the species' repatriation of its former territory (see Introduction). These data show how different states enact their biopolitical power to 'manage' wolf that are largely influenced by sociocultural perceptions of the species, rather than ecological data.

2.3 Wolves in Idaho

There was an 11 percent decline in the population as Idaho wolf levels fell to from 705 to 684 in 2012. In the same year, there were 425 wolf deaths; of these, 418 were attributed to human-

caused mortalities. Out of the 418 human attributed wolf deaths, 329 were 'harvested' by Idaho state agency removal, 73 were legal take including hunting, 16 were other human causes and seven were unknown. In contrast, the USDA-APHIS Wildlife Services attributed deaths by wolves to livestock in Idaho as only 73 cattle, 312 sheep, and two dogs were killed; 19 cattle and 25 sheep were probable wolf kills (Idaho Department of Fish and Game and Nez Perce Tribe 2013). Prior to 2021, wolf harvesting in Idaho consisted of solely hunting and trapping. Hunting season in Idaho typically runs August 30-March 31, and trapping season between November 15-March 31 annually. Hunters were permitted to take up to five wolves and trappers up to 10 wolves annually, even though most only take one. The wolf population peaked in Idaho at 849 wolves in 2008, and from 2010-2015 numbers held steady between 684 and 786, indicating a stable population (Idaho Department of Fish and Game and Nez Perce Tribe 2013). However, more recent 2020 data estimated the population in Idaho at around 1,500 wolves (Lie 2021), suggesting the difficulty in assessing an accurate wolf census. These data correlate with the 2008 migration of wolves from Idaho into bordering states Washington and Oregon.

2.4 Wolves in Washington

In 2008, wolves repatriated Washington State, where they had not been present for more than 70 years, from neighboring Idaho and British Columbia (Wiles et al. 2011). In 1980, wolf was listed as endangered under Washington State law, providing the species additional protections even though federal law delisted them from the eastern 1/3 of the state in 2011, and fully in 2021. The Washington Department of Fish and Wildlife (WDFW) adopted the 2011 Wolf

Conservation and Management Plan, and formally cooperate with the Confederated Colville Tribes, the Spokane Tribe of Indians, USDA-APHIS Wildlife Services, and the U.S. Fish and Wildlife Service to manage wolves (Washington Department of Fish and Wildlife et al. 2019). It established three recovery areas including the Northern Cascades, Eastern Washington, and the Southern Cascades and Northwest Coast, though the aforementioned indigenous tribes manage wolves on their respective lands (see Figure 2.4.1 below).

FIGURE 2.4.1 WASHINGTON WOLF RECOVERY AREAS

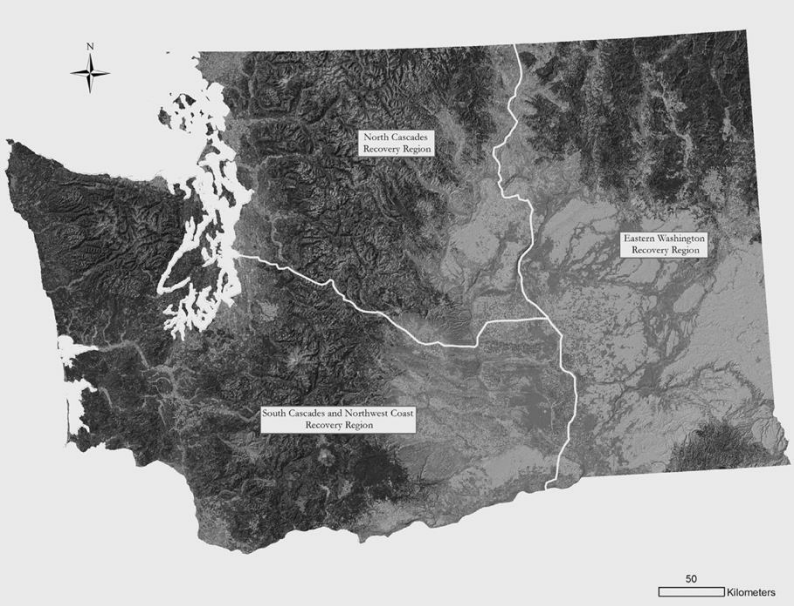


Figure 2.4.1 Wolf recovery regions identified in the 2011 Wolf Conservation and Management Plan for Washington (Wiles et al. 2011) and landscape cover types in Washington, USA with the Columbia Basin shrub-steppe and agriculture as light gray and forest cover as dark gray (Maletzke et al. 2015: 369).

After likely factoring in the contentious political discourse experienced in Idaho, Montana, and Wyoming before enacting his wolf management plan, former WDFW Director Jeff Koenings led a group of 18 stakeholders to develop Washington's Wolf Conservation and Management plan.

He adamantly specified that “no wolves have ever been or will be reintroduced into Washington from areas outside the state as part of this plan” (Wiles, Allen, and Hayes 2011: 8). With no planned reintroduction, wolves repatriated the state quickly following the first documented breeding pair in 2008. Guidelines for recovery (resulting in the wolves delisting) included “15 successful breeding pairs for 3 consecutive breeding years, with $\geq$ 4 pairs in each of the 3 recovery regions” (Maletzke et al. 2015: 368), or when $\geq$ four pairs breed in each of the three recovery regions and an additional six breeding pairs are identified anywhere in Washington state in a single year (Washington Department of Fish and Wildlife et al. 2019: 4). The most recent data collected, as of December 31, 2018, estimated 126 wolves reside in the state amongst 27 packs, of which 15 are breeding. The Eastern Washington Recovery Region has successfully hit the recovery targets with at least four breeding packs for three consecutive years (2016-2018), the North Cascades Recovery Region had only three breeding packs for one year, and the South Cascade and Coastal Recovery Region had only documented individual wolves, but no known packs (Washington Department of Fish and Wildlife et al. 2019).

Unlike Idaho, Washington State limits public wolf harvesting to the Coleville Confederate Tribes’ members, as well as for tribal members of Spokane Indian Reservation. The former maintains hunting rights north of their current tribal lands (Gooding 1994), known as the ‘North Half’ and part of their former territory, which was ‘upheld by the U.S. Supreme Court’s decision in *Antoine v. Washington* in 1975’ (Washington Department of Fish and Wildlife 2019b). The Coleville Confederate Tribes harvest season runs from August 1, 2017 until February 28, 2018. Each member was allotted up to three wolves per year, with a limit of one taken per day in

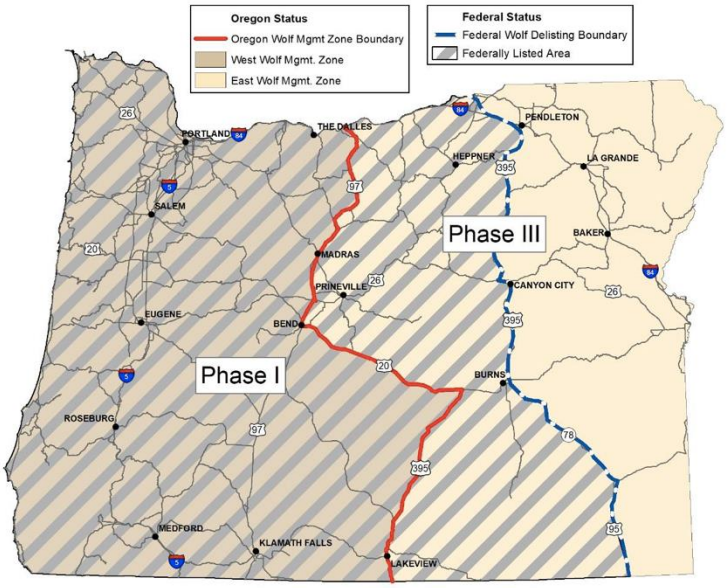
both the northern and southern halves of the reservation. However, they modified their harvest regulations in September 2018, opening up wolf harvesting year-round with no limits on tribal lands. This resulted in three wolves killed in 2018. The Spokane Indian Reservation caps harvest allocations at 10 annually, and only hunting is legal, unless a special permit is obtained for trapping or snaring; three wolves were harvested in 2018 on the Spokane Indian Reservation (Washington Department of Fish and Wildlife et al. 2019).

2.5 Wolves in Oregon

Similar to Washington State, Oregon State does not actively seek to reintroduce gray wolves, but in 2005 the State commenced a formal conservation and management plan. Its first documented breeding pair was discovered in northeastern Oregon in 2008 (Oregon Department of Fish and Wildlife 2011), and the most recent data collected in 2018 estimated that there are at least 137 known wolves; 16 packs in which 15 qualify as breeding pairs. 'For monitoring purposes, a pack is defined as four or more wolves traveling together in winter' (Oregon Department of Fish and Wildlife 2019b). Oregon is split into two wolf management zones; the East Wolf Management Zone is federally delisted from the ESA, whereas the West Wolf Management Zone was still federally protected until January 2021 (Lie 2021). In 2015, the Eastern Management Zone successfully hit its Phase II goal of four breeding pairs for three consecutive years, delisting them from Oregon State's endangered list. However, they are still protected under the Oregon Wolf Conservation and Management Plan and have not moved in to Phase III. Once that is implemented, the controlled take of wolves for sport hunting will be allowed under special permit (Oregon Department of Fish and Wildlife 2018b).

The two Wolf Management Zones are roughly split in the middle of the state, along the Cascade Mountain range, though the federal Wolf Delisting Boundary is further east, along Oregon Highways 395/78/95 (see Figure 2.5.1) (Oregon Department of Fish and Wildlife 2019b). Wolves are increasingly repatriating the Western Zone, as a new pack of wolves was discovered in 2019 in the Western Oregon in Lane and Douglas counties, north of Crater Lake in the Cascade Mountains (Plaven 2019). Two wolf pups were discovered on remote cameras on the Warm Springs Indian Reservation southeast of Mt. Hood and east of Timothy Lake in 2018 (KTVZ 2018), and another six in 2019 establishing the first known resident pack in the North Cascade Mountains in Oregon since their extirpation in the first half of the twentieth century (The Associated Press 2019).

FIGURE 2.5.1 WOLF MANAGEMENT ZONES AND PRE-2021 FEDERAL ESA STATUS



(Oregon Department of Fish and Wildlife 2019b: 3).

2.6 Wolves in British Columbia

Wolf population dynamics in British Columbia, Canada contrast starkly with U.S. Northern Rocky Mountain and Pacific Northwest populations. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) maintains the gray wolf's status in the country as 'Not at Risk' as their population has maintained levels deemed 'Least Concern' by the International Union for Conservation of Nature (IUCN) Red List of Threatened Species for at least 10 consecutive years. However, wolves are re-inhabiting southern British Colombia where they were previously extirpated, in a similar manner to what transpired in the U.S. in the first half of the 20th century. There are approximately 8,500 wolves in the province with an estimated population range of 5,300—11,600. Akin to the U.S. side of Cascadia bioregion, as well as the U.S. Northern Rocky Mountain Range, "the species attracts a highly polarized debate between those who see wolves as emblematic of B.C.'s wilderness heritage and those who see them as a threat to game species and livestock" (B.C. Ministry of Forests, Lands, and Natural Resource Operations 2014: iii-5).

Wolf harvesting in the province is legal, with hunting and trapping seasons running from fall through spring. Hunters are limited to taking two or three wolves, known as bag limits, although there is no required license for Canadian residents to harvest wolves. However, "hunting of wolves is prohibited in national parks and some provincial parks" (B.C. Ministry of Forests, Lands, and Natural Resource Operations 2014: 21). In contrast to the legalized wolf hunts, the British Columbia Society for the Prevention of Cruelty to Animals (BC SPCA) lambasts the provincial governments' wolf management plan for promoting the culling of wolves that

"use inhumane methods and lack of scientific justification". Dr. Sara Dubois, the chief scientific officer at the BC SPCA declares "killing from helicopters, even by the most skilled marksman, causes excessive stress during chase and there is no way to confirm death was quick and painless" (BC SPCA 2019). To best understand how current governmental wolf policies are influenced by local perceptions, it is imperative to consider cattle ranching history and culture in rural Euro-North American culture.

2.7 Cattle Ranching and Rural Euro-North American Culture

The history of cattle grazing in the western United States is complex and rich with opposing stakeholders and varying perspectives on land use rights. In Knight's (2002) edited volume, *Ranching West of the 100th Meridian: Culture, Ecology, and Economics*, they proffer an insight into cattle ranching history and culture in the U.S., arguing for a new 'cattle ranching culture' that is environmentally sustainable. They also promote livestock grazing and what Knight refers to as a more 'robust' contemporary culture that is less politically polarizing and balances economic, cultural, and environmental factors. The editors purposely selected contributors from what they call the 'radical center', abandoning extremists from both sides of the pro versus anti-cattle grazing debate. This includes conservationists that are diametrically opposed to livestock in the 'New West' for their negative impact on the environment, as well as anti-government persons who maintain that public lands should be completely privatized in favor of private citizen rights, and cattle ranching. The edited volume collectively presents cattle ranching culture as fairly homogenous (amongst Euro-American settlers) west of the 100th meridian, at least since the mid-1800s, although ranching history started in what became the

U.S. as early as the late 1500s. They posit that the culture surrounding ranching in the New West at times amplifies the contrasting perceptions of entrenched mounting discourse between pro-cattle ranching and environmentalists. For example, the editors state:

> Ranchers tend, pretty much of necessity, to be ultimate pragmatists. It is their supporters who wear the big hats, never having choused a cow, and it is often rancher-wannabes who prove notoriously inflexible, hidebound, and doctrinaire. Because ranching requires access to so much land and because its incomes are at best small, ranching has rarely had a strong built-in economic constituency in places of power. Instead, ranchers have through the years had to make cultural converts. And they continue having to do so, with surprising and ongoing success (2001: 5).

Perhaps contrary to many contemporary cattle ranchers' beliefs, the United States government has always had a role in cattle grazing. The Homestead Act of 1862 is arguably the most popular act, as it granted settlers and potential ranchers the right to 160 acres of land that had been secured with 'victories' over Native American groups such as the Apache (Porterfield 2004). Sheridan (2001) provides a succinct history of cattle ranching in the 'American West' (limited to the U.S. in this context) and northern Mexico since the Homestead Act passed. At the turn of the twentieth-century, harsh blizzard conditions in Montana and North Dakota forced many ranchers to relocate their cattle to Arizona where grazing opportunities had still not been over consumed. However, Arizona quickly faced similar issues of land overgrazing, and in combination with pressure from environmental activists, many cattle ranchers have been forced to exit the business and sell their property to real estate developers during the latter part of the century (Sheridan 2001).

Brunson and Huntsinger (2008) claim that ranches "safeguard rangeland ecosystem services, protect open space, and maintain a unique and cherished American heritage" (137-138).

Proponents of rancher rights argue that ranching is a more sustainable solution then the overpopulation of resource-limited areas in the American West, where water, fauna and flora are rapidly facing degradation (Sheridan 2001). Competition from other industries such as coal mining (Rolston 2013; 2014), natural gas fracking (Davis 2012), logging (Prudham 2002), and oil extraction (Davis 2012; Haggerty et al. 2018), have also had a contentious impact on the environment (Walker and Hurley 2011). The American West has transformed since the 1950s, with increasing populations transplanting into urban and sub-urban areas from predominantly U.S. coastal states (Nash and Etulain 1989; Sheridan 2007). As natural resource extraction jobs were eliminated due to bust cycles and automation since the 1990s, some workers migrated to cities, but rural populations in the Cascadia bioregion stabilized after experiencing a reverse migration of urbanites that were "attracted by natural amenities" (Boag et al. 2016: 209; Gosnell and Abrams 2011).

2.8 Wolf Reintroduction Perspectives

The reintroduction of gray wolves into the Northern Rocky Mountain Range of the United States, and specifically central Idaho and Yellowstone National Park (YNP) in 1995 and 1996, was a controversial issue based in a long history of Euro-American cultural beliefs holding negative perceptions of the wolf (see Fogelman 1989; Chavez et al. 2005). For example,

> The wolf's name underwent taboo deformation (as we would say gosh for God) in several [Proto-Indo-European] branches, suggesting it was feared; we also know it was associated in PIE culture with outlaws. In Hittite law, calling a person a wolf was a speech-act that legally branded the person an outcast. The wolf was also a symbol of death; seeing a wolf was a metaphor for being struck dumb, itself metaphorical for losing vitality and dying (Fortson IV 2011: 31).

The negative view of wolf persisted across the Atlantic, where "prior to the arrival of European

settlers in the 1600s, wolves existed throughout much of the North American continent. European colonists, however, sought to eradicate wolves and other large carnivores, viewing them as dangerous and bloodthirsty predators and an impediment to progress" (Fox and Bekhoff 2011: 127). Contrarily, indigenous views of wolves have been largely positive (Shelley et al. 2011; Cortes-Vazquez and Zedalis 2013). Prior to Euro-American settlers in the present day American-Canadian West, wolves roamed freely in North America and were an integral part of the environment (see Young and Goldman 1944; Pimlott 1961; Mech 2012; Busch 2018). Hunt (2008) details positive perceptions of the wolf globally amongst Asian, Near Eastern, and North American indigenous populations, with uniquely contrasting negative perceptions of wolves held predominantly by Europeans and European immigrants to North America. Arnold contends that following the last Ice Age, 'man and wolf' coexisted as the two predominant predators "for a long time comfortable, the wolf complementing its own diet with the remnants of man's wasteful hunting. For this reason, the mythology of the North American Indian was favorable to the wolf and that of the Eskimo remains so" (1986: 102). The historical, predominantly negative, (generally), European cultural viewpoint may be rooted in folklore (Crawford 1955; Lopez 1978; Beresford 2013), competition for prey (Mech 2012), fairy tales (Zipes 2003; Marshall 2004), and religious beliefs (Lincoln 1975), arguably skewing the image of wolf throughout the Euro-American history of the United States and Canada. Fritts et al. conclude that the "wolf is the sum total of what we believe about the animal, what we think it represents, and what we want and need it to be. To many humans, this animal is the ultimate symbol of wilderness and environmental completeness. To others…it represents nature out of control" (2003: 290).

The cattle ranch industry, along with the U.S. government, sought to clear bison (*Bison*) from the U.S. prairie lands in favor of cattle, limit indigenous hunting, and open up the west for development. "The great bison hunt of the 1870s, was therefore more a product of temporary economic circumstances than intrinsic value of the hides' (Barsh 1990: 107). In the years following wolves' extirpation in the 1920s and 1930s throughout the U.S. and southern Canada, negative views of the wolves reached their climax. Adolph Schultz (1945) provides one outlook of wolves from that era, describing them as a fascinating nuisance:

> Wolves have not only been a menace to human life, but have always been very destructive to domestic stock, being perhaps the most efficient of all predators…only in recent days and with the aid of modern traps and poisons has man succeed in exterminating the wolves over a large part of their historic territories. From the point of view of human welfare, economics, history, and literature the wolves and their descendants, the dogs, represent the most important and interesting group of carnivores (93).

By the mid 1940s, wolves were nearly extirpated from the entirety of the continental U.S., except for a small population that has persisted in Minnesota and Michigan (Fuller et al. 1992). Public knowledge of the wolves' near extinction in the U.S. resulted in somewhat of a renaissance of shifting wolf perceptions in the 1960s to 1970s, although there is no consensus pertaining to why this occurred (Bruskotter et al. 2007). Potential causes may include positive media coverage of large carnivores following World War II (Kellert et al. 1996), or improved knowledge and education concerning the environment holistically (Musiani and Paquet 2004).

Messmer, Reiter, and West proffer that public perceptions of wildlife are volatile where "historically, the pendulum regarding how wildlife is managed has been subject to wide swings" (2001: 1254). They credit Rachel Carson's (1962) book *Silent Spring* for "initiating a new environmental era" of improved public perception and concern for wildlife (1254; Wagner

1988). These shifts ultimately resulted in various sub-species of wolves' reintroduction, or rewilding, in Michigan, Minnesota, Wisconsin, Idaho, Montana Wyoming, Arizona, New Mexico, North Carolina and Tennessee in the U.S. (Browne-Nutlez and Taylor 2002).

2.9 Gray Wolf Political Discourse

The historical and cultural background of the gray wolf played a significant role in perpetuating the negative perceptions of their pending reintroduction in the late 1980s and early 1990s, where "strong opposition from some factions within the region forestalled action for two decades" (Fritts et al. 1997: 7). While the opposition was clearly in the minority, with more than 72 percent of Idaho's population supporting wolf reintroduction in a 1992 survey (Wilson 1999), their collective voice amplified resistance to rewilding wolves. "The cattle culture of the West continues to be the most powerful obstacle to wolf recovery" (Nie 2003: 133), as livestock grazing roam over more than 270 million acres of public lands, though "the Forest Service concluded that livestock grazing is the primary cause of species endangerment in arid regions of the West" (Donahue 2005: 724).

Dubuc aptly captures the 'opposition' anti-wolf perspective, opining against the wolf's reintroduction to the Northern Rocky Mountain region, including Idaho, Wyoming, and Montana. He succinctly describes cultural dynamics and the outsized political influence of cattle ranchers and big game hunters:

> Although ranching continues to serve as a foundation of many communities throughout the West, it no longer serves the function as one of the primary underpinnings of the West's economy. Today, ranching represents a microscopic percentage of the economy of the West as a whole. But while ranching may not

> be the fuel that makes the Western economy run, it is part of the skeleton that holds the West together and it is difficult to imagine a West without it. Ranchers remain politically powerful in sparsely populated states such as Montana and Wyoming and ranchers, aligned with a hunting community that sees wolves as antithetical to their cause, do not, by God, want to have to contend with competing with wolves for a living. It's bad enough that they have to contend with uncertain markets, disease, and Mother Nature. Now they want to put wolves in my backyard? And they want to use my tax dollars to do it? I don't think so. And so they have resisted - hard…[and] for those opposed to wolves, the reintroduction was largely seen as having the Feds shove it down their throats. They weren't happy about it. They still aren't happy about it. But nonetheless, the Feds went ahead and did it. Having brought the wolves back against their will, the Feds then turned to the states and asked them to manage the wolves (2008: 218-219).

The *threat* of financial uncertainty, however, appears to be greater than the *actual* cost inherited when wolves are responsible for livestock depredation. Muhly and Musiani analyzed the financial impact of livestock depredation from wolves at an individual ranch level between 1987 and 2003, and found that "livestock killed by wolves cost producers approximately $11,076. 49 per year", and that while the individual rancher was impacted at a larger scale, wolf depredation cost the cattle industry a dismal <0.01% of annual gross income in the northwest region (2009: 2439). They also suggest that compensation programs that pay ranchers for their losses may create further animosity toward wolves and their supporters if not paid promptly, but that compensation programs should not be abandoned.

Idaho has been at the epicenter of the wolf reintroduction debate for nearly two decades as it has the three largest areas of 'undeveloped' forest (from human settlement) in the nation-state (including Frank Church-River of No Return, Selway-Bitteroot, Gospel Hump forests), with more than 64% of lands owned by the federal government, compared to just 31% private ownership (Fritts et al.1994). Issues of state's rights versus federal law were exposed where "in 1995, the Idaho legislature barred the Idaho Fish and Game Department from cooperating with the federal wolf recovery program" (Nie 2003: 108). To proceed with the wolves' reintroduction,

the U.S. Fish and Wildlife Service changed the plan's status from a recovery plan to a 'non-essential-experimental' program, in an attempt to address state and local concerns (Fritts et al. 1997; Bangs et al. 2001). The Idaho State government also sought to turn over management of the wolves to the Nez Perce Native American tribe, believing that the tribal community was perhaps more susceptible to pressure to conform to state-interests in the long-run (Wilson 1999).

The Idaho State government remains adamantly opposed to wolves coexisting in the state (see Introduction), as their 2002 Idaho Wolf Conservation and Management Plan is the primary governing doctrine on the issue prior to *SB 1211* (Siler 2021). The Idaho Legislative Wolf Oversight Committee in the 56th Idaho Legislature, in 2002, declared in their executive summary:

> Without management, conservation is overcome by conflict. The State of Idaho is on the record asking the federal government to remove wolves from the state by the adoption in 2001 of House Joint Memorial No. 5. The position reflected in House Joint Memorial No. 5 continues to be the official position of the State of Idaho. However, in order to use every available option to mitigate the severe impacts on the residents of the State of Idaho, the state will seek delisting and manage wolves at recovery levels that will ensure viable, self-sustaining populations (2002: 4).

Despite opposition by Idaho State officials, the federal wolf reintroduction plan proceeded, and their management was ultimately turned over in part to the Native American Nez Perce Tribe, which cooperated with the U.S. Fish and Wildlife Service to manage the wolves' rewilding (Donoghue et al. 2010). The U.S. federal government must cooperate with Native American tribes on a mutual governmental level as "Native American tribes have a unique relationship with the United States federal government known as the trust relationship, which is based on a

complex body of treaties federal court rulings, act of Congress, Executive Orders, and tribal laws" (Ohlson et al. 2008: 431). However, the cooperative management of the gray wolves between the U.S. government and the Nez Perce Tribe was novel for its tribal inclusion in 'natural resource management', and eventually resulted in becoming a hallmark agreement between the United States government and a Native American nation (Wilson 1999).

Cortes-Vazquez and Zedalis (2013) leveraged an historical ecology approach to conduct brief ethnographic research with the Nez Perce Tribe of Idaho in 2009, in relation to their role in the gray wolf reintroduction into the state. They conducted 10 interviews (eight with tribal members and two with non-tribal wildlife biologists working on tribal lands), where interviewees detailed their shared identity with wolves, as well as the wolves' influence in Nez Perce culture. One interviewee shared:

> The Nez Perce recognize the importance of species management and survival as a vital link to our cultural and religious heritage' [Q. What do you associate with wolves?] 'The association is that all life is connected and all life is spiritual. The wolf through its pack symbolizes both of these. Each plays a role in the survival of the family and the community that interrelates to its importance to the environment in which it lives (Nez Perce female, approx. 45) (2013: 942).

The Nez Perce collectively depicted the wolf as unthreatening, part of their heritage, and that non-tribal member residents of Idaho simply did not comprehend the cultural significance of the wolf to the tribe. Beginning in 2002, the State of Idaho and the Nez Perce Tribe cooperatively monitored wolves under *Idaho's Wolf Conservation Management Plan* (Idaho Department of Fish and Game and Nez Perce Tribe 2013). However, this was bittersweet for pro-wolf supporters as these data were used as a basis for wolves to be delisted from the Endangered Species Act list in 2011.

Federal management was partially turned over to the State of Idaho in 2006 (Norton and Kempthorne 2006; U.S. Fish and Wildlife Services 2011; Horne et al. 2019). As of 2011, "wolf monitoring and management in Idaho is a cooperative effort between the State of Idaho, Nez Perce Tribe, USDA APHIS Wildlife Services, and the U.S. Fish and Wildlife Service" (Husseman and Struthers 2016: iii). After wolves became delisted from the ESA in 2011 in Idaho (Mech 2017), wolf management drastically shifted as wolf harvesting became legal in certain circumstances, (e.g., protecting livestock from depredation) or newly established hunting seasons following the 2009 proposed delisting (Bergstrom et al. 2009), and ultimate reduction of ESA protections and subsequent delisting (Ausband 2016). However, lawsuits delayed wolf harvesting in the Great Lakes region (U.S. Fish and Wildlife Services 2019b), as well as in Wyoming until 2017 when the U.S. Court of Appeals in the D.C. circuit overturned a previous U.S. District Court's ruling that had halted their ESA delisting in 2011 (U.S. Fish and Wildlife Service 2017).

National public support for wildlife, and wolves in particular, continues to be capricious, as Olson et al. demonstrate that in Wisconsin perception "swings in wolf status led to inconsistent management authority, declining public support for wolves, and possibly the unintended backlash of more illegal kills and a legislatively mandated public wolf hunt" (2014: 351), which materialized in 2021 (Treves et al. 2021). Houston et al. (2010) performed a content analysis of more than 30,000 print news media between 1999-2008, and found that U.S. states with established wolf populations, (e.g., Minnesota), held more positive attitudes toward the large

carnivores than states that had relatively new populations (e.g., Wyoming, Idaho). Support for wolves in Cascadian rural areas, where humans may more frequently encounter wolves, may be trending more positively, however. Boag et al. conducted two-cross sectional telephone surveys in 2011 and 2014 of northeast Oregon residents regarding environmental concerns. They found that public opinion had shifted and support for eliminating wolves in the area was reduced from 33% to 27% over the four-year period (2016). Fickle public opinion is perhaps one of the most vital variables to address in large carnivore management and conservation, as Sillero-Zubiri and Laurenson (2001) claim a "move towards community-based conservation is clearly essential for carnivore conservation" (283). This background foregrounds the study, pre-fieldwork. In Chapter 3, I outline how I co-produced knowledge 'in the field', where I leveraged my position as a tenure-track faculty (academic staff).

Chapter 3- Co-producing Knowledge

If you want to go fast, go alone; but if you want to go far, go together.

- African Proverb[5]

3.0 Introduction

In her recent essay *Anti-hero Care: On fieldwork and anthropology,* Emily Yates-Doerr celebrates "fallibility over mastery and social connections over individually acquired knowledge" (Yates-Doerr 2020: 233). She draws on contemporary feminist critiques of the 'lone field-worker' in anthropology (Gottlieb 1995; El Kotni et al. 2020) to demonstrate the importance of failure, collaboration, and situating one's work within a perpetual essence of unfinishedness. "The Hero is a powerful figure in anthropology, a discipline that has long celebrated the 'lone fieldworker'—presumably male, presumably unencumbered by kinship—who would venture into the unknown to return with captivating stories, that is, stories that capture" (2020: 233). Emily's reflexive essay draws on her first attempt to take her two young boys into the field in highland Guatemala, but she encountered professional challenges and an accident that caused her young son to have emergency surgery. She ultimately cut her trip short with little fieldwork conducted. As Emily ethnographically describes the consequences of this chaotic experience, she emerges with a new concept, 'anti-hero care', as a pathway for anthropologists to confront persistent gender stereotypes and the idea of the lone 'hero'.

[5] This oft-quoted proverb is believed to be of African descent, but it's exact origins are unknown. For an intriguing conversation about it see: https://www.npr.org/sections/goatsandsoda/2016/07/30/487925796/it-takes-a-village-to-determine-the-origins-of-an-african-proverb (Goldberg, 2016).

I draw on Emily's essay to unpack the sticky entanglements of knowledge (co)production in anthropology, and by doing so take a small step toward promoting gender equality within the discipline. I also formally recognize co-producers of knowledge with authorship, in this case, students and supervisors, which has become commonplace in other disciplines such as ecology. I've co-published with interlocutors and community partners in previous research and am an advocate of doing so (see Thomsen et al. 2021d), but there was no single interlocutor that earned authorship in this case. There are no universally accepted guidelines for authorship and disciplinary norms persist, though the International Council of Medical Journal Editors (ICMJE) guidelines are widely used (McNutt et al. 2018; ICMJE 2021). In my work, I attribute authorship as defined by McNutt et al.'s (2018) guidelines that are used by the journal *Nature* and are adapted from the ICMJE.

> Each author is expected to have made substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data; or the creation of new software used in the work; or have drafted the work or substantively revised it; AND to have approved the submitted version (and any substantially modified version that involves the author's contribution to the study); AND to have agreed both to be personally accountable for the author's own contributions and to ensure that questions related to the accuracy or integrity of any part of the work, even ones in which the author was not personally involved, are appropriately investigated, resolved, and the resolution documented in the literature (2018: 2558).

In this chapter, I grapple with the assemblage of my positionality, identity, and privileges afforded to me as a white, cis gender male anthropologist who aspires to be the anti-hero. I concur with the view that no one should have to be called a feminist; gender-equality (including nonconforming and fluid gender identities) should be the generally accepted social norm across all cultures as a fundamental human right. Rather, those who oppose gender-equality in speech, law, culture, or action should be called sexist. Like a wolf, I could survive as a 'lone-

wolf' or 'lone-fieldworker', and have done so at times, but I learned early on though that I feel most fulfilled when working in a group. Nay, a pack. "Wolf pack is defined as a cohesive family group, including a long-term bond breeding pair, mature offspring, and pups; occasionally, an unrelated individual may join the group" (Cordoni and Palagi 2019: 992). They are highly social animals with complex social structures, divisions of labor, and culture, such as the demonstration of mourning when a member of the pack dies (see Chapter 4 for an ethnographic description of an instance where I encountered this during my fieldwork) (Mech and Boitani 2007).

Akin to a wolf pack, I include my students in my research as it is mutually beneficial and creates a shared sense of responsibility and purpose. I also regularly collaborate and co-lead my lab with my partner, Dr. Jennifer Thomsen. Yes, it takes time to train students to become effective members of the lab before they can contribute to knowledge acquisition, production, and dissemination. However, I am consistently rewarded in a multitude of ways. Students challenge my thinking, make me defend my positionality, and force me to clarify my thoughts and ideas in a cohesive manner. They have different perspectives and agency and are incrementally tasked with more advanced skills such as data analysis and writing for publication as they progress in their training. In my experience, students mature rapidly during this process (see Thomsen et al. 2018a, 2018b, 2019, 2020, 2021a), and provide unique insights that ultimately produce a richer final product.

As this was my second Ph.D. (I don't recommend doing a second doctorate but in my case it was worth it), I was in the unique position, and privilege, of already holding a tenure-track

academic job. Though this provided several limitations on where and when I could conduct my fieldwork, it also presented an opportunity to engage my students as research assistants through the Vertically Integrated Project (VIP) model (I detail the model and its merits below), and by using my study as a pedagogical tool in the courses that I teach. I apply Yates-Doerr's concept of 'anti-hero care' to the co-production of knowledge with students, supervisors, and colleagues and couple it with the VIP model in my Multispecies Livelihoods Lab (MLL).

In 2013, Jenn and I co-established the Global Scholars Program (GSP) that would eventually become the MLL. The GSP was an undergraduate focused experiential-learning program that we started when I was in an adjunct instructor, equivalent to an academic casual in other parts of the world. It developed into the MLL when I became a tenure-track Assistant Professor at Boise State University. Jenn and I champion diversity, equity, inclusion, and justice in the lab. We apply the VIP model within the MLL in an effort to increase underrepresented students (e.g., racial, or ethnic, women, disabled persons, etc.) in science, technology, engineering, and math (STEM). Anthropology's breadth aligns with humanities at times, but also positions itself within STEM as cultural anthropology is recognized as such by one of the U.S.'s primary national research funding agencies, the National Science Foundation (NSF). The MLL is an interdisciplinary wildlife-human relations research lab, and includes students from anthropology, ecology, veterinary sciences, business, etc. to prevent 'group think' or simply becoming too entrenched within one disciplinary perspective. I describe our model and its efficacy in greater detail below. After a short discussion of the VIP model and its ability to attract and train underrepresented students in STEM, I analyze the coupled VIP and anti-hero

care approaches for their usefulness to deconstruct gendered power structures in anthropology, and science in general, to provide insights into an anthropology of knowledge co-production.

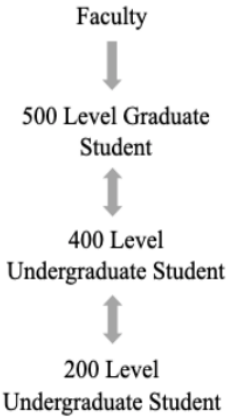
3.1 Vertically Integrated Project Model

Dr. Ed Coyle developed the VIP model at Purdue University while working with engineering students on experiential-learning projects in the Engineering Projects in Community Service (EPICS) program (Amoo et al., 2020). In 2005, the EPICS program won the National Academy of Engineering's Gordon Prize (Coyle et al., 2006), and has since expanded to over 30 universities (Zoltowski & Oakes, 2014). Though EPICS is widely considered a success, the VIP model was created to transition focus away from engineering-based community projects in an effort to integrate faculty research and teaching in a more sustainable faculty award structure (Cullers et al., 2017), and to emphasize Ph.D. research (Coyle et al., 2006). At a meeting hosted at Georgia Tech in 2014, 14 institutions met to develop the core tenants of the VIP model. This resulted in a collaborative proposal and subsequent $5 million grant from the Helmsley Charitable Trust to establish the VIP at multiple sites (Amoo et al., 2020). The eight 'essential elements' of the VIP model include:

1.) Projects are embedded in faculty mentor's scholarship and exploration
2.) Projects are long-term and large-scale, continuing for many years, even decades
3.) Program is curricular and all participating students are graded (A-F; not P/F or S/U)
4.) Students can participate and earn credits toward their degrees for at least two years
5.) Learning outcomes focus on the development of both disciplinary and professional skills
6.) Multi-disciplinary teams are encouraged but not required
7.) Dedicated classroom and meeting spaces, and
8.) Faculty/student interest is based on mutual interest (VIP Consortium, 2020).

The VIP Consortium was consequently established to manage and expand the VIP model, now present in 36 universities and colleges around the world (24 U.S. and 12 international). The VIP program is "a transformative approach to enhancing higher education by engaging undergraduate and graduate students in long-term, large-scale, multidisciplinary project teams that are led by faculty. Students earn academic credits, while faculty and graduate students benefit from the design/discovery efforts of their teams" (VIP Consortium, 2020). It is designed to be 'vertically' integrated from first year undergraduates-to-PhD level students (see Figure 3.1.1 below), though the focus is most often concentrated at the undergraduate level.

FIGURE 3.1.1 STANDARD VIP MODEL



The model is considered sustainable as it reduces faculty workloads by coalescing research and educational objectives, empowers existing students to teach and mentor incoming students (Abler et al. 2011; Ferri et al., 2017), transcends disciplinary silos that often hinder research (e.g., Thomsen et al., 2018a), promotes diversity and inclusivity (Sonnenberg-Klein et al. 2017), and fosters student-faculty collaboration (Baxter et al., 2011; Abler et al., 2017; Strachan et al., 2019). However, while graduate student benefits are identified and sometimes considered,

most studies do not detail how the VIP may generate a myriad of benefits for (underrepresented) graduate STEM students. We applied the VIP model to recruit URMs and women, as the 'near-peer' mentorship model may serve as an optimal education-to-career training model for Ph.D. students, as it inherently embraces diversity and inclusivity (Sonnenberg-Klein et al., 2017).

3.2 Why Focus on Underrepresented Students?

Underrepresented minority (URM) representation in U.S. undergraduate STEM enrollment rates (34.8% URM first years vs. 37.6% non-URM declared STEM majors) and bachelor's degree graduation rates (31.6% of all URM vs. 32.2% of non-URM undergraduate degrees awarded are STEM degrees) are proportionate to non-URM rates (Allen-Ramdial and Campbell 2014). In the U.S., URMs comprise students who self-identify as Black/African American, Hispanic/Latino(a), Alaskan or Native American/Indian, or Pacific Islander; people who identify as Asian and white but not another racial or ethnic group are not considered URM (Bailey 2015; Yadav et al. 2020). However, these seemingly favorable statistics rapidly decline between undergraduate degree attainment and graduate degree completion, resulting in URMs representing only 12.1% of all STEM doctorate recipients, and they hold approximately 10% of all STEM positions in academic or industry settings (Allen-Ramdial and Campbell 2014).

Though data suggest that gender diversity in STEM graduate programs and work positions post-Ph.D. are better compared to URMs, women still represent less than 40% of STEM-related faculty positions, and at a significantly lower rate in non-social and behavioral science fields,

such as engineering at 16.3% in 2016 (Yoder, 2017). Gender diversity in non-academic STEM industry positions appears to be fairly representative at first glance, at about 50%. However, this is perhaps skewed as women are overrepresented in health-related jobs at approximately 75% (Funk and Parker 2018). When healthcare fields are excluded from STEM employment studies, women held STEM positions decrease to about 26% despite making up about half of the workforce in the U.S. (Landivar 2013). Gender and URM diversity in graduate STEM education enrollment have improved over the past decade, but URMs' graduation and employment rates post-Ph.D. remain low, and high attrition rates for underrepresented STEM Ph.D. students remain prevalent (Cardell et al. 2020; Miller and Orsillo 2020; Okahana and Zhou 2019). Though national efforts to improve URM and gender diversity in STEM graduate education are underway through programs such as the National Science Foundation's (NSF) Bridge to Career (Preuss et al. 2020), ADVANCE (NSF 2017), Integrative Graduate Education and Research Traineeship (NSF IGERT) (Denham et al. 2021), and Ph.D. bridge programs (Rudolph et al. 2019), barriers to inclusivity and diversity persist.

3.3 Barriers to Inclusivity, Diversity, and Belonging in Graduate STEM Education

Critical mass theory suggests that the numerical representation of minorities in a given environment helps to alleviate social and cognitive barriers such as tokenization or isolation (Kanter 1977). While various discussions remain within the affirmative action debate, Park and Lui critique quantitative analysis and group proportions as "an oversimplified association of critical mass with a magical tipping point" (2014: 49), citing numerous failed attempts to actualize a supportive racial climate on university campuses by numbers alone (see Cress and

Ikeda 2002; Museus 2008; Poon 2010). Considering the dynamics of an agency framework, individual institutions and their legacy play a vital role in shaping a campus' climate and culture. While diversity representation significantly influences student populations and their perceptions, Garces and Jayakumar's *Dynamic Diversity: Toward a Contextual Understanding of Critical Mass,* suggests that educational benefits of diversity are context-specific and depend on a "symbiotic relationship between the environment and student" (2014: 120). While a vast amount of research over the last several decades has been dedicated to broadening participation in STEM, gains have yet to be actualized in all fields (e.g., mechanical engineering and computer science) and across racial or ethnic groups (e.g., African Americans and Native Americans in the natural sciences) (Malcom and Malcolm-Piquex 2013).

Yadav et al. (2020) discuss the challenges URM postdocs face securing tenure-track positions within academia, while Carrigan et al. (2011) cite underrepresentation at every level for women faculty in STEM disciplines, albeit asserting that a mere 'critical mass' of 15% or higher positively effects women faculty. Significant improvements in representation have stemmed from this breadth of research, but it is clear that women and URMs face persistent barriers compared to their male (predominantly white) counterparts. Cardel et al. (2020) synthesize added barriers to women in academia that translate to 'chutes' (structures that drive women out of academic careers). They call for an academic culture of respect and equal opportunity with specific institutional interventions (e.g., 'ladders') that cultivate inclusive learning environments to empower future leaders. While systemic racial and ethnic discrimination, microaggressions, and low belongingness are understood to negatively influence psychological

functioning and academic achievement, Miller and Orsillo (2020) propose that providing students with a framework of acceptance that is consistent with their personal values can significantly improve their overall merit and self-efficacy. We strive to do this in the MLL, and the following section describes our efforts to date.

3.4 The Multispecies Livelihoods Lab

The MLL is delivered as a wildlife-human relations research lab and the foundational GSP included a complementary service-learning course where we led students abroad to conduct research and consult environmental nonprofit organizations. Though aspects such as service-learning are still integral to the MLL, we transitioned to mainly focus on graduate training with a few select undergraduates, rather than a majority of undergraduates for practical purposes. Service-learning is a pedagogical strategy to integrate course content with community service to enhance civic engagement (Giles and Eyler 1994; Furco and Norvell 2019) and helps to provide students access to non-academic career training. The MLL's research foci include environmental anthropology and multispecies ethnography (e.g., Ogden 2008; Tsing 2015), wildlife-human coexistence (e.g., Woodroffe et al. 2005; Chapron et al. 2014; Carter and Linnell, 2016; Chapron and Lopez-Bao 2016; Swan et al. 2017; Thomsen et al. 2020; Thomsen and Thomsen 2021), wildlife ecotourism (e.g., Stronza 2001; Moorhouse et al. 2017), and biodiversity conservation (e.g., Van Dyke 2008; Chapin et al. 2009; Sahney et al. 2010), among others.

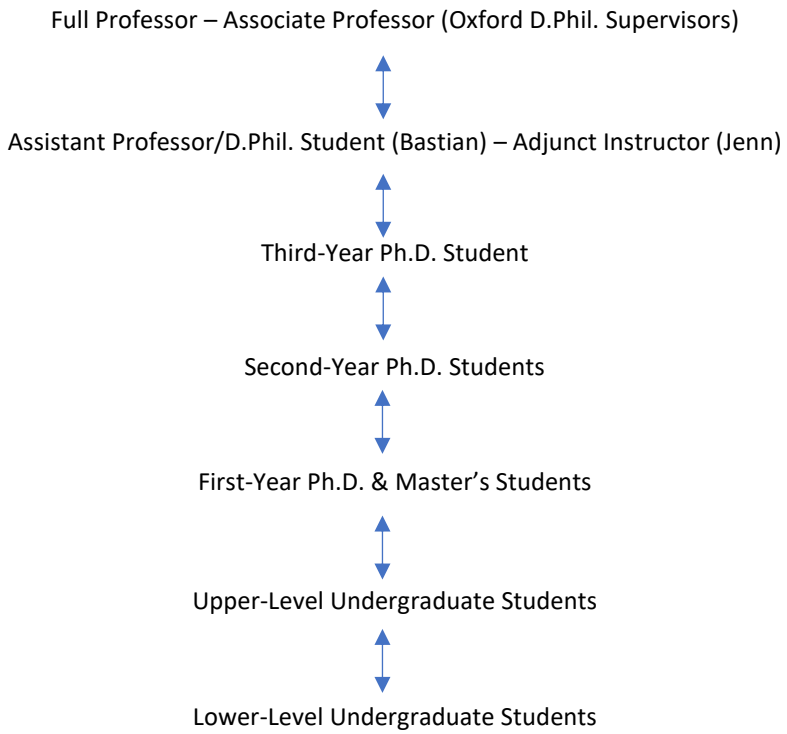
The primary research objectives of the MLL consider how wildlife-human relations influence policy, governance, and management of nonhumans, and vice versa. It is vital to the MLL that we provide students a solid foundation of key concepts and theories, such as continental connectivity (Finegan et al. 2008), species recovery (Whitworth et al. 2018), habitat restoration (Fournier et al. 2019), conservation policy and management (Sanchez-Azofeifa et al. 2002; Sierra and Russman 2006), and community development (Hunt et al. 2015), etc. In addition to this pedagogical exercise, students apply course content (e.g., theory and methods) in the field, and then analyze data and write-up with us for publication.

Jenn and I have co-led the MLL/GSP program six times over seven-years, across three institutions. Jenn is Venezuelan-American, and our collaboration has proved fortuitous as gender dynamics persist in short-term study abroad research trips (Nguyen et al. 2018). She has repeatedly shown our students - and me - the positive effects a URM woman in STEM education can have on others, reinforcing the urgency for me to consistently (re)consider my positionality and leverage my privilege to empower underrepresented students in graduate STEM education. We each won Boise State's 'Golden Apple Award' for outstanding faculty based on the GSP/MLL before coming to Colorado State University. I share this not out of narcissism or self-promotion, but to demonstrate that the program was well-received.

Fifty-two students, including three graduate students, participated and carried out research over four international trips. Three more trips were planned for 2020 before the COVID-19 pandemic halted travel, but we salvaged our study to collect data via *Zoom* interviews and

subsequently published a manuscript with 13 students in the *Journal of Sustainable Tourism* based on the data collected (see Thomsen et al. 2021c). Of the 52 students prior to CSU, 69.2% self-identified as women and 38.4% self-identified as URM. This was greater than Boise State's enrollment rates at 57.3% women and 27% URMs (BSU, 2020), and higher than my previous institution's at 51% women and 31.16% URMs (College of Idaho, 2020). The MLL at CSU now consists of 11 students, 54.5% self-identified as women and 45.5% self-identified as URMs, and 66% of self-identifying males also self-identified as an URM. An additional six graduate-level students self-identified as women, 66% of which self-identified as URMs. These six students also significantly contributed to this study but graduated and are no longer active members of the MLL. Perhaps unique to any VIP model, at one point during this study this VIP consisted of nearly every academic level from a full professor to an undergraduate first year student, with the exception of a post-doc. Figure 3.4.1 outlines the MLL's VIP structure.

FIGURE 3.4.1 MLL VIP STRUCTURE



Our VIP model is not based on hierarchy, but on experience and expertise. As each person learned something during this project, they shared it with the rest of the team, which resulted in the co-production of knowledge. This is why the arrows flow both ways throughout Figure 3.4.1. I expand on the assimilation of individual knowledge production below.

3.5 Testing the Near-peer Mentor Model as a Basis for the VIP

Our previous research experience taught us the complexities of changing site locations and student teams each year and led us to reevaluate our MLL model. To adjust, we refocused the MLL to predominantly focus on graduate students and is now based on the 'near-peer' mentorship model popular in graduate STEM education (Zaniewski and Reinholz 2016). Research suggests that in the near-peer model "incumbent scientists train junior investigators" to improve academic achievement outcomes and self-efficacy, especially for URMs as the "near-peer mentoring approaches are grounded by the understanding that the mentoring is a collaborative process that requires engagement of both teacher and learner" (Trujillo et al. 2015: 1). This near-peer model aligned well with the VIP model and helped to address gaps in previous VIP-focused studies that typically focus on the outcomes of undergraduate VIP training.

We tailored the MLL to primarily focus on this project over the last 13 months of the study and its subsequent write-up. Students served as research assistants, which in turn rapidly advanced their individual and collective research skills. Jenn, my third-year Ph.D. student Kellen Copeland, and I co-trained the students to perform a range of research tasks including data collection,

analysis, and writing-up for publication. Kellen started with us as a third-year undergraduate in our second GSP and has worked with us for six-years now. All students in the MLL participated in data collection via *Zoom* and or in person interviews, a handful conducted participant observation with Jenn and me, and all students helped to code and analyze data using thematic analysis. Some students learned these skills in the classroom but may not have had the opportunity to practice them as part of a formal research study.

When I first met Kellen, he was an eager undergraduate student who held promise, but little research experience. He'd be the first to describe his writing capabilities at the time as…lacking. Kellen persisted, and I've experienced the authentic joy of watching him develop as a scholar and mentor who also aims to 'pay it forward' to those less privileged. Through the VIP model, we have co-authored three publications together, he published an additional two on his own, and we have another three under review. He just started his Ph.D. fieldwork at the time of writing, and Kellen now writes at an Assistant Professor level (Lecturer in other countries). Due to this long-term professional and now personal relationship, I have the luxury of being able to heavily rely on him for his consistent, high-quality performance and ability to evoke positive responses from more junior students. I would advocate the VIP model for this reason alone.

Previous undergraduate students cited in survey data and in person illustrated how much they looked up to Kellen. This supports existing graduate STEM education literature where near-peer educators or mentors promote inclusivity and a sense of belonging (Rudolph et al. 2019). In November 2021, Kellen commenced his Ph.D. fieldwork on salmon-sea lion-human relations in

the Cascadia bioregion of the U.S.'s Pacific Northwest. Three other students in the MLL flew to Oregon from Colorado to serve as his research assistants over a week's time. They conducted 26 semi-structured interviews and 46 surveys and are now writing up the pilot study for publication based on the VIP model, demonstrating its effectiveness to train one-another as near-peer mentors. Another major benefit of the model is the ability to discuss what each of us learned from an activity, and how each person may have identified a different verbal or nonverbal cue that one person may have missed alone. I unpack this technique and how it applied to this study below.

3.6 Assimilating Individual Perspectives to Enhance Understanding

In Chapters 4 and 5, I detail our excursion to Yellowstone National Park (YNP) where I arguably had the most productive two-day stint of the entire study. Our trip was limited to five-days total including travel, due to the high-cost of the trip. Expenditures totaled more than $2,000 USD for three people to travel to YNP from only two-states away by car, stay in a budget hotel, and hire a tour-guide. The precarity of contemporary academic research and the variable costs associated with conducting fieldwork, including financial, professional, and caring responsibilities, challenges 'traditional' in-person fieldwork and data collection that has long been celebrated in anthropology. I wish I had the luxury of spending a year or more in the field without having to support my family or hold down a job. I was lucky enough to spend most of my time on this study but had to be creative to do so. The global pandemic further exacerbated the segmented nature of being able to conduct interviews and participant observation in-person versus online. Like Yates-Doerr, I embraced this anti-hero unfinishedness, which also

aligns with Günel et al.'s concept of 'patchwork ethnography' that challenges boundaries between 'home' and the 'field', as well as what counts as research and what doesn't (2020). They also ground their methodological contribution in feminist and decolonial anthropology like I do in this work, "by *patchwork ethnography*, we refer to ethnographic processes and protocols designed around short-term field visits, using fragmentary yet rigorous data, and other innovations that resist the fixity, holism, and certainty demanded in the publication process" (2020: 1). The realities of including students in my fieldwork also contributed to the patchiness of data collection, which was no less robust but surely non-traditional.

Kellen, Jenn, and I had the opportunity to experience the much-hyped YNP wildlife ecotours that chased wolves and other wildlife. What I don't describe in subsequent chapters, however, is how important it was for us to debrief as a research team after each day. We each wrote up our perceptions and 'key takeaways' from the day, like any good fieldnote. What was special was how surprised I was when we started discussing our individual experiences in a small group. I was astonished of how much information I missed when someone spoke with us, because there was so much information and dialogue to process. Recordings are arguably ideal, but not always feasible in ethnographic fieldwork as it can distract interlocutors from sharing candid feedback and make them self-conscious (Reeves et al. 2008). Our experience with our tour guide, Jake (pseudonym), illuminated the seemingly gendered disparities in our recollection and general experience of the events that took place.

We first met Jake at 6:45 AM outside of our hotel in the quaint town of Gardiner, Montana that bordered the north and original entrance to the park. We had to leave before sunrise as wildlife are most active in the morning. It was December, and we were bundled up in *Smartwool* and what seemed like 10 layers of winter 'gear' to protect us from the elements. With our sludge-like hotel coffee in-hand, we made our 45-minute trip into the heart of YNP. Jake was accustomed to the frigid temperatures, leaving his yellow and black jacket unzipped with the window half-cracked. He even made fun of Jenn for shivering. The three of us remained silent for the first 40 minutes, as it felt like we were trying to survive a locked walk-in restaurant cooler. Luckily, Jenn brought homemade lemon white-chocolate bread to share, which broke the metaphorical and literal ice within the van. Jake kindly rolled the window up, and we began to learn about the history of the park and endured a barrage of questions about wolves from Jake since he knew that was the primary reason we were there. Thankfully, I had recently read Mech's (2012) book on wolves, so I could regurgitate some quick wolf facts that seemed to please him.

Over the next two days with Jake, we developed mixed feelings about our experience with him and what we were learning. As we debriefed at the end of day two, Kellen and I were generally on the same page regarding our perceptions and value of having a tour guide with regular quotidian insight. It was clear that Jake's routine was well established. He focused on Yellowstone terminology and local landmarks. He was able to identify different parts of the park and their relation to specific animals. Relationship building was important to him, as he went out of his way to notify the professional biologists in the field, such as the winter wolf

study team and the national park service personnel, if he saw a wolf. Rick McEntire, the world-famous wolf biologist, is known locally as 'the wolf guy' for his decades-long research experience in the park, regularly notified other park biologists via radio as soon as wolves were spotted. It was important to Jake to monitor the radio to be able to show clientele various animals. Kellen and I questioned some of Jake's practices such as how he chose where to go, but we felt that on the first day at least, it was worth spending the time with a tour guide. However, Jenn stated a vastly different outlook from our own:

> With the exception of access to the specialized scopes and introductions for beginning networking with the Wolf project, I had a hard time seeing the true value of a guide. I was disappointed in the lack of factual information given, with several statements that were made proven to be incorrect. Likely due to lack of regulations, his position [tour guide], is one that holds a lot of power in spreading information both correct and otherwise. It allows for individuals who just enjoy being outdoors to make gainful employment. My expectations were to find an individual who was passionate enough to do background research and ensure that the information that he gave was truthful and as unbiased as possible. I did feel like I gained some knowledge on what to look for in search of wildlife, but it didn't validate the expense. He didn't provide us access to anything that wasn't available to the general public, with one exception being that he had radio access if someone had seen a wolf in a particular area.

Jenn was timid at first to share what she thought was a negative perspective as she didn't want to disappoint us or 'bring down the mood'. Kellen and I encouraged her to speak and reinforced to her that her opinion and sentiments were valid. We were forced to really think about how we brushed aside many of Jake's comments. The more we all discussed our experience with Jake, the more we noted that his comments about animals seemed to be more based on hearsay than scientific facts.

From my perspective, Jake appeared to be a white male in his late 30s-to-early-40s who stated he was married with a child. He stated that he had been running his own business for nearly a

decade, employed a few others and averaged one-and-a-half tours per day annually by his count. He shared that his primary customer demographic were families and recently retired couples. A rough estimate of his influence on tourists would range from 1,000 to 2,500 people annually. Over a decade, that's 10-25,000 people. This suggests that he has significant influence on other people and their perceptions of wildlife. We reflected that he did his best to 'toe-the-line' and not appear to be too political. However, on day-two he made multiple Darwinian-style comments about how nature is brutal and that seeing death (e.g., a wolf pack taking down an elk) was what he hoped to show people. Dark tourism, or the purposeful viewing of death or atrocities, such as visiting holocaust sites is gaining popularity. It also includes animals such as viewing skeletons in museums, participating in trophy hunting competitions, or attending bull-fighting events (Fennel et al. 2021). Jake made increasingly anti-wildlife comments on the second day, revealing that he was doing this more for income than because he enjoyed his work or cared about wildlife. This analysis of how Jake wielded his biopower over tourists may not have come to light had Jenn not been there, or not felt empowered to share her views. By embracing this anti-hero care approach of collaboration and shared responsibility, we collectively learned more. This form of knowledge co-production permeated the study, especially with other students through in-person and *Zoom* interviews with scores of interlocutors.

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A total of 17 students participated in data collection, coding, and thematic analysis, and helped to write-up some (minor) portion of results. I placed students in teams of two-to-four with more senior Ph.D. students serving as group leaders. We held meetings at least weekly to

discuss progress, assignments, and expectations. The junior students were always able to approach me, and I would hold one-on-one meetings with every person at least once or twice per month. However, the students were encouraged to work with each other, and rely on the group leader as a first point of contact. I did this to train the students to not only trust each other and work cooperatively in teams, but to develop their leadership skills. As new students came aboard, the current student received what amounted to a promotion in terms of responsibility. After completing a given task such as coding a recorded interview, we would debrief about what they had learned and work through why they choose to categorize a phrase to a certain theme. This was beneficial for each person, but especially me. Students learned how to code, ask open-ended questions, and imagine how they would have asked something differently. They would frequently ask me why I didn't pursue a certain topic that the interviewee spoke of. This allowed me to make note of it and follow-up with the interlocutor on several occasions.

Students typically felt comfortable coding results but became timid at times during interviews or participant observation. I gained permission from my interlocutors for students to participate, and they would come prepared with a couple of questions of their own. However, they would often remain quiet despite my encouragement to speak up. Though I tried to teach them to embrace the semi-structured interview style and be prepared to 'go with the conversation', many were uncomfortable with the perceived lack of structure, at least at first. Kellen captured this sentiment well in one of our recent lab meetings:

> There's probably one main common theme that resonates with me from the lab that I have picked up over the years. Many students, and I don't know if this is the result of contemporary American society, but many students have a hard time with engaging in the process of doing research. At first, students are interested in the outcome or result and want a direct guideline to show them how to obtain a result or, in the least, understand exactly what it is that they're trying to achieve. Anthropology itself is trying to rectify its sometimes-colonialist traditions. The field is no longer solely about collecting information and knowledge that is taken from others, but actually the process of fieldwork itself. Once students understand that the process of knowledge creation is often unstructured then they can accept that the exercises they engage with become part of that research. They then start to understand anthropology and its messiness. I think that this has led students to better understand themselves, the field, and their relation to it and, in some cases, the rejection of the lab altogether for its perceived lack of structure once they get into the field. It is important to keep in mind that the process is messy, and therefore is part of the structure as students engage with, train as, and become contemporary social scientists.

What Kellen didn't say here but alluded to was that for many students, especially graduate students, the research process can be mentally and emotionally debilitating. Anti-hero care work is especially apt when mentoring students, as each person requires different care and attention at different times in their training. This care is critical, as "one in two PhD students experiences psychological distress; one in three is at risk of a common psychiatric disorder" (Levecque et al. 2017: 868). By working within the VIP model and coupling it with anti-hero care, then students and faculty (academic staff) can develop a healthy co-working environment that prioritizes supporting one another and their well-being. This is easier to accomplish when in a lab setting, but for me it was much more challenging to do so inside the classroom.

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In fall 2020, I taught an eight-week master's-level course on conservation and tourism while I was still conducting fieldwork. Even though I have taught at the university-level for eight-years, this was the first opportunity I had to directly tie an in-depth research study I was conducting to my course lesson plans. I grappled with how to teach from a position of power, and it was an interesting experience because I was deeply aware of it and did my best to at least own my positionality. I can't say that I wasn't biased, but I did my best to present multiple arguments to

every wolf-related issue, which I unpack in subsequent chapters. I provided theoretical approaches and case studies about wildlife-human conflict and coexistence throughout the course but used my study as the on-going baseline case study. I also worked with several students outside of class and the lab to teach them how to conduct literature reviews, collect and analyze data, and then write-up results. A group of three students used the Colorado wolf-reintroduction topic for their semester-long project. They followed the Proposition 114 wolf-ballot initiative events in 'real-time' as the November 2020 vote took place during the course (see Chapter 5). Though most of the 14 students in the class expressed generally pro-environmental views, many were conflicted as they acknowledged valid arguments from both sides of the wolf-human debate that was raging across the State.

These weekly debates helped me to critically reflect on my own positionality and analysis of my study. Even though my personal ethics made me cringe when hunting interlocutors expressed joy in killing wolves, I had to be able to share this with my students in a way that validated that the practice was currently legal in some states, and that those hunters felt ethically justified in their actions. This balancing of sharing my positionality while trying to maintain my role as a person with power in charge of a class was hard for me, to put it lightly. However, the students shared their feedback with me personally and in their anonymous post-class student surveys. They highlighted that discussing wolf-human relations, learning how to conduct research and how to own one's positionality while engaging in debates that attacked ideas but not each other, were their favorite parts of the course. Thanks in part to this group of students, I was inspired to use my voice where and when I could. I decided to fully embrace my argument for

nonhuman personhood in this thesis (see Chapter 9) based on the data collected and stand by my/our work. In this way, they attended to my well-being, as I tried to do for them.

3.7 Toward an Anthropology of Knowledge Co-production

Günel et al. discuss the entrenched disciplinary views that perpetuate traditional fieldwork and publication norms (2020). They challenge the *status-quo*, that often favors neoliberal metrics (e.g., Google Scholar citations) and the 'lone-hero' for tenure and promotion (Günel et al. 2020; Yates-Doerr 2020). Similarly, El Kotni et al. argue for co-authorship as feminist writing (2020), which positions us as scholars to justly recognize all those who earn authorship according to McNutt et al. 2018, and to equitably acknowledge collaborative scholarly works when considering an individual scholar's contributions in annual performance or tenure reviews. Only by tying performance metrics to our social goals of decolonizing the discipline and promoting gender, racial, and ethnic equality can any real change occur. In this chapter, I assembled Yates-Doerr's anti-hero care, Günel et al.'s patchwork ethnography, and the VIP model to illustrate how one team of scholars attempted to achieve equitable knowledge co-production. Like wolves, we can survive as scholars individually, but most of us regularly work in a pack. It's time we recognize each individual's contribution to the group if we are to deconstruct arbitrary boundaries that hinder diversity, equality, inclusivity, and justice in knowledge (co-)production.

Part 2- Current Wildlife Governance Paradigms and their Limitations

Part 2 includes two chapters. Chapter 4 focuses on the five times I was able to conduct participant observation with actual wolves during the study. I examine the ethical dimensions of four wolf sanctuaries and Yellowstone National Park from a posthumanist lens. Chapter 5 questions the efficacy of protected areas. It discusses how common perceptions of 'wild' are intertwined with the establishment of U.S. national parks and Native American reservations, which subjugated subaltern indigenous peoples and wildlife to 'invisible cages'.

Chapters in Part 2:

Chapter 4- Wolf Ecotourism: A posthumanist approach to wildlife ecotourism

Chapter 4 is published in *Routledge's Handbook of Ecotourism*, and the published (final edited) version is attached as Appendix 1.

Chapter 5- Invisible Cages: Confronting the efficacy of protected areas

Chapter 4- Wolf Ecotourism: A posthumanist approach to wildlife ecotourism

4.0 Introduction

Humans frequently exercise unilateral power over nonhuman animals at wildlife tourist attractions (WTAs) in a myriad of ways. We dictate nearly every aspect of nonhumans' quotidian life and milieu: when and what to eat, when to perform or socialize, and where to bed down or play – the list goes on. Our fascination and interest in nonhumans are perhaps fundamental to our identity and understanding of the world (Clayton 2003; van der Werff et al. 2013), evidenced by more than 100,000,000 nonhumans working in entertainment annually (Fennell 2013a). Some scholars estimate that 20-40% of all tourist attractions involve animals in some capacity (Moorhouse 2017), and for many humans, WTAs may be one of the few opportunities to encounter other species as the current ecological crisis has devastated wildlife populations, and billions of 'wildlife' now live in captivity (Mason 2010; Baker & Winkler 2020). More than 60% of the world's wildlife has died-off in the past 50 years (Grooten & Almond 2018), urban sprawl and habitat destruction show no signs of slowing (Matović 2020), and the human-caused ecological crisis has led to earth's sixth-mass extinction event (Steffen et al. 2011). These conditions demand that we, as global citizens, problematize our relationship with 'other' species at the abstract and individual levels to question: how can we, as humans, equitably speak for nonhumans and foreground their agency, welfare, rights, and interests in any decision that affects them? This question engenders arduous ethical and ontological issues as it is inherently an exercise of humans speaking for and about nonhumans without their consent.

Nonetheless, wildlife ecotourism provides an optimal lens to explore this ethical question for its focus on human-nonhuman encounters, and its ubiquitous spectrum of wildlife welfare and justice across different types of WTAs (Fennell & Sheppard 2021). In this chapter, I draw on a multispecies, multi-sited ethnographic study that investigated wolf-human conflict and coexistence in the western U.S. during the Trump Administration. The gray wolf (*Canis lupus*) was chosen for its exceptional ability to provoke human-human and wildlife-human conflict as a symbol for other sociocultural and socio-environmental issues entrenched in Euro-American culture, politics, and history (Jürgens & Hackett 2017; Lappalainen 2019).

During the study, the only opportunity to directly interact with wolves at the individual level occurred at five WTAs. Four of the WTAs could be described as 'wolf sanctuaries' that promoted tourists to interact with wolves at different levels ranging from petting wolves and taking 'selfies', to 'hands-off' observations through chain-link fences. The fifth was Yellowstone National Park (YNP), which is a protected area where park rangers strictly enforce laws aimed to safeguard wolves. Preconceived notions of what ethical wildlife ecotourism should look like may propagate initial conceptions as to which of these models optimally foregrounds wolf's interests. However, through a posthumanist analysis I unpack the ethical entanglements of each WTA model to proffer an alternative perspective that considers the complexity and context in which they operate. I will first present a brief history of wolf's plight in the U.S., and then engage relevant theoretical perspectives before analyzing each of the WTAs' models.

4.1 Short History of Wolf in the U.S.

Except for a small population in Minnesota that historically persisted, U.S. and state-level governments sanctioned bounty programs to systematically extirpate wolf throughout the lower-48 U.S. states from the 1860s to 1940s (Mech 2012). Following World War II, attitudes towards wolf, and wildlife in general, positively shifted culminating in the passing of the Endangered Species Act (ESA) in 1973 and wolf's listing on it in 1978 (Ripple et al. 2014; Carroll et al. 2021). Sixty-six gray wolves were reintroduced to YNP and central Idaho in 1995-6 (Wilson 1997; Foreyt et al. 2009), and the species has since dispersed to surrounding states. Wolf was delisted in the western-U.S. states of Montana, Wyoming, Idaho, Utah, and the eastern third of Washington and Oregon in 2011, even though wolf has only recovered to an estimated 6,000 individuals nationwide (USFWS 2019).

In October 2020, the Trump Administration announced wolf's delisting from the ESA, set to come into effect 4 January 2021 pending legal challenges (Rott 2020). The decision was highly controversial, as critics charge that the decision was socio-politically motivated and not driven by science. If the delisting survives the lawsuits, wolf 'management' would be turned over to individual U.S. states, where anti-wolf sentiments proliferated in rural, conservative-leaning areas in the western U.S. For example, in 2019 the Idaho Fish and Game Commission awarded a $23,065 grant to a northern Idaho nonprofit, *Foundation for Wildlife Management*, to compensate hunters and trappers up to $1,000 per wolf 'harvested' (Peacher 2019). Between 1 July 2019 and 30 June 2020, a record 570 wolves were killed in Idaho, mostly by hunters and trappers, up from an average of 400 annual deaths (Plank 2020). In this study, wildlife sanctuary

operators universally condemned these practices and cited these data as evidence to support their missions of educating humans about wolves.

4.2 Nonhuman Animal Ethics in Wildlife Ecotourism

The emergence of animal ethics in the tourism literature (see Fennell 2008; Shani and Pizam 2008) offers insight into how humans can exercise their power to promote equality with subaltern nonhumans inside and out of WTAs. Subaltern studies developed out of postcolonial theory to signify how indigenous, racial, and ethnic minorities, women, and nonhuman groups, among others, have been marginalized and made subordinate to more dominant patriarchal interests on the basis of power (Spivak 1988; Mitchell 2002; Thomsen et al. 2021a). Subaltern studies, coupled with posthumanism, provide a complementary lens to reflexively analyze our power over nonhumans and to deconstruct human exceptionalism in our collective treatment of 'other' species. Posthumanism is a postmodern philosophical line of research "rooted in late twentieth-century feminist and anti-racist critiques of modern Western social and political institutions…[that] seeks to erase the human-animal divide, thereby rejecting the basic premise of human exceptionalism" (Cohen 2019: 416). Cohen recognizes the inherent paradoxes of posthumanism where humanists criticize posthumanists' reliance on human exceptionalism to develop their scholarly arguments (Chagani 2014). He cites Soper's defense of human exceptionalism in that "we need […] to defend human exceptionalism, and resist blurring the human-animal divide", as exceptionalism provides the needed 'footing' for binding moral obligations (2012: 423). Cohen declares:

> Posthumanist thinkers thus failed to recognize sufficiently the importance of a critical point: that there is no reciprocity from animals in the sphere of morals; they do not share our ethical precepts nor respond to them. Posthumanist ethics cannot serve as the basis of a covenant between humans and animals (2019: 423).

However, posthumanists would counter to argue that humanists' insistence on contouring arbitrary boundaries between species is counterproductive in this ecological crisis, especially when their core argument is rooted in a 'we were here first' mentality (Badley 2017). Posthumanists would also refute Cohen's assertation for being anthropocentric and falling into the same logical 'trap' lodged by humanists, by stating that nonhuman animals 'do not share our ethical precepts nor respond to them'. Under humanistic logic, how can he know this?

Cohen does acknowledge that nonhuman animal ethology may help us to untangle our human limitations and (mis)understandings of interspecies communication, intelligence, and emotion (De Waal 2016; Turnbull & Bär 2020). Cohen has advocated for nonhuman welfare and justice on multiple occasions and his critique of posthumanism is a scholarly exercise rather than a criticism of nonhuman-welfare (Cohen 2009; Cohen 2019b; Cohen & Fennell 2019). He states that posthumanism is essentially absent from tourism scholarship, and suggests how it could contribute to deconstructing the human-nonhuman divide:

> Insistence on animal personhood and critique of anthropocentrism, could reinforce contemporary efforts to reduce animal abuse in tourism, and help to balance the presently often one-sided approach in contemporary tourism studies to the relationship between tourists and animals. Posthumanist attitudes could certainly sensitize tourist practitioners and researchers to issues overlooked in current touristic practices, especially in the field of embodied human-animal interaction (2019a: 424).

The following analysis considers how posthumanism applies in wildlife ecotourism, in an effort to respond to Cohen's call to balance nonhumans' welfare in theory and practice. It also

cogitates about the inherent paradoxes and complexities in determining whether a specific WTA is truly ecotourism, and if so, to what degree.

4.3 Applying Posthumanism to WTAs

At their best, WTAs provide the potential to observe nonhumans exercising their own agency under "natural conditions that are completely unframed, according to Cohen, 2009" (Fennell & Sheppard 2021: 330). At their worst, WTAs perpetuate the depravity of humanity, condemning nonhumans to slavery, torture, mental and physical abuse, and even death (Idfwru et al. 2013; Moorhouse et al. 2015; D'Cruze et al. 2017; Fennell and Sheppard 2021). Most WTAs operate somewhere between these extremes, and research on nonhuman welfare and rights in (eco)tourism has materialized over the past two decades (see Cohen 2009; Hayward et al. 2012; Fennell 2013b; Cohen 2019; von Essen et al. 2020; Thomsen and Thomsen 2020). Wildlife ecotourism transcends wildlife tourism by embracing non-consumptive activities such as wildlife sightseeing, compared to consumptive practices such as hunting or fishing (Burns 2017), to equally stress ecological sustainability and human (economic) livelihoods (Duffy and Moore 2010; Karanth et al. 2012; Sheppard and Fennel 2019; Thomsen et al. 2021b).

Moorehouse et al. (2015) suggest that tourists are not typically educated on how to identify poor nonhuman animal-welfare conditions that may reinforce horrific practices such as inadvertently funding the illegal wildlife trade. Newsome (2017) contends that in addition to demographics such as age, and sex, culture was a key influence concerning who engages in wildlife-based tourism and how animals are treated. Accordingly, von Essen et al. (2020)

caution against a cultural relativism approach for its anthropocentricity, as it can normalize and reinforce utilitarian views of human dominance over nature (Peterson and Nelson 2017). von Essen et al. cite Juvan and Dolnicar's (2014) attitude-behavior gap, as well as Kline (2018) to argue that it is common for some people to leave their pro-environmental values 'at home' when traveling and engage in WTA activities that may perpetuate negative nonhuman animal welfare.

Fennell and Sheppard coalesce two common animal ethics approaches in the tourism literature, normative ethics (i.e., what we are told to do or believe based on rights, welfare, utilitarianism, ecocentrism, and contractarianism perspectives) against virtue ethics, in conceptualizing a 'scales of justice' approach to animal welfare in ecotourism. Utilitarianism, which is most applicable to the present study, is "informed by the doctrine of "the greatest good for the greatest number" (2021: 318), whereas virtue ethics "is focused not on what we are told to do, but rather on 'what sort of person I should be'. Virtues are positive traits of character such as altruism, compassion and loyalty, which if practiced regularly in the proper shaping of our desires through reason and will, allow individuals to flourish" (2021: 320). Based on their framework, WTAs can be assessed for their ethical treatment of nonhumans, moving from 'No Justice' at the low-end, through 'Shallow Justice' and 'Intermediate Justice', towards 'Deep Justice' at the high end. The deeper the justice, the greater the emphasis for nonhuman animals in moving from welfare to rights in the recognition of nonhuman animal agency.

Baker and Winkler (2020) argue that the ability for many species to exist outside of captivity is severely limited by human power dynamics, social carrying capacities, and habitat destruction. In the case of wolf, natural habitat is ecologically abundant in the western U.S. as wolves are 'habitat generalists' able to exist in most landscapes, but are hindered by livestock ranching, natural resources extraction, and hunting activities (Bangs et al. 2005). Sociopolitical policy and discourse pose a 'real' threat of state-legitimized hunting, trapping, and culling programs, and illegal poaching endures with little or no negative consequences (Brasch 2020a,b). Coupled with the practical complexities of releasing captive, human-dependent wolves into 'wilderness', captive wolf ecotourism WTAs present a morally ambiguous case study. A posthumanist conceptual framework should not argue for maintaining the status-quo in wildlife ecotourism (e.g., commodification), but rather aim to improve the quality of an animal's life and protect them from existential harm in our efforts to be ethical and just.

4.4 Conceptualizing a Posthumanist Approach to Wolf Ecotourism

There are well-established animal welfare models that evaluate an individual's welfare based on a combination of 'physical or functional domains', and 'affective experience domains' such as Mellor and Beausoleil's (2015) 'Five Domains model for animal welfare assessment'. Similarly, Fraser's 'Practical Ethics for Animals' (2012) examines four principle criteria of human-animal welfare relations: keeping animals, causing intentional harm to animals, affecting animals in direct but unintended ways, and affecting animals indirectly by distributing life-sustaining processes and balances of nature (Fraser and McRae 2011). However, a posthumanist perspective extends existing models by considering the opportunity cost of what

an individual's existence could be under specific temporal and spatial contexts. Wolf presents an even more nuanced analysis for the aforementioned sociocultural, sociopolitical, and socioenvironmental conditions they faced in the U.S. during the Trump Administration. Like elephants (*Loxodonta*), wolf is a charismatic species that polarizes humans' perceptions. Fennell's (2013b) paper, *Contesting the zoo as a setting for ecotourism, and the design of a first principle*, provides a convincing outlook as to "what might constitute the ethical use of animals in an ecotourism setting". He departs from utilitarianism to present his 'first principle of ecotourism' that "corresponds to the deontological school of ethics, which reasons that what is morally right is that which abides by rules, guidelines, duties or principles independent of the consequences of actions or inactions" (2013b: 10). Fennell posits that we should:

> Reject as ecotourism all practices that are based on or support animal capture and confinement, or other forms of animal use that cause suffering, for human pleasure and entertainment. Embrace as ecotourism interactions that place the interests of animals over the interests of humans. This would include encounters with free-living animals that would have the liberty to engage or terminate interactions independent of human influence (2013b: 10).

On this account, Fennell declares that zoos are not ecotourism, because they severely limit the ability of animals to participate in 'normal behavior', and in so doing, deny nonhuman animal rights and agency. Some of the enclosures for wolves in this study may appear similar to zoos in terms of size and setting, but small differences between the WTAs either reinforce or violate Fennell's *first principle of ecotourism*. Four key criteria should be considered to develop a posthumanist conceptual framework for wildlife ecotourism (see Figure 4.4.1 below). These include: 1.) Quality of life of the animal prior to living in the WTA, 2.) Animal welfare conditions at the WTA that includes the physical, mental, and emotional health and well-being, 3.) Agency of animal to determine what to do and when based on rights granted, and 4.) Right to exist free

of exogenous threats. These criteria are not presented in a linear progression, but rather as equally weighted elements that must be considered to evaluate the ethics of a specific WTA's operations. This posthumanist conceptual approach departs from Fennell's *first principle of ecotourism* to consider whether or not a WTA's model is ecotourism by focusing not on what the species' rights and welfare should be in a non-captive setting, but by comparing the quality of life that the individual animal experienced prior to, and at the WTA. Following the figure, I ethnographically describe each wolf WTA's model and then assess it compared to the posthumanist conceptual framework.

Figure 4.4.1 Posthumanist Conceptual Framework for Wildlife Ecotourism

1.) Quality of life of the animal prior to living in the WTA	2.) Animal welfare conditions at the WTA that includes the physical, mental, and emotional health and well-being	3.) Agency of animal to determine what to do and when, based on rights granted	4.) Right to exist free of exogenous threats

4.5 Posthumanist Analysis of Wolf WTAs

4.5.1 Wolf 'Sanctuary' #1: No Contact, Wolves Paired in Separate Enclosures

The rain finally broke as we pulled into the sanctuary's parking lot. As my research assistant and partner, Jenn, and I stepped out of the truck, the hair on the back of my neck stood up and a grin spread across her face. About a half-a-kilometer away wolves were howling. It had been three years since we saw a wolf in person, and I was eager to observe wolves as part of an actual academic study. Five minutes later, the executive director (ED) was giving us a private

tour through the sanctuary, providing a mix of standard tour rhetoric with her own insights as a biologist regarding the welfare of the wolves in her care, as well as the conflicts that plagued their 'wild cousins', as she phrased it. Tourists are not guaranteed a wolf sighting, humans do not interact with wolves and even the sanctuary workers have extremely limited contact. About 50 individual wolves are in residence, and once an individual enters the sanctuary its physical, emotional, and mental well-being, such as 'enrichment' activities (mental and physical games and stimuli), are provided for the rest of their life. The sanctuary changed its original model from breeding gray wolves decades ago to only taking in 'at risk' individuals in need of care. The sanctuary is one of 170 sites nationwide that engages in captive-breeding programs of either red (*Canis rufus*) or Mexican wolves (*Canis lupus baileyi*) (USFWS 2020). These 'species survival programs' (SSP) are partnerships between the United States Fish and Wildlife Service (USFWS), the Association of Zoos and Aquariums (AZA), and various sanctuaries and zoos nationwide. In these SSPs, wolf pups are selected for cross-fostering reintroduction at the discretion of USFWS to ensure genetic variability. This is explained in great detail on tours at the sanctuary, as wolf education is emphasized, and visitors learn about current wolf affairs in the U.S.

PHOTO 4.5.1.1 WOLF IN ENCLOSURE AT WOLF SANCTUARY #1



Photo Credit: Jennifer Thomsen

After the ED opened the gate, we approached the first enclosure cautiously as the 13-year-old male had recently lost his partner. The ED's eyes teared-up as she described how he was still in mourning, and that he regularly 'set off the choir' by initiating constant howls of sorrow. As we slowly circled the sanctuary, we learned innate details about each wolf, their background, and why they were paired with each other. Every wolf or wolf-dog hybrid was born in captivity, and wolves were typically brought to the sanctuary once they reached full maturity, and when humans realized that "the cute pups aren't domesticated dogs and demand different needs than a companion dog would". In one instance, the wolf had lived for over a year-and-a-half in a two-bedroom apartment without even going outside – ever.

Enclosures, though modest compared to non-captive environments, range between 1/3 and 3 acres, and are a massive quality of life improvement for the wolves in their care. The ED

stressed that if mature, adult wolves were released into the wild they would not survive long due to a lack of survival-skills and dependence on humans. The ED described that with increased monetary or in-kind donations they could further improve the size and quality of the enclosures. The ED strongly objected to any type of wolf-human physical contact, and the focus of the sanctuary was to stay current on academic literature, avoid wolf-human contact, and use the best available science to foster wolf welfare. In this case, wolves' rights, agency, and welfare were foregrounded, and since they are guaranteed lifetime care once they enter the sanctuary, their quality of life seemed to be drastically improved. Each individual always has the ability to ignore humans, and though conditions could always improve, most posthumanists might agree that these conditions were beyond adequate given the previous abuse these individual wolves endured. By applying the posthumanist conceptual framework to Fennell and Sheppard's (2021) scales of justice framework, wolves at this WTA experience 'deep justice' for the degree to which their quality of life improved.

4.5.2 Wolf 'Sanctuary' #2: Wolves Paired in Separate Enclosures, Wolf-human Contact Encouraged

Nine months later, we headed to a Colorado-based sanctuary right before the Proposition #114 vote (see Chapter 6), to learn how this ballot initiative to reintroduce the gray wolf to the state may influence discourse onsite (Blevins 2020). Before Jenn and I conducted interviews with four volunteers and employees we paid to take the standard hour-long tour. Like the first sanctuary, none of the wolves were purposely born in the sanctuary except for the Mexican wolves as part of the SSP. What stood out in this regard was the extra level of security surrounding the Mexican wolves, as all wolves in the SSPs are 'property' of the USFWS. At wolf sanctuary #1,

there were few obvious differences between the enclosures, whereas at wolf sanctuary #2 the Mexican wolves had extra fencing and were not allowed to engage with tourists. The first two models were similar in many regards, including the enhanced quality of life at the sanctuary compared to the individual's previous captive conditions.

PHOTO 4.5.2.1. FENCING DIFFERENCES AT WOLF SANCTUARY: GRAY WOLF (LEFT), MEXICAN WOLF (RIGHT)



Photo Credit: Jennifer Thomsen

Wolves generally had the right to ignore tourists, as guides attempted to attract them with treats but quickly moved to the next enclosure if the wolf ignored them. However, this sanctuary diverted from the first for its overt commercialization of wolves. The educational components of the tour were scientifically accurate but were tempered with guides trying to 'up-sell' the ability to pet a wolf and take a selfie for a charge 10-20 times the price of

admission, depending on the package purchased. In this way, wolves were commodified beyond their educational contribution (Burns 2017; Belicia and Islam 2018; Cohen 2019), redolent of any other zoo experience that violates Fennell's 'first principle of ecotourism' (2013b). From a posthumanist lens this sanctuary rates highly for wolf's improved captivity conditions and guaranteed lifetime care. However, the treatment of wolves as capitalistic prop is counterproductive and problematizes the idea of what a sanctuary should be. Wolf's commodification was anthropocentric, and the economic focus promulgated sentiments of deception and increased opacity concerning the individual wolves' rights, agency, and welfare. For these reasons, this sanctuary rates rather low at 'shallow justice'.

4.5.3 Wolf 'Sanctuary' #3: No Wolf-human contact, Wolves in Packs

Before embarking on the wolf tour, we gathered with other visitors in an educational room that was filled with posters, books, pictures, and skulls. As I watched the kids in the room, I felt a sense of nostalgia-like comradery with them, as if we had come here together on a primary school class field trip. The entire experience centered on education, and we spent 20 minutes learning about wolf as a species including their diet, mating, and behavioral norms. As we transitioned outside, six-meter-tall fences and an unkindness of ravens (*Corvus corax*) dominated the scenery. We learned that this was natural behavior for ravens, as they not only tried to steal pieces of flesh from wolves' meals at the sanctuary, but this behavior was commonplace in non-captive settings as well (Stahler et al. 2002). Only four gray wolves resided here and were rescued from other captive environments.

The primary focus of this organization was the Mexican wolf, and it was also a member of the SSP. There were two packs of Mexican wolves, and no human interaction was permitted except for occasional contact for staff veterinarians. The wolves were allowed to live together as they were members of a pack, though packs were split from each other. The tour guide informed us that aside from the wolf pups involved in the SSP's cross-fostering program, no wolves would ever purposely be reintroduced to non-captive settings. They were strict in limiting human contact so that if something catastrophic occurred such as wildfire, which was a constant threat, then wolves would be better equipped to survive on their own. The sanctuary also had metal fire-proof boxes that would protect the wolves in case of wildfire, and on a couple of occasions, they had to place the wolves in them as wildfires came over the ridge before being fought off by local fire crews.

This sanctuary had a small gift shop and engaged in traditional nonprofit fundraising activities to support operational costs including fundraisers and sponsorships. However, unlike wolf sanctuary #2, they did not commodify the wolves for financial gain, and all calls for funding were aimed at humans. Though captive breeding occurs for the SSPs, the wolves were able to exercise some agency and live with family members. Those who came from previous captive situations had their quality of life improved, and wolves were guaranteed life-long care and protections from natural disasters such as wildfire to the best of the sanctuary's ability. Short of a fully non-captive existence, this sanctuary WTA model ideally promotes a posthumanist wolf ecotourism paradigm and qualifies as 'deep justice'.

4.5.4 Wolf 'Sanctuary' #4: Wolf pack, Wolf-human Contact Encouraged for Education

Out of the five wolf WTAs we visited this organization produced the most challenging ethical dilemma from a posthumanist perspective. The two breeding wolves were rescued from similar captive situations as the wolves in sanctuaries #1 and #2. However, the wolves were purposely bred to create a pack. Initial criticisms of captive breeding could be made, but counter arguments of a nonhuman's right to reproduce also murky the context (Wickins-Dražilová 2006). The wolves were empowered to fully practice their agency in the captive context. The co-founders of the sanctuary co-existed in a quasi-domesticated setting where the wolves lived like pets inside the home, and each wolf was provided its own physical space in the form of a custom-made den-like crate. The wolves were able to go outside into a 10-acre fully fenced area at any time, and regularly practiced natural behaviors such as digging dens. This is possible because all of the wolves are from the same pack, and their welfare, rights, and agency were always foregrounded.

Both directors worked externally to offset the costs of the wolves' care, and it would be difficult for anyone to question their dedication and compassion to the wolves. They were politically active fighting for the species' rights and welfare in the U.S., and regularly promoted wolf and wildlife education in local schools. The directors were hard-pressed to take even a week's vacation a year, and spend nearly $20,000 per month for their food, medical, and insurance requirements. Jenn, a Doctor of Physical Therapy and Certified Canine Rehabilitation Practitioner, performed physical exams on two of the wolves during our most recent visit. Jenn is now in CSU's Doctor of Veterinary Medicine program. We visited this pack on multiple

occasions before and during the study. As the directors give private educational seminars during the 'wolf experience', tourists could engage in wolf-selfies. The wolves can come and go as they please, but only inside the captive environment. Though wildlife-selfies are generally condemned for good reason (Moorhouse et al. 2017), and the captive breeding of gray wolves is questionable and should not be encouraged, this organization seems to be one of the rare exceptions where a posthumanist may condone these acts considering how well the wolves are treated 'behind the scenes'. This ethical context was by far the most complex from a posthumanist perspective. It elucidated the challenges of trying to develop an overarching theory concerning wolves' rights, agency, and welfare across WTAs, and further research into the ethical dilemmas of captive wildlife is needed from a posthumanist lens. The complexities of this specific case are rife in ambiguity, resulting in a rating of high 'shallow justice', to low 'intermediate justice', to low 'deep justice' depending on the sub-content in question.

4.5.5 Wolf 'Sanctuary' #5: Wolves in Protected Areas (Yellowstone National Park)

Yellowstone National Park (YNP) is arguably the most famous protected area for wolves in the world. It is the epicenter of wolf reintroduction in the western U.S. and has contributed to billions in increased revenue over the past 25 years (Middleton et al. 2020). "Park visitors spent more per person to the see wolves (around US$160 per day), compared to elk hunters who are a primary voice of opposition to the wolves' reintroduction, (at about $39 per day)" (Thomsen et al. 2018: 203). In December, we spent two eight-hour days with a private ecotourism operator as it is one of the best times of year to observe wildlife. We stayed on the Montana side of the North Park Entrance and had to leave the hotel at 6:45 AM to be able to spend as

much time in the park before sunrise when wolves are most active. Our guide had been operating his business for seven years and had developed strong connections with 'regulars' at the park that included the winter wolf research team and nearby locals who come to 'glass' wolves through telescopes as a hobby. Wolf sightings weren't guaranteed, and it is extremely rare to see one with the 'naked eye', though other species such as bison (*Bison bison*) and elk (*Cervus canadensis*) are commonly found roadside. What transpired over the two days was awe-inspiring as we glassed wolves chasing herds of elk, bison, and big horned sheep (*Ovis canadensis*), bedding (lying) down and howling, yearlings playing, and consuming an elk carcass as ravens and magpies (*Pica pica*) competed for scraps.

PHOTO 4.5.5.1 GLASSING WOLVES AT YELLOWSTONE NATIONAL PARK



Photo Credit: Bastian Thomsen

The YNP experience was a microcosm of the omnipresent wildlife-human conflict and coexistence issues in the western U.S. On the one hand, wolves were living a natural life free from captivity – in most regards. For scientific purposes, wolves are routinely tranquilized via helicopters where biologists take blood samples and collar wolves with bulky GPS monitors around their necks. From a posthumanist perspective, this is ethically ambiguous as scientific data is used to inform policy, but simultaneously infringes on an individual wolf's agency and welfare. Wolves enjoy strong protections inside the park's boundaries including laws that limit humans coming closer than 100 yards or engaging in any activity that may alter their natural behavior, though this is arguably hypocritical given the air-induced tranquilizations that occur. This percolates questions concerning how environmental policy is socially constructed and special interest human groups legitimize what is and isn't acceptable human behavior toward wildlife. We witnessed two park rangers investigate and then fine an amateur wildlife photographer who hiked up the side of the mountain to photograph wolves consuming the elk carcass but was clearly visible through scopes to more than 20 people watching the activity.

Human-wolf conflict in the surrounding states of Montana, Wyoming, and Idaho is prevalent. In Wyoming, humans can legally kill a wolf without a permit in 85% of the state if they report the 'take' within 10 days. As these borders are socially constructed by humans and invisible to wolves, exogenous threats to wolf safety are a real threat and demands us to question how ethical protected areas are if the surrounding areas are insecure with limited ecological corridors. Posthumanists would argue that protected area WTAs are just as ethically complex as captive WTAs due to the compounding threats and lack of wildlife laws and policies that

equitably represent nonhumans' welfare, rights, and agency outside of them, at least in the U.S. context. The coupling of helicopter-based tranquilizing and exogenous threats reduce the ranking of this WTA from 'deep justice' down to 'intermediate justice' at best.

4.6 Pathways Toward a Posthumanist Future in Wildlife Ecotourism

Cohen's (2019) *Posthumanism in Tourism* article was influential as it was one the first to apply posthumanism to the tourism literature. Though Cohen theoretically supported humanists' objections to posthumanism as a valid theory divorced from humanism, he supported its application to tourism in practice. However, humanists' can launch these claims because they represent utilitarian human-dominance perspectives who have maintained power since the Enlightenment. Posthumanism blurs these lines and in the context of subaltern wildlife, a posthumanist conceptual framework provides wildlife ecotourism theorists and practitioners an approach to shed binary humanist arguments and consider wildlife rights, agency, and welfare at the individual level. Chrulew argues that "wildlife conservation should […] be seen as an art and a science of ontological ethopolitics: an anthropogenic apparatus tasked with maintaining animals in their very being, a cosmo-political-and-ecological experiment in coexistence" (2021: 1).

This chapter responded to Fennell and Sheppard's (2021) call for further research into the ethics of 'animals-in-tourism research', and Cohen's (2019) call to balance nonhumans' welfare in theory and practice, in an attempt to untangle complex ethical situations at five wolf WTAs in the U.S. Since all captive wolves had never experienced a non-captive existence, a

posthumanist approach demanded that the WTAs be evaluated for their treatment of wolves at the individual level, rather than what the species should experience in a non-captive environment. Fennell and Sheppard's *scales of justice* framework provided an optimal model to compare the posthumanist conceptual framework for its focus on emphasizing nonhuman welfare, rights, and agency. Due to the captive focus of the first four WTAs, and the omnipresent exogenous threats that linger outside of YNP, not a single model in this study could be championed as a 'utopian model' for wildlife ecotourism. However, all five WTAs could be considered ecotourism for at least providing shallow justice, as the YNP wolves experienced non-captive lives and the wolf sanctuaries improved the quality of life for individual captive wolves.

Captive wildlife sanctuaries should be considered a 'stop-gap' effort to remedy poor welfare conditions of individual nonhumans. The magnitude of the ecological crisis demands that we no longer tolerate the *status quo* of treating nonhumans as subaltern. Wildlife ecotourism researchers and practitioners should advocate for three key goals to promote equitable wildlife-human coexistence: 1.) facilitate deep justice conditions for all nonhumans at all times, 2.) promote non-captive conditions whenever possible for nonhumans where their welfare, rights, and agency are equitably considered in any decision that affects them, and 3.) lobby for nonhumans to be granted nonhuman personhood. Gombay describes the meaning of personhood where, "as a person, one is a holder of rights and responsibilities that form the basis of citizenship" (2015: 13). Posthumanists must continue to deconstruct postcolonial power structures at WTAs and in wildlife policy to overcome the horrific practices that reinforce

abhorrent welfare conditions of subaltern nonhumans, if they are to ever experience deep justice consistently, let alone personhood. In Chapter 5, I further examine Yellowstone's wolves, and how its history is undoubtedly intertwined with the subjugation of indigenous peoples and wildlife alike.

Chapter 5- Invisible Cages: Confronting the efficacy of protected areas

Uninhabited wilderness had to be created before it could be preserved, and this type of landscape became reified in the first national parks.

-Spence 1999: 4

5.0 Introduction

From the late 1800s to early 1900s, the U.S. government weaponized emerging concepts of wilderness as biopolitical power to engender abstract, artificial boundaries that subjugated indigenous tribes and wildlife to invisible cages: protected areas and 'Amerindian' reservations. To understand how protected areas have been historically deployed as biopolitical armaments, it is essential to examine the sociohistorical and colonial contexts that have repeatedly oppressed subaltern indigenous communities and wildlife in the western U.S. "The symbolic connection of the wolf and the Native American reinforced a view of wildlife and wildlands as requiring mastery and domination. Subjugation of wolves and wild places merged as an expression of moral duty, reflecting the settlers' will to dominate the land and transform it for economic use" (Kellert et al. 1996: 978). Though a minority of ranchers and farmers in the U.S. have held positive attitudes toward wolf in recent decades (Williams et al. 2002; Carlson et al. 2020), "there was a sort of un-written law of the range that no cow man would knowingly pass by a carcass of any kind without inserting in it a goodly dose of strychnine sulfate, in the hope of killing one more wolf" (Young 1946: 27). Eighty-five years after Young's comment, nothing seems to have changed. In December 2021, Oregon State Police released a public statement confirming that they had been investigating the deaths of eight wolves, including the entire Catherine Pack in Union County, a skunk, and a magpie by poison (Associated Press 2021). Anti-

wolf sentiments persist and have been re-institutionalized, as the Idaho state legislature recently passed *State Bill 1211* to exterminate wolves through bounties and inhumane hunting methods (see Introduction) (Machemer 2021; Siler 2021).

Complex (post)colonial legacies endure to shape protected area management, affect contemporary concepts of wilderness (Adams and Mulligan 2003), and may inhibit innovative solutions to stave off species extinction. Indigenous perspectives and their traditional ecological knowledge (TEK) are rarely considered in debates concerning wildlife 'management' and policy, particularly concerning their relationship with wildlife. Traditional ecological knowledge is entwined with indigenous cosmologies and cultural belief systems (Ramos 2018), and considered by many Western scientists as "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes 2012: 7).

Protected areas are now championed by many conservationists as wildlife refuges and considered essential for the survival of particular species (see Gallardo et al. 2017; Chester and Hilty 2019; Middleton et al. 2020; Zhu et al. 2021). Environmental laws (or the lack thereof), coupled with western U.S. settler-based ideologies (Browne-Nuñez and Taylor 2002; Knight 2002; Liberg et al. 2012), restrict wildlife mobility outside of protected areas. This renders Yellowstone National Park (YNP) as nothing more than an artificial outdoor zoo where wolves lose their legal protections the moment they cross an obscure boundary, as they are at risk of

being hunted (AP News, 2021). In this chapter, I draw on participant observation and interviews that I conducted with my research assistants at YNP, and from interviews with state-level wildlife managers, and community-based stakeholders near YNP, to question the efficacy of protected areas, and suggest how to equitably represent subalterns' interests. I first consider the historical background of protected areas before examining their merits, and posit how they can be reconceptualized to foreground subaltern rights, agency, and welfare in wildlife-human relations in and at the periphery of protected areas.

5.1 History of Protected Areas

Contemporary wildlife-human relations in the western U.S. are not only influenced by Euro-American folklore and sociohistorical ecologies (see Chapters 2 and 4), but by abstract ideas that were *in vogue* from the second half of the 19th century through World War I (Neumann 2002). It is no coincidence that wolves were hunted to near extinction in the western U.S. between the 1860s-1940s, as state-sanctioned bounties rewarded white-settlers for extirpating the species from the landscape (Ripple et al. 2013). Notions of 'manifest destiny', 'the final frontier', and a 'patriotic transubstantiation' of nation building followed the Mexican War, Civil War, and Reconstruction (Spence 1999). In his pivotal book *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks*, Mark David Spence critically examines the entangled history of the first U.S. national parks (i.e., Yellowstone, Glacier, and Yosemite) with the relegation of Native Americans to reservations. Spence demonstrates how U.S. colonial practices reshaped popular ideas of 'untouched by human' wilderness that permeate conservation practices today (1999). He states:

> Generations of preservationists, government officials, and park visitors have accepted and defended the uninhabited wilderness preserves in national parks as remnants of a priori Nature (with a very capital *N*). Such a conception of wilderness forgets that native peoples shaped these environments for millennia, and thus parks…are more representative of old fantasies about a continent awaiting "discovery" (1999: 5).

President Ulysses S. Grant signed the *Yellowstone National Park Protection Act* into law on March 1, 1872 (National Park Service 2021a), establishing YNP as the country's first national park, which ultimately became a bastion of (white) American biopower in the west. This environmental policy was ironic for it was molded by rhetoric from explorers and trappers who recounted the 'majestic' and 'untouched' wilderness, but in actuality these landscapes were sculpted by several indigenous tribes in the area at the time.[2] These included the Crow, Shoshone, Bannock, Nez Perce, Sheep Eaters, Blackfeet and Flathead (Nabokov and Loendorf 2004). "Because the square boundaries of Yellowstone National Park had no direct correspondence to any particular tribal territory, native use of the park area is difficult to document in the preservation era. Native peoples could not possibly distinguish the lands within the park's future borders from those outside" (Spence 1999: 50).

The abstract idea of boundary making as a tool for biopolitical power has devastated subaltern subjects throughout the park's history, indigenous and wildlife alike. Only by reconciling with YNP's colonial-past can pathways toward equitable multispecies livelihoods emerge to foreground human and wildlife's interests equitably (Thomsen et al. 2021a). Concepts of wilderness are socially constructed, culturally embedded, and shaped by a specific temporal and spatial context. Wilderness "is not a pristine sanctuary where the last remnant of an untouched, endangered, but still transcendent nature can for at least for a little while longer be encountered without the contaminating taint of civilization. Instead, it is a product of that

civilization, and could hardly be contaminated by the very stuff of which it is made" (Cronon 1996: 7).

Debates about whether or not humans should occupy or live at the periphery of protected areas often center on the rights of Nature versus cosmopolitanism, typically Western ideals of modernization and development that mostly ignore traditional indigenous cultural practices. Since modern day ranchers and farmers have usually never known another livelihood in their lifetime, their arguments to maintain their 'ranching-way of life' do hold some validity. So too are conservationists' acute concerns such as land development and 'natural resource' extraction, the hunting and killing of wildlife, the effects of livestock grazing, and pollution. What is often absent from pro and anti-wildlife positions, however, is a recognition that indigenous communities did live sustainably with wildlife in what are now protected areas for thousands of years before Euro-American settlers pillaged their lands. This assemblage of competing worldviews clouds debates and potential solutions concerning how humans should view 'Nature' and who has the right to exist on a given landscape. Though indigenous communities are not homogenous, and each individual has agency, their collective historical legacies, sociocultural traditions, and traditional ecological knowledge suggest that non-Euro-Americans may provide insight in how to coexist with wildlife in more sustainable ways. Since it is highly unlikely that protected areas in the U.S. will be returned to indigenous peoples or changed in any substantive way that favors subalterns, it is critical to understand contemporary debates concerning the efficacy of protected areas and their relation to conservation.

5.2 Common (Western) Conservation Perspectives of Protected Areas

There is a growing consensus amongst social scientists that although protected areas (PAs) can generate negative social implications for subalterns such as limiting their mobility or prioritizing one species over another, PAs remain seminal conservation strategies (Rechciński et al. 2019), and reinforce conventional ideas of wilderness to be protected. Proponents of PAs often argue that they prevent biodiversity-loss, species extinction, and (some) resource extraction, and can even provide sustainable human livelihoods (Stone, 2010; Belicia and Islam, 2018). They may remain a principal defense mechanism to stave off species extinction, because of the anthropocentric lens in which conservation is still largely viewed. Schelas suggests that U.S. parks are an "imperfect response to diverse human demands…[but] balancing people's needs and desires with nature protection in national parks holds useful lessons for international conservation" (2010: 2). By continuing to centralize human needs over those of wildlife, it effectively frames wildlife welfare as a result of human compassion rather than an inalienable right for wildlife to persist. Critics of protectionism dispute the Yellowstone model of national parks, "in which strict nature protection is the primary goal" (Stevens 1997: 28). They contend that the YNP model has become the golden standard of conservation, which disregards human rights and further produces feelings of cultural insensitivity. Further criticisms of PAs state that they are ineffective or counterproductive as tools for conservation. Belicia and Islam suggest that the Yellowstone model of park tourism propositions a performative atmosphere for wildlife to justify an economic return on investment (2017).

The International Union for Conservation of Nature (IUCN) takes a global leadership role in defining different types of protected areas, and influences how protected area systems develop and are managed (Harvey et al. 2017). Many global protected areas experience resource extraction, maimed wildlife, and land degradation. Alberts suggests that budget constraints prohibit many developing nations from deterring illegal resource extraction and trophy hunting, as well as preventing sufficient enforcement of poaching, or the curbing of bribery that can affect whether regulations are enforced in PAs (2010). The Virunga National Park in the Democratic Republic of Congo is a UNESCO World Heritage site, but remains a prime global example of where a PA can be susceptible to human-caused destruction and devastation. The burgeoning illicit charcoal trade creates wealth for government officials and wildlife rangers through bribery, at the expense of the endangered, endemic mountain gorillas (*Gorilla beringei beringei*) through habitat degradation and poaching (Lovgren 2007). In Hwange National Park in Zimbabwe, elephants (*Loxodanta*) are poached consistently despite being a popular tourist destination to observe wildlife (Muboko 2016). In other parts of the world, extractive reserves are being classified as PAs, such as in British Columbia, Canada. Industrial-scale loggers must legally practice sustainable timber harvesting within these reserves to 'protect biodiversity', but logging practices are regularly challenged (Locke et al. 2005). These are but a few global examples to show that protected areas are complex capitalistic-dominated environments that can cause severe harm to individual subalterns. Protected areas perpetuate modern conceptions of wilderness and can oppress alternative practices and social tolerance for wildlife-human coexistence.

In this study, I did not collect sufficient first-hand data to provide greater insights into how contextual indigenous perspectives could elucidate current debates concerning the efficacy of protected areas as an apparatus for conservation. However, I do rely on secondary data to attend to the (perceived) interests of indigenous communities and their rights, agency, and welfare. Instead of speaking for indigenous peoples, the most equitable way to inform any environmental policy is to substantively include indigenous perspectives that goes beyond mere tokenistic acknowledgement. Instead, I *do* speak on behalf of wildlife, as they do not have a human voice of their own in debates about wildlife-human relations. In the following sections, I describe some of our experiences and reflections while glassing wildlife in YNP. I then consider wildlife-human relations at the periphery of protected areas, and reflect on efforts to ameliorate sociocultural conflict between humans and wildlife near protected areas.

5.3 Glassing Yellowstone's Wildlife

In early December 2020, my research assistants, Jenn and Kellen, and I partook in an intimate wildlife ecotourism tour for two days with our tour guide, Jake (see Chapters 3 and 4). We started the excursion by entering Yellowstone from the (original) north entrance in Gardiner, Montana. What was most striking to me was how 'unspectacular' this area of the park was. It was heavily 'hyped' for its beauty, and though it was attractive, I couldn't help but think of how much wildlife we saw from the road. We were merely a few meters from an abundance of nonhumans that we could spot with our 'naked-eyes', without the use of a scope. Bison, coyotes, elk, white-tailed deer, rabbits, and squirrels were but a few roadside attractions. I questioned why I didn't see these same species as readily in similar landscapes throughout the

region. About two-hours into the park, Jake heard chatter on the radio that wolves had been spotted by the park biologists. Jake immediately pulled into a turn-off, and we began 'glassing' wolves through binoculars and high-powered scopes.

After about 10 minutes, we made out a predominantly white wolf through the trees. It was running west in the valley below, alongside a creek. I had heard captive wolves howl before, but when a chorus broke out the hair on the back of my neck stood up. I imagine that I probably 'had the chills', but was simply too cold to notice. Jake suddenly rushed us back into the van, and stated that he knew of an excellent vantage point about a half-mile away if we were up for a short hike. In our anticipation to see wolves up close, Jake's S-curve maneuvering abilities were anything but Jason Bourne-like. I'm glad I contained my impatience, because about 15 minutes later we found ourselves less than 200 meters away from a midnight-colored wolf. His howl felt like it was directly next to me, but it took another 10 minutes before Kellen glassed him through the scope. He looked like a rock without our scopes. When glassing him you could watch him throw his head back and let out an elongated howl. It took about two-seconds before our ears registered what we saw. His howl stirred other individual wildlife nearby. We saw deer scamper and heard several coyotes chirping. After the four of us spent nearly an hour with *our* wolf (nobody else was around), we felt a relief that no matter what else happened, we glassed our wolf. Once back in the van, more radio traffic turned our attention to the park's winter wolf study team, who were tracking a pack of wolves by radio collar and plane. The team intended to collar more wolves. As we drove to the next site, we discussed how camouflaged our wolf was even though no vegetation immediately surrounded him. It made us wonder how

often other wildlife had been near us in previous 'wilderness' treks without us knowing it, and we questioned how to be more attune to our surroundings.

As we pulled up behind the winter wolf study vehicle, we noticed a dozen people glassing wolves in the snowbank along the road. There was a sense of excitement amongst the group, and Jake immediately went over to speak with one of the biologists. In our anticipation, we finally forgot how cold it was. Jake leveraged my study to ask Jessica (pseudonym) if she would speak with us for a few minutes. Jessica welcomed us into their group and stated up front that she was happy to chat with us along as we let her record her observations while we talked. She was a wealth of information, and allowed me to hold an extra radio collar while she held up a receiver, a radio telemetry method the park biologists used to monitor wolves in the park. The collar felt heavy and bulky. I pondered what it would be like to wear one and immediately thought of how many people would do nothing but complain with this contraption around their neck. Jenn, a licensed animal physiotherapist, commented on the neck pain and 'down spine' problems that these collars could cause. As I watched Jessica wield the large, 1980s-looking tech, we listened over the radio as a pilot tried to track the wolves with 'fly-overs' so that they could tranquilize more wolves from the air and fit them with collars. Jessica quipped that "only the stupid ones were shot".

I experienced my first wolf-based scientific celebrity meet-and-greet, as I briefly spoke with the renowned wolf-biologist, Rick McIntyre. As he moved from person-to-person conversing about different wolf-related observations (this seemed to be a 'second-nature' practice to him),

Jessica graciously fielded more of my questions. As we were chatting, someone yelled “I got em’!”. Jessica guided us to glass a pack of about 25 wolves on the mountain across the gorge. I finally experienced what I had only previously seen on a National Geographic documentary. We observed the wolves chasing a herd of big horn sheep (*Ovis canadensis*) up and over a ridge. Ten minutes later, the wolves re-emerged in our scopes, still in search of breakfast. They moved onto a herd of bison (*Bison*) further up the mountain side. Four wolves pushed ahead of the rest. Their energy seemed boundless. Jessica commented that these were probably yearlings, and noted it in her journal. As we watched them move the bison into a close-knit bundle of indistinguishable fur, a few of the yearlings began to face-off with a large, protective male who refused to concede his ground. I couldn’t help but resonate with the bison, as our border collies back home regular herd Jenn and me to the door before we even know it, tennis-ball in tow. After about 20 minutes, the wolves gave up and progressed over the next ridge. Jessica postulated that this was normal and that the younger wolves were displaying ‘testing behavior’, while the more senior members of the pack ignored the abundant energy. She logged hand-written, time and date stamped notes in her journal of nearly every movement the wolves made. I felt like I finally shared a scientific method with ecologists.

Over the two-days, our team kept running into Jessica and her team as they closely monitored several packs of wolves. We spoke with a range of bystanders, most of which were retired locals who had nothing better to do. An entire wolf-watching sub-culture was vibrant with systems of citizen-science knowledge and snack sharing flowing along the two-lane roads that infiltrated the northern area of the park. I was happy to swap *Oreos* in exchange for a few

interviews with some interlocutors. The overall experience was exhilarating, but physically, mentally, and emotionally exhausting.

When we left YNP, we reflected how this landscape looked like most of the western U.S., and I've seen more than my fair share of this region, which hit me really hard. If this many individual wildlife could persist in such a small area, why couldn't they everywhere? It's one thing to read about wolf extirpations, but the weight of being confronted with abundant wildlife forced us to acknowledge how much wildlife has been lost across western U.S. landscapes. It was devastating. The western U.S. should be dotted with bison instead of cattle, and instead it appears absent of any other species of wildlife besides deer (*Cervidae*). This protected area permitted us to experience an otherworldly terrain, which both confirmed the positive effects of protected areas, while simultaneously engendering emotions of anger that this was seemingly unique. We discussed the many lessons that we learned, and tried to digest and make sense of why it was so difficult for wolves, and other wildlife such as bison to expand their territories beyond the park's boundaries.

5.4 Wildlife-human Relations at the Periphery

The use of protected areas as a predominant conservation method raises heated debates amongst researchers, conservationists, and community-based stakeholders. Protected areas perpetuate various exclusionary approaches in their management. Lele et al. define an exclusionary approach as one that "involve[s] the forced removal of people from their homes and/or significantly curtailment of their activities" within or near a PA (2010: 95). With humans

maintaining residences either in or near PAs, the number of community-based conflicts with wildlife is on the rise (Ogra 2008; Watson et al. 2014; Geldmann et al. 2019). Many instances of interspecies conflict near PAs stem from the presence of limited resources (e.g., prey), eliciting a competitive rather than cooperative interaction (Fox and Bekoff 2011). The most common perceived wildlife-induced conflicts for humans living in or near PAs include the destruction or raiding of crops, the predation of livestock, and the potential of physical human harm that can result in human emotions of resentment, anger, and fear (Ogra 2008; Stone and Nyaupane 2018).

Branco et al. describe how efforts to improve wildlife-human encounters and foster coexistence must involve the moderation of both parties' behavior and, relating to human perspectives, a change in perceptions toward wildlife (2002). Fox and Bekoff suggest that the first step toward improving interspecies relationships surrounding PAs is to shift the biopower dynamics between both species, which could facilitate ecosystem harmony and reduce conflict-causing competition (2011). But how can biopower be shared between species?

Positive (i.e., non-consumptive) wildlife-human interactions near PAs often emerge from wildlife education programs, which support conservation management initiatives and can ameliorate negative human perceptions of wildlife (Fox and Bekoff 2011; Brias et al. 2020). Though I reprise posthumanism throughout this dissertation to argue that nonhumans have intrinsic value and deserve equal rights, interspecies relations can be further improved if humans perceive wildlife as holding some sort of value such as attracting tourists. Snyman

states that “if communities receive benefits from protected areas (PAs) and ecotourism they will tend to hold positive attitudes towards conservation as a land use” (2014: 1). Wildlife education and ecotourism are potential tools to foster multispecies livelihoods in and near PAs (Watson et al. 2014; Thomsen et al. 2021a), but these tactics can reinforce anthropocentric views that wildlife must serve some purpose to humans in order to persist (Geldmann et al. 2019).

Growing wolf and human populations near YNP increase the chance for interspecies conflict (Vaske et al. 2013), particularly related to livestock depredation and ‘big game’ hunting, as wolves are seen as competition for taking ungulate species such as elk (*Cervus canadensis*). This creates an opportunity for wildlife-human conflict when wolves cross into human-held private lands, are no longer protected, and can be threatened by lethal action (Nelson et al., 2012). With the delisting of wolf from the Endangered Species Act in early 2021, states gained the biopower to determine the fate of the species, which spurred a flurry of legal action to permit increased hunting bag limits (Siler 2021). This suggests that the efficacy of protected areas for wildlife conservation is confined to a park’s artificial boundaries and prompts discourse for legally and socioculturally protected wildlife corridors as many species such as wolf are highly mobile.

5.5 Continental Connectivity and Wildlife Corridors

Protected zones, where animals’ risk of being hunted is limited and resources necessary for survival are believed to be more readily available, have become scarcer as human development continues to expand across the planet (Sanderson et al. 2002). While relatively safe within

these designated areas, wildlife are unable to distinguish the limits of their security within invisible, human-made borders that frame protected areas (Bowers and McKnight 2012). This vastly inhibits biodiversity as wildlife mobility is limited, which can result in fewer opportunities to procreate with unrelated individuals (Hughes et al. 2008; Liu et al. 2018). Without an exchange of genetics within the species inhabiting a protected area, genetic diversity will increasingly diminish. One solution to promoting genetic and biodiversity at the species level, while attending to the rights, welfare, and agency of individual wildlife is to facilitate wildlife corridors legally and socially.

Wildlife corridors, however, are fraught with obstacles that prohibit them from materializing. Santini et al. suggest that for wildlife corridors to be effective, they must follow the innate migratory patterns of animals living in protected areas. These paths are difficult to achieve as western U.S. landscapes are pockmarked by the biopower of fences. These simple materials provide physical barriers to wildlife and human mobility. An equitable multispecies wildlife corridor approach could utilize space more effectively and lead to more cost-effective implementation (Marrotte et al. 2017). Collard details the biopolitical relations between cougars (*Puma concolor*) and humans on Vancouver Island, Canada, to "demonstrate how nonhumans matter to the material-semiotic construction of safety and space…namely, that space is produced within network formations of which cougars, in this case, are key actors" (2012: 23). Issues of biosafety and biopolitics saturated most of my interviews during this study. Many interlocutors described frustration with ranching laws that allow cattle to graze public lands at a minimal economic cost to ranchers, but that wolves can be killed for depredating

livestock when cattle are rarely protected from threats. One interlocutor asked, “why are cattle ranchers exempt from protecting their investment? As a business owner, I have to buy three different types of insurance, and face a host of risks. I want to support them, and I love burgers, but if they are going to treat cattle as an investment, they need to do more to protect it”. This response prompted me to ask George Edwards about the issue of protecting cattle. He agreed to be named publicly and is the Executive Director for Montana’s Livestock Loss Board. He passionately shared:

> Ranchers hate to see their animals injured. And when they come upon, well, in the case of wolves, the back-end shoot-out of their calf or the side tore out of their sheep, it tears them apart emotionally. And that worry of those predators when they're in there, and they are in their area and attacking. They lose a lot of sleep because they truly care about the welfare of those animals. So, the compensation part is, is really secondary to their actions, their concern for their livestock is his primary. So, there is a very big emotional factor in this. So once predation starts, you see more of an outcry to get those wolves removed.

To be transparent, this surprised me. It made me empathize with ranchers and their cattle, but I also wanted to know more about what efforts were being made to deter predator-caused depredation of livestock. George stated:

> We did something unique in Montana. USDA personnel and other states weren't too happy with it. We started loss prevention workshops. USDA put them on where we would bring in people to talk about the different loss prevention activities or methods that ranchers can use - things try to help reduce predation, and brought ranchers in for a panel to talk to about what they'd seen and what they'd experienced and what they felt was working and not working. And these workshops have been going on for a number of years, up until this year with the COVID. And they were successful. And one of the ideas that I came up with, that has just kind of blown up - expanded, is our board bought a 16-foot enclosed trailer, loaded that up with flaggery and electric fencing materials, electrified flaggery, that is, and that was for ranchers to try those methods. Because those things are expensive, they're very expensive. And a rancher with the - well, they run on pretty low profit margins. And so, they're not really willing to try a lot of these things. But my idea was to come up with that, and USDA to try to come up with personnel to actually go out and install it. Well, USDA worked with Defenders of Wildlife and NRDC, Natural Resource Defense Council. And those folks ponied up the money to help pay for that Wildlife Services specialist to go out and do these loss prevention activities. And for us, that ended up being bears and wolves both. So that's been highly successful, and the demand for it just keeps increasing.

George continued to stress that he wanted ranchers to have the financial support to protect livestock and reduce predator-human-cattle conflict. He said that the program started slowly, but was gaining traction. “To start with, only about a dozen [ranchers were involved], but it keeps growing year after year. I saw a map with our projects and there were dots all over the western third of our state”. Wildlife managers from other state agencies shared similar efforts to mitigate wildlife-human conflict, but faced a lack of acceptance or ‘buy-in’ amongst many ranchers to employ non-lethal methods of deterring wolves. Most state-level wildlife managers possessed an overt pro-cattle ranching industry and cultural view, and all interlocutors expressed a desire to stop cattle-depredation, but were willing to ‘allow’ wolves to persist on the landscape. Some emphasized that ranchers would feel better and needed the security of knowing that they could lethally control ‘problem wolves’. But if ranchers are so emotionally invested in their cattle, why are so many willing to exercise a death-sentence for a predator who is simply trying to persist? Why are these sentiments institutionalized in state-level policies?

The lack of wildlife corridors is not unique to the U.S. In South America, research suggests that humans are directly responsible for subjecting animals to indiscriminate hunting, leading to species endangerment and possible extinction (Fischer et al. 2003; Cibot et al. 2019). Sanderson et al. contend that due to humans’ expanding ecological footprint, we possess a moral responsibility to protect wildlife. He states that “the human footprint is a global map of human influence on the land surface, which suggests that human beings are stewards of nature, whether we like it or not” (2002: 891). Entrapping wildlife to protected areas without reconciling our holistic treatment of other species effects biodiversity, which is entangled with

the ecological crisis and threatens our long-term well-being as a species. As protected areas become increasingly isolated from other viable wildlife habitats, arguments for wildlife corridors and buffer zones are gaining in popularity amongst conservationists.

5.6 The Potential of Buffer Zones and Corridors of Tolerance

Approximately 106,000 designated protected areas make up almost 20 million square kilometers globally (Gaston et al. 2008). But do they work? It is important to recognize that many protected areas face conflicts that originate outside the boundaries of the area (Palomo et al. 2013). Boiko analyzed longitudinal data of PAs in Cote D'Ivoire from 1986-2017, and found that protected areas remain subjected to land-use change at a mass-scale (2019). The implementation of a legally declared buffer zone could provide a way of slowing development as well as further protecting the wildlife that live within each protected area. The first implementation of buffer zones was via the UN in the 1970s: the concept being a core reserve surrounded by increasing levels of development and land use (DeFries et al. 2010).

Nepal and Cameroon are some of the only countries to legally define buffer zones. Nepal's program was established in the 1990s and has a strong focus on individual communities who live in and around national parks. The program's goal is to increase the self-reliance of individual communities, while also minimizing the dependence of its people on critical 'natural resources' such as wood for household consumption. Nepal's plan composes several steps that communities can take in order to establish their own buffer zone program. The buffer zone program is funded from approximately 30-50% of park revenue, which is funneled directly into

local communities (Budhathoki 2004). The final step in creating a buffer zone is the continued monitoring of the program, where locals and conservation managers can rapidly adjust to contextual issues in pursuit of increased socioeconomic and ecologic benefits. While the program remains imperfect, it posits an innovative attempt to increase the efficacy of protected areas.

In India, government officials have attempted a similar buffer zone approach. The 'Zone of Interaction' (ZOI) implements the (perceived) beneficial aspects of Nepal's plan, and applies them to an area of much greater human density (DeFries et al. 2010). The ZOI includes four criteria: (1) protection of headwaters which feed the park's rivers and streams, (2) contiguous habitat for the park's protected species, (3) corridors for wildlife migration, and (4) govern the level of human activity in and around the park. In one park, protected areas increased seven-fold, moving beyond the plan's initial goals. These results reinforce the importance of ecosystem congruity at the periphery of abstract demarcations that contour protected areas (DeFries et al. 2010). The ecological crisis necessitates that we collectively overcome our interspecies conflict and to recognize novel, culturally sensitive ideas that foreground subaltern, multispecies livelihoods in and near protected areas.

'Corridors of tolerance' focus on the sociocultural dynamics that affect wildlife mobility between protected areas and other viable habitat, known as biodiversity fragmentation risk. They focus on educating humans about wildlife behavior to shape more pro-wildlife perspectives to accept that other species are simply trying to persist. Communication between

stakeholders is critical to reduce intra, and interspecies conflict, and produce healthier and more resilient habitats (Dolrenry et al. 2020). Though Mathur details the complicated relationship between large, 'crooked' cats and humans in India (2021), Dolrenry et al.'s findings suggest that leopard ethology focused education can reduce conflict and facilitate greater leopard ranges (*Panthera pardus*). Similar programs have been implemented in Africa to improve lion-human relations (*Panthera leo*) and in the U.S. to reduce biodiversity fragmentation risk for mountain lions (Ghoddousi et al. 2021.). In this study, a handful of pro-wolf environmental nonprofit organizations actively worked with ranchers in California, Montana, and Colorado to develop non-lethal, anti-depredation methods (similar to Montana state-level efforts), improve wolf ethology education, and develop community-based corridors of tolerance. In spite of these efforts, wolf-human conflict persists at the macro and micro-levels in the western U.S., evidenced by the illegal poisoning of wolves and the re-institutionalization of wolf-bounties. So how can competing cosmologies and their effects on biopower be accounted for in complex wildlife-human relations in and at the periphery of protected areas?

5.7 Cosmopolitics and Diplomacy

Cosmopolitanism aligns with the convergent phenomenon of globalization intended to perceive the world as universally experienced, "a cosmopolitan is one who rejects parochial allegiances and embraces the common world (the cosmos) as the grounding to work out differences among humans" (Blaser 2016: 546). Examining our ontological positioning within the cosmos is intended to challenge sociocultural assumptions or 'group think' and to find common ground.

US public lands and protected areas are said to be set aside for 'the good of all' by asserting cosmopolitan claims over social, cultural, and environmental engagement. Its preconception is that the cosmos lend to a unifying culture that justifies the management of nonhuman places for angling, sport hunting, bird watching, etc., which sustain an $82B industry (Vincent et al. 2017).

The biopolitical subject, or more specifically the nonhuman subject in contemporary wolf-human relations, and their habitats are managed by state agencies and by the U.S. federal government. Anderson asserts "without explicit federal action, such as listing a species under the Endangered Species Act, states set the population levels of species within their borders" (2019: 1). Stengers' (2010) cosmopolitics is critical of western science for its reproduction of authoritative knowledge and its assertion of mono-naturalism – the result of a social-natural world chosen by a Western scientific doctrine. That is, the rejection of multiple worlds has created a Western dichotomization where the social is separate from the environmental and its ensuing nature-culture divide is depicted by park fees and tag limits. Blaser describes how multiple cosmos collide in his articulation of the caribou and atıˆku, to suggest that "what is debated (and has to be resolved) are the different views that, given their allegiance to their cultures and traditions, humans have about that cosmos" (2016: 546).

Despite the changing sociocultural context in US public attitudes towards a pro-wildlife mutualism orientation (Manfredo, 2020), conflict resolution is often determined by the sole discretion of the state. To Blaser, 'resolution' meant coming to a mutual decision about two

fundamentally competing claims. When wolf leaves its invisible cage, it becomes subject to death, and its lost protections under the ESA to nonhuman animal genocide (see Chapter 8). Granting guardianship to multiple worlds which have stake in its claim translates to the protection of individual nonhumans and ecosystems. This becomes a system where multiple naturalisms engage with one unifying force and social-cultural tension is 'managed' through fundamentally competing claims. Both state agencies and federal governments are therefore accountable for the protection of wolf outside protected areas, but how can this be accomplished? The extension of legal personhood and guardianship is intended to imagine a world where wolf has rights outside of its human constructed environment and asks what do those engagements look like in practice (see Chapter 9). Most importantly, what are the fundamental tenants of this contextually specific, yet cosmic diplomacy?

5.8 Conclusion

Isolated protected areas and lack of wildlife corridors render wildlife vulnerable to biodiversity fragmentation and biosecurity risks (Anderson 2019). Contemporary discourse concerning the efficacy of protected areas often evade the intrinsic value of wildlife. Indigenous perspectives and their TEK may proffer alternative pathways to foster wildlife-human coexistence and inform Euro-American cosmologies that attend to the social contract that (should) exist between species. In this chapter, I questioned the efficacy of protected areas and their effects on wildlife and humans living within and near protected areas. Protected areas are undeniably situated against the backdrop of (post)colonialism, and perpetuate arbitrary ideals of wilderness. Protected areas do provide some refuge for wildlife in the midst of the ecological

crisis, but the complexity of wildlife-human relations in and near protected areas' borders suggest that we need to move beyond fixing the abstract biopower of artificial boundaries. In the following chapters, I question the biopower and sociocultural dynamics that influence Western science ideologies and their effects on the lives of particular subaltern wildlife.

Part 3- Invoking Agency for Change

Part 3 includes two chapters. Chapter 6 discusses a new era of 'democratic conservation' where Colorado voters passed Proposition #114 that requires Colorado Parks and Wildlife to reintroduce wolves to the State by the end of 2023. It aligns with emerging ecodemocracy literature. Chapter 7 questions the moral responsibility that conservation biologists have toward wildlife. It builds on compassionate conservation and multispecies justice to suggest that technocratic power relations are insufficient, and that individual nonhumans continue to suffer for the sake of biodiversity. I suggest a *nonbinary, interspecies harm prevention framework* for scientists to consider when interspecies conflict occurs.

Chapters in Part 3:

Chapter 6- Democratizing Conservation: A new paradigm in conservation management

Chapter 7- Compassionate Conservation & Multispecies Justice: Rethinking conservation biology's moral responsibilities toward wildlife

Chapter 6- Democratizing Conservation: A new paradigm in conservation management

6.0 A New Era in Environmental Policy

On November 3, 2020 voters in Colorado, USA ushered in a new paradigm of wildlife management: 'democratic conservation'. More than 3,000,000 Coloradans narrowly voted to pass Proposition 114 to reintroduce the gray wolf (*Canis lupus*) to the state (Brasch 2020a). This exercise of democratic power is the first case where a coalition of citizens and nonprofit organizations led a grass-roots effort to bypass state and federal legislation to demand a nonhuman animal species' reintroduction via a statutory ballot initiative. The outcome is bittersweet for environmental and wolf advocates: on October 29th, 2020 the U.S. Fish and Wildlife Department (USFWD) controversially decided to end federal support for the wolf by delisting the species from the U.S. Endangered Species Act (ESA), turning over management to local and state officials (Rott 2020). Colorado Parks and Wildlife (CPW) is now required to develop a plan to manage the species' return based on statewide public hearings and scientific data, and to initiate 'paws on the ground' west of the Continental Divide by December 31, 2023.

Wildlife management and policy is a contentious global issue, rife with competing values and tragic histories of violence against indigenous peoples and nonhuman animals, as well as favoring particular special interest groups. In this chapter, I take a subaltern, posthumanist, and decolonial ecological perspective to consider the rights and perspectives of subaltern groups related to environmental conservation and examine the potential of this new democratic

conservation paradigm. We first consider the history leading to Proposition 114, the effects of keystone species on ecosystems, sociocultural dynamics of environmental policy, and how wildlife discourse is constructed. I then review ecological and social science literatures to examine the potential effects of democratic conservation and its role in subverting existing power relations in favor of more hospitable, convivial, and sustainable relations between human and nonhuman animals (Büscher and Fletcher 2019). This review concludes with questions to consider regarding the future of democratic conservation.

6.1 History Leading to Proposition 114

"The fossil record indicates that gray wolf first arrived in North America from Eurasia approximately 500,000 years ago" (Weckworth et al. 2010: 363), but was systematically extirpated through methods of trapping, poisoning, and shooting from all of the lower-48 US states from the late 1860s to the 1940s, except for a small area in Minnesota, and was sanctioned by colonial US government bounty programs (Mech 2012). The 'othering' of wolf and subsequent eradication was driven by fears rooted in Euro-American cultural heritage, land management uses including livestock grazing, and an exceptionalist interpretation of human dominion over 'nature' (Fritts et al. 2003). In the decades following wolf extirpation in Colorado, the species was listed as endangered under Colorado's Nongame, Endangered, or Threatened Species Conservation Act. The law dictates that eradicated species' reintroduction must be authorized by Colorado's legislature. US American attitudes towards wolf and other species shifted after World War II, leading to the Endangered Species Act in 1973, and by 1978, the wolf enjoyed widespread federal protection (Fritts et al. 2003; Blevins 2020). Since the

ESA's implementation, ecological research, political surveys, and public discourse regarding the ecological importance of wolf resulted in the reintroduction of 66 wolves to Yellowstone National Park (YNP) and central Idaho in 1995-6 (Ripple et al. 2014).

Proposition 114 developed after more than 40 years of discussion between stakeholders considering planned wolf reintroduction, such as the 2005 14-member Wolf Management Working Group. In 2016, the CPW Commission issued its fourth declaration to oppose wolf reintroduction, and declared it was not responsible for managing the species' return if they travelled by their own accord from neighboring states (e.g., Wyoming) unless it was no longer listed under the ESA (Colorado Parks and Wildlife 2020a). Pro-wolf advocates were frustrated by state-level inaction and surmounting ecological studies and sociocultural support for wolf reintroduction (Mech 2012; Ripple et al. 2014; Blevins 2020). Criticisms of unequal power dynamics, which favor game/prey species over predators, have been lodged against CPW for maintaining 'dominance-oriented' wildlife management practices including a controversial predator control study that trapped and killed black bears (*Ursus americanus*) and mountain lions (*Puma concolor*) (Blevins 2020). Fees generated from hunting and fishing permits account for 68% percent of CPW's conservation budget, but efforts to diversify revenue are underway (Colorado Parks and Wildlife 2020b). Other criticisms of anti-wolf practices in Colorado concerned 'big agriculture's' (perceived) influence in the state's management of wildlife (Blevins 2020). Pro-wolf advocates have responded to government inaction to form the Rocky Mountain Wolf Action Fund and parallel Rocky Mountain Wolf Project, a coalition of individuals and about 30 nonprofits. These groups led a multi-year campaign to initiate a state-wide ballot

proposition (Brasch 2020a; Blevins 2019). An alternative attempt to reintroduce wolves by Colorado state legislator Kerry Donovan's Senate bill 121 failed resulting in Proposition 114 (Brasch 2020a).

6.2 Effects of Keystone Species in Ecosystems

Human 'management' of nonhuman animals and ecosystems is an ethically contested terrain riddled with anthropocentric value-laden judgements (Berry 2006). Albeit contested, ecological studies suggest that keystone species, including apex predators such as wolf, create trophic cascades in ecosystems (Ripple and Beschta 2012). In YNP, wolf reintroduction led to changing ungulate prey (e.g., elk) movement patterns that decreased riverbank erosion, enhanced tree recruitment (e.g., aspen, willow), and down-chain species' return (e.g., beavers, bison), resulting in enhanced ecosystem health and variability (Ripple and Beschta 2012). Cascading effects outside YNP were severely hindered, however, as YNP is a 'protected area' that limits human activities within its borders. Wolf is a highly mobile and dynamic pack species that may travel up to 30 miles (48km) in a single day and relies on large territories for hunting and mating (Mech 2012; U.S. National Park Service 2020). The species has recovered to a population of about 6,000 in the lower-48 US states (U.S. Fish and Wildlife Service 2017), and since 2008, repatriated parts of Oregon and Washington.

Wolf dispersal is contingent upon suitable corridors to facilitate continental connectivity and healthier ecosystems (Mech 2012). Individual wolves have successfully migrated to Colorado since the YNP reintroduction in the mid-1990s, and in early 2020 six wolves, named the Pioneer

pack, were identified in Moffat County, CO that borders Wyoming. Critics of Proposition 114 cited the Pioneer pack's return as evidence that governmental action is not warranted. However, the likelihood of natural wolf dispersal into Colorado is hindered by Wyoming's anti-wolf laws and protections, as Wyoming allows permit-free hunting and killing of wolves in 85% of the state as long as it is reported within 10 days, following the species' delisting in 2011 and court challenge in 2017. Wyoming's unprotected area includes the entire border between Colorado and Wyoming, and three members of the Pioneer pack were believed to have been slaughtered in Wyoming in late August 2020 (Brasch 2020b). These lawful killings underscore the need to protect the rights and agency of wildlife as individual animals outside of protected areas, rather than as species categories.

6.3 Sociocultural Dynamics of Environmental Policy

Ecologically, there are better ways to restore healthy, sustainable ecosystems without significant intrusive management, other than the stewardship of indigenous or sustenance hunters who act as predators and ecosystem engineers (Lovelock 2000; Gosler et al. 2013). Social-ecological systems is a theoretical approach that attempts to coalesce ecological knowledge with human sociocultural factors. However, it is criticized for its emphasis on value-laden terms such as resilience (e.g., whose resiliency?) that does not adequately address unequal power relations and persisting social and environmental injustice. Social norms and scientific inquiry serve as feedback loops, as scientific racism proliferated in the early 1900s and eugenics was applied to conservation to justify the systematic extirpation of the wolf in the US (Spiro 2009). Subaltern studies provide a postcolonial theoretical perspective to consider the

rights and power of traditionally marginalized groups such as indigenous, women, ethnic and racial minorities, and nonhuman species (Spivak 1988; Mitchell 2002). Coupled with the posthumanist 'animal-turn' in the social sciences, subaltern scholars question who has the right to decide the fate of other species. For example, traditional ecological knowledge (TEK) studies suggest that indigenous groups (though non-homogenous) often possess a deeper knowledge of non-industrialized lands and the interaction between humans and nonhuman species (flora and fauna), yet typically lack power in discussions about environmental policy (Ferguson and Messier 1997). Subaltern analysis helps to untangle debates about wildlife-human interactions, with ontological acknowledgement that it is still an exercise in humans speaking for and about another species, without their consent, knowledge, or opinion.

6.4 Shaping the Narrative

Since scientific studies are produced by humans, even hypothesis-driven studies can never be truly objective, as scientists choose the variables and parameters of study, and are informed by their own norms, values, and assumptions (see Chapter 7) (Haraway 1988; Daston 1995). Nonetheless, researchers must attempt to eliminate (unconscious) biases or at least acknowledge their positionality when trying to present scientific information to a public audience. Researchers affiliated with the newly established Colorado State University's Center for Human-Carnivore Coexistence (CHCC) (which I'm now a member of) have worked to provide scientific information for public use. In February 2020, the CHCC hosted a public workshop on wolf reintroduction, and created 12 Colorado Wolf Information Sheets on various sub-topics of

wolf knowledge including taxonomy and biology, wolf policy, and human and pet safety (The Center for Human-Carnivore Coexistence 2020).

Charismatic species including the wolf elicit strong emotions as they are often tied to folklore (e.g., the 'big bad wolf' in *Little Riding Hood*) with cultural norms and values that castigate wolf as villain, as warrior, or as myth. How humans speak about subaltern groups is shaped by history and culture, where the subaltern is 'Othered', distancing the group, making it easier to blame them for unrelated turmoil such as economic decline, bad weather, loss of jobs, culture wars, etc. (Spivak 1988; Fritts et al. 2003), suggesting a historical link of eugenics' effects on conservation and social outcomes. Opponents of wolf reintroduction in Colorado are unhappy that urbanites might decide the quotidian practices of ranchers and hunters who have to live with wolves, and cite fears of livestock depredation, increased costs to safeguard herds, reduced market value for cattle due to higher levels of stress and increased movement patterns limiting weight gain, as well as sentiments that their cultural norms and values are dissipating through modernization and government overreach (Fritts et al. 2003; Brasch 2020a).

Common discourse amongst some actors in wolf-human interactions describe a 'viral' disposition known as the '3S's', suggesting that some wolf opponents see wolf as good for 'shoot, shovel, and shut-up' (Liber et al. 2012). Conversely, even supporters of charismatic subaltern species can be complicit in speciesism, where wolf supporters are quick to defend them for their 'majestic' and 'intellectual' qualities, while speaking abhorrently about other species such as the coyote (*Canis latrans*). Other charismatic-based approaches align with an ecosystems approach, as Ladle

et al. (2019) call for a culturomics approach of favoring species for reintroduction that enjoy high-levels of discourse on the internet. The internet community is also biased in age – younger users outnumber older, but have less knowledge/experience of nature (Louv 2008). This draws the question as to whether or not a single species approach to environmental policy is effective, or even ethical.

Anti-wolf advocates suggested that only 'experts' working in wildlife agencies should conduct ecological surveys and draft policy (thereby ignoring university-based wildlife biologists) and that Proposition 114 was 'ballot box biology' (Brasch 2020a), where uninformed voters were empowered to dictate policy and its effects on others. However, state agencies are mandated to represent the interests of all Coloradans, not just their primary financial constituents. Some current ecological studies have been questioned for their sociocultural carrying capacity rather than an ecological one (Blevins 2019). This approach to wildlife management aligns with an ecosystems services approach that evaluates environmental worth, at the ecosystems and species level, to humans. Though this theoretical framework is rooted in ecology, neoliberal capitalism has perhaps co-opted the framework to further distance humans and 'Nature', giving preference for some species over others, and engendering human domination over nonhuman animals. The anthropocentricity of the ecosystems services approach, while widespread and prevalent in conservation, has serious shortcomings, and thus demands a posthumanist approach to conservation (Ninan 2012).

6.5 Concerns to Consider

The potential for rewilding once-native species to foster environmental sustainability by restoring trophic cascades is promising (Ripple and Beschta 2012), and is being practiced globally (e.g., see Rewilding Europe). Debates about land use management question whether agricultural and natural resource extraction industries are sustainable, especially with rampant climate change. Stronger commitments to 'mutualism orientations' that value wildlife more equally are emerging across the world, and in particular across the USA, and align with subaltern social and environmental justice movements (Manfredo et al. 2020). Ferdinand et al. (2020) discuss how social oppression through racial and colonial domination and environmental destruction are deeply intertwined in earth's current environmental crisis. They emphasize that though ecofeminism, social ecology, and political ecology have explored the relationship between environmental destruction and social inequalities, decolonial ecology links these literatures with others such as subaltern studies to critically analyze the potential for socioenvironmental justice.

Though these theoretical frameworks still do not adequately give voice to subaltern nonhuman animals because of an underlying ontological assumption about their incapacity to communicate through human speech, nonhuman animal' rights and agency are at least considered to some extent. Questions quickly emerge, however, as to whose ecological and cultural values are to be considered in democratic conservation (Gosler et al. 2013). How can equitable representation be considered, and how can an electorate be informed by conservation science? As experience from southern Africa shows, a more critical view of how conservation is understood by communities impacted by 'dangerous' wildlife is necessary if existing power relations are not to be reproduced,

but instead reconfigured to be fairer and just for people who live with nonhuman animals, as well as more supportive of fragile ecosystems and endangered species. Who or what might constitute the subaltern in these contexts is mercurial and requires careful attention (Spivak 1988; Mitchell 2002; Galvin et al. 2018).

6.6 Parting Thoughts

Gaia studies suggest that there is a growing sense in systems ecology that predators are an essential component of a healthy ecosystem. This is supported by ecological cascade studies, but is limited by cultural considerations that will determine the fate of global ecological sustainability (Lovelock 2000; Ripple and Beschta 2012). Democratic conservation paradoxically problematizes posthumanism, as it democratically subverts existing biopower relations, while still not fully accounting for the agency of individual nonhuman animals. Does democratic conservation set wildlife up for failure by delaying the formation of a wildlife management plan until after the proposition passes as in the case of Proposition 114? Oregon and Washington arguably made positive steps to include scientific data and solicited constituents' voices through public forums, but wolf management remains highly controversial as state authorized wolf killings persist in certain circumstances. With Proposition 114's passing, contested human power relations will determine wolf management policy over the species' rights, agency, and welfare, including whether or not an individual or pack can be destroyed for their behavior (e.g., livestock depredation). Democratic conservation is a new paradigm that will likely grow in its contribution to public understanding of and support for ecological sustainability. It provides numerous threats and opportunities but will ultimately need to consider thorny questions about equal

representation, rights, and agency for wildlife and humans, which aligns with emerging research on ecodemocracy (see Gray and Curry 2020; Kopnina et al. 2021). Is a species approach to wildlife management effective, or can a democratic conservation paradigm embrace an equitable ecosystems management approach that decolonizes ecology? In Chapter 7, I address the ethical and sociocultural dynamics that influence contemporary conservation biology in particular, and conservation science at large, to show how one's own positionality informs their science. I question how this assemblage of ethics, social and political milieus, and training coalesces to perpetuate a doctrine of species-level biodiversity at the detriment of particular, individual subalterns.

Chapter 7- Compassionate Conservation & Multispecies Justice: Rethinking conservation biology's moral responsibilities toward wildlife

'Traditional conservation' customarily engages in the dismissal of individual non-human animal claims when these conflict with human interests or prevailing ideas of biodiversity.

-Santiago-Ávila and Lynn 2020: 247

7.1 Introduction

Before I started my fieldwork, I naïvely hoped that conservation biologists possessed most of, if not all of the solutions to stave off species extinction – we simply needed to listen to them. I believed that they were the experts, that we should trust their science, and figure out how to overcome interhuman conflict to implement their findings in environmental policy and its enforcement. In many ways, they do possess this knowledge and expertise for their emphasis on conserving biodiversity, but the widespread omission of individual nonhumans' rights, welfare, and agency severely hinders the field's position to spearhead efforts to foster wildlife-human coexistence. I do not intend to imply that their work or perspectives are not worth considering, but rather that a technocratic power approach to wildlife-human coexistence is insufficient. Species extinction is accelerating (Steffen et al. 2011; WWF 2017; Ceballos et al. 2020), ecosystems are imperiled of collapsing (Lindenmayer et al. 2016; Bergstrom et al. 2021), and humans proceed to kill millions of individual wildlife annually in the U.S. alone (see Chapter 8 for data and a discussion of nonhuman animal genocide).

Conservation biologists *should* be leaders in wildlife-human relations, but two key debates are strife within the discipline and may impede their ability to engender greater public influence in

practice. The first concerns the efficacy of advocating socially or politically for wildlife, and whether or not a scientist can remain objective in their scholarship if they demonstrate their positionality. Many multispecies ethnographers also remain apolitical by not advocating for nonhumans in their writing or in practice (Kopnina 2017), which necessitates a radical rethinking of our responsibility toward nonhuman 'Others' in scholarship and practice across conservation science disciplines, and in society (see Chapter 9). Academe and society must collectively engage with the tacky entanglements of applied ethics to confront prevailing apathy toward *all* nonhumans' interests, rights, agency, and welfare. I examine the fallacies of some common ethical positionings that inform a seemingly fanatism focus on species-level biodiversity. The second debate concerns how ethical stances and decisions inform scientists' epistemological and ontological positions, suggesting that this value-laden assemblage prevents any scientist or their study from being purely objective, thus rejecting positivist perspectives toward science.

Brown challenges the postmodern argument that science is socially constructed, culturally embedded, situated temporally and spatially, and informed by individual agents with varying cultural, class, political, race, gender, or ethnic identities (2009). He positions himself within positivist 'classical science' and condemns arguments from the humanities, social sciences, and Science, Technology, and Society (STS) studies, that suggest "instead of being a glorious and progressive achievement of the Western world since the seventeenth century [science] has been a deeply flawed enterprise which has degraded the environment, oppressed women, minorities, the Third World, and is presently a tool of capitalism and the military industrial

complex" (2009: ix). Positivist science remains pervasive in contemporary scholarship, particularly in the natural sciences. I align myself with the postmodern view that science is socially constructed, as a positivist stance benefits those who already hold biopower, and are often male, Western, and white, at the exclusion of more diverse voices. "Through the work of science studies, many scholars have come to understand science as culturally situated knowledge practices. This shift in understanding entailed a move away from thinking about science as the pursuit of universal truths and a debunking of the assumptions that science is unified and value-free" (Olohan 2017: 1). Oziewick defines science as "a collection of alternative subjective and personal ideas. Science is, and must be, individual understanding. I see science created by scientists and by anonymous referees only, and claim that science does not exist outside of personal opinions of scientists" (2013: 8). If *all* science is a pursuit of knowledge and therefore subjective, socially constructed, and culturally embedded, how can the sociocultural dynamics that affect conservation scientists' studies be better accounted for in a manner that equitably considers the rights, agency, and welfare of individual nonhumans, and subaltern humans (see Chapters 4, 6, and 8 for discussions on subalternity)?

Rosendahl et al. suggest that transdisciplinary research proffers a pathway toward 'socially robust knowledge' production, that can be "assessed by appreciating how the process of knowledge-coproduction with the specific social and political milieus in which it happens achieved to be salient, credible and legitimate" (referencing Cash et al. 2006; 2015: 18). By accepting that knowledge (co)production is socially constructed, it provides access to seriously engage not only traditionally marginalized, subaltern voices in Western-based scientific

contexts, but also to emphasize (non-homogenous) indigenous perspectives, cosmologies, value-systems, and traditional ecological knowledge (TEK) (see Ferguson and Messier 1997; Cortes-Vazquez and Zedalis 2013; Ramos 2018). Though I did not have the opportunity to significantly include such valuable indigenous perspectives and approaches in this study first-hand, indigenous activists from organizations such as the *Global Indigenous Council* are actively working with the U.S. federal government and the state of Colorado on wolf-human relations. A ground-breaking institutional example of bridging the gap between Western-based science and traditional ecological knowledge recently emerged at the University of Alaska Fairbanks. The revolutionary *Tamamta* program, meaning 'all of us' or 'we' in Yup'ik and Sugpiag (Alaskan indigenous tribes/languages), is part of UAF's College of Fisheries and Ocean Sciences and aims to "elevate indigenous knowledge in fisheries research" (Grove 2021: 1). UAF institutionalized TEK as 'legitimate' science in a Western context, which provides a pathway for conservation scientists to reflexively evaluate the social constructions that influence their ethical, epistemological, and ontological positionings.

In this chapter, I interrogate the necessity for conservation scientists (an emerging interdisciplinary field) to reconsider their ethical positions, politicality, and even science, given the surfeit criticisms of compassionate conservation in the literature and from what I learned first-hand in this study. I do not absolve anthropology or any other discipline from similar debates within and across disciplines, but particularly challenge conservation scientists (including conservation-focused anthropologists) to reconsider their positionality for the immense biopower they exercise implicitly and explicitly over the rights, agency, and welfare of

nonhumans. I unpack the tensions conservation biologists face within their disciplinary milieu from an STS studies perspective, to consider how to reflexively question the non-binary, applied ethics they grapple with on a quotidian basis. I also discuss why embracing the social science norm of stating one's positionality can stimulate candid discourse between stakeholders. By attending to the limitations of siloed disciplinary efforts to stave off species extinction, I present a non-binary framework that foregrounds nonhumans' interests for conservation scientists to consider when wielding biopower that has real-world effects on the individual lives – and deaths – of wildlife.

I first detail the rise of bioethics before challenging the 'doctrine of biodiversity', and then consider the merits of compassionate conservation and multispecies justice, which are recent ethical positionings that aim to reconcile tensions between valuing species over individuals when moral dilemmas arise. I then explore the pervasive view that individual nonhuman lives' do not matter if their agency conflicts with human interests, and the abstract idea that is 'biodiversity above all' (Santiago-Ávila and Lynn 2020), before presenting the non-binary compassionate conservation and multispecies justice framework that attends to the rights, agency, and welfare of individual nonhumans and their relation to science.

7.2 Bioethics

Bioethics considers whether or not certain species of animals deserve respectful treatment from humans, and has remained a contested topic of scholarly debates since its development in the 1970's (Rothstein 2009; Irvine et al. 2013). It emerged as a result from a growing concern

for nonhuman animals and their moral status, as nonhumans are deeply embedded within human politics, socioeconomic structures, research, medicine, and food systems globally. In an effort to bridge the gap between persons who hold differing ideologies of the moral status of nonhuman animals, a widely agreed upon notion that nonhumans possess symbolic value has been recruited. This is due to three key factors: 1.) defining a nonhuman with 'personhood' status can be socioculturally evasive, 2.) personal or cultural interests are not sufficient evidence for applying moral relevancy, and 3.) arguments against granting nonhuman animals with personhood fall short when humans are presented with contrasting ideas of individual agency (Bortolotti 2007).

McKendree et al. suggest that it is commonly understood amongst animal welfare professionals that emotional connections and beliefs held by humans toward nonhumans are more positive if they have a pet in the home, which contributes to an increased level of concern for nonhuman life compared to humans who do not own pets (2014). They state that other important factors have been identified as pertinent for developing an emotional attachment towards nonhumans, such as education level, gender, and age. Popular philosophical beliefs pertaining to personhood (see Chapter 9 for a discussion and argument for nonhuman personhood), such as one posited by Peter Singer in his book, *Rethinking Life and Death: The Collapse of Our Traditional Ethics*, utilize the notion of rationality as proxy for understanding which beings are deserving of ethical respect (1996) that compassionate conservation has embraced (see Bekoff 2010; Wallach et al. 2015, 2018, 2020a). Singer proposes that great apes (*Hominidae*) fall into the category of *rational* as they have been shown to be "aware of their own existence over time

and capable of reasoning" (Zylinska 2009: 13). Other species such as 'dolphins, elephants, monkeys, dogs, whales, and pigs, amongst others', have also shown to possess similar capacities, which would justify granting them the same moral status from a rational perspective (Zylinska 2009). However, all of these positions remain anthropocentric for the notion that humans must 'grant' moral status to nonhumans based on their cognitive abilities, rather than their intrinsic worth as individuals. Conservation biology accepts the notion of intrinsic worth when it concerns biodiversity and is based on Soulé's five guiding principles that bedrock the discipline (1985). These include: "(1) diversity should be preserved, (2) untimely extinctions should be prevented, (3) ecological complexity should be maintained, (4) evolutionary processes should continue, and (5) biological diversity has intrinsic value" (Griffin et al. 2020: 1). If conservation biology can accept arguments that nonhumans have intrinsic value at the species level, how can individuals be 'granted' the same respect?

7.3 Challenging the Doctrine of Biodiversity

"Conservation science is concerned with phenomena that affect the maintenance, loss, and restoration of biodiversity and the science of sustaining evolutionary processes that engender genetic, population, species and ecosystem diversity (Groom et al. 2006; Hunter and Gibbs, 2006; Van Dyke 2008; Sahney et al. 2010)" (Griffin et al. 2020: 1). Yet conservation is inherently "value-laden and goal oriented" (Soulé 1985; Batavia et al. 2021: 1381). The term doctrine is a highly-charged term in a variety of contexts, particularly religious ones. However, I apply the common usage meaning here from *Cambridge Dictionary*, where doctrine refers to "a belief or set of beliefs, especially political or religious ones, that are taught and accepted by a particular

group" (Cambridge Dictionary 2021). By coupling this definition of doctrine to biodiversity, 'the doctrine of biodiversity' signifies a fundamental belief held by conservation biologists that biodiversity should be prioritized above all, to the detriment of individual nonhumans, which often results in their death and or suffering. Relying on the technocratic biopower of conservation biologists without questioning their moral and ethical decisions would be irresponsible considering the dire state of the ecological crisis. One biologist reflected:

> I wonder how much of the justification of killing in conservation comes from the fact that most conservation advocates come from a background and training in biology, which explicitly regards other organisms as objects of study rather than subjects or agents, and that part of the 'discipline' of training for biologists is getting over any empathy that prevents one from conducting one's experiments objectively. Under such a scenario, empathy is regarded as unprofessional and a weakness, and the ability to 'transcend' it is regarded as a professional virtue. This comes from my own training in biology and experience of why many chose botany rather than zoology.

The more I spoke with conservation biologists in this study, the sharper it became that I must attend to the ethical incongruities that permeate the field, like any other. To be clear, I do not intend to imply that conservation biologists or their science is untrustworthy, but rather subjective and influenced by an individual's biases. Every interlocutor I spoke with suggested some sort of pro-environmental outlook and a genuine care for all *species* to persist. Issues quickly arose when discussing the moral dilemmas that frequently occur in practice, and when they had to choose between the intrinsic value of an individual, versus the 'greater good'. I share some interlocutors' perspectives in detail in the *Killing for the Greater Good?* section below.

7.4 Compassionate Conservation

Some conservation biologists have begun to challenge the utilitarian worldview through the emergence of compassionate conservation (Bekoff 2010, 2013; Wallach et al. 2018, 2020a, b). Compassionate conservation "is distinguished by its heightened focus on individuals, in addition to collective units, such as populations, species, and ecosystems. Summoning compassion for individuals, it is argued, would transform the very meaning of conservationists' views of, and interactions with, the natural world (human and nonhuman)" (Batavia et al. 2021: 1381). Compassionate conservation takes a 'do no harm' approach that many conservation biologists purport is unrealistic (Driscoll and Watson 2018; Griffin et al. 2020), and opponents to compassionate conservation are often fierce in their opposition. Driscoll and Watson opine that "Wallach et al. promotes, demands a complete halt to lethal control of invasive vertebrates (e.g., use of 1080 bait on Gough Island) (Marris 2018), which would accelerate global homogenization and biodiversity loss" (2018: 777). This perspective, however, reinforces the separation of 'Nature' from culture to imply that humans solely possess the right and power to 'play God' by deciding who should and should not live.

Griffin et al. explore philosophical and psychological concepts of empathy, compassion, and deontological moral principles to castigate compassionate conservationists who advocate for the moral principles of 'first, do no harm' and 'individuals matter' that are rooted in virtue ethics and focus on 'what type of person should I be' (see Chapters 4 and 8 for a discussion on virtue ethics) (2020). They argue that if compassionate conservation is "adopted, [it] could be more harmful for native biodiversity than any other conservation action implemented thus far,

while also causing more net harm to individuals than it aims to stop (2020: 1). The inherent misconceptions in their argument are twofold. First, they problematically position any debate or issue between species and individual levels as binary when conflict arises, where one perspective must be chosen at the detriment of another. The second concerns the abstract construction of what is considered to be an invasive species. In the U.S.:

> Executive Order (EO) 13112—defines an invasive species as ‘‘an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.’’ In the Executive Summary of the National Invasive Species Management Plan (NISMP) the term invasive species is further clarified and defined as ‘‘a species that is non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.’’ To provide guidance for the development and implementation of the NISMP, the National Invasive Species Council (NISC) and the Invasive Species Advisory Committee (ISAC) adopted a set of principles outlined in Appendix 6 of the NISMP. Guiding Principle #1 provides additional context for defining the term invasive species and states ‘‘many alien species are non-invasive and support human livelihoods or a preferred quality of life” (Beck et al. 2008).

Most individual U.S. states also exclude humans and livestock from being considered as invasive species (see Chapter 8), and livestock are omitted for their economic value to humans. These legal policy frameworks are rooted in anthropocentricity that further distance humans from nature. While humans may have existed on western U.S. landscapes over the past tens of thousands of years, indigenous groups are believed to have maintained a sustainable lifestyle as intrinsic components of ecosystems, rather than perceiving nature as a natural resource whose primary purpose was for human (Euro-American) consumption. By ignoring the effects of humans and livestock on shared landscapes and their outsized roles on the environment, Griffin et al. render their arguments for killing non-native species mute, or at least hypocritical. The second misconception of their argument is that they do not adequately consider, nor address alternative solutions to interspecies conflict that does not result in the death of particular

individual nonhumans. I was fortunate to attend a lecture at the University of Oxford in 2019 by Emma Marris, a renowned environmental science writer whose work explores wildlife-human relations. She presented research from what became her latest book, *Wild Souls: Freedom and Flourishing in the Non-human World* (2021). Emma articulated that the often-binary choices between whether or not to kill a non-native species came down to how humans valued a given species. She posited that humans could find innovative solutions to seemingly binary conflicts, like using the CRISPR-Cas9 gene-editing tool to render invasive species' offspring, such as rats or mosquitos, infertile (Callaway 2018). Though this presents different ethical conundrums concerning an individual's right to procreate, it does provide an alternative solution to curbing a species' population that doesn't result in the killing of individuals, which aligns with a compassionate conservation perspective.

Since compassionate conservation was introduced this century, it has faced strong opposition founded within the idea that humans participate in a higher moral community than nonhumans. Popular arguments against compassionate conservation suggest that conservation biology is inherently compassionate, as the intent of conservation is to preserve biodiversity, which 'must be done at the cost of the individual' (Wallach et al. 2020a). Opponents to compassionate conservation, who are particular humans that wield biopower to determine which species are considered invasive, argue that it would thereby diminish biodiversity in a given ecosystem (Callen et al. 2020). They contend that it is already compassionate to eliminate invasive species via euthanasia from the perspective of endemic species who are threatened by 'invasives' (Russel et al. 2015). However, these arguments rely on a framework that places

human livelihoods above other sentient beings as we do not evaluate human effects on the environment with the same regard as we assess that of an invasive species. Would conservation efforts, outside of compassionate conservation, be considered compassionate if they focused on human subjects (Wallach et al. 2020a)?

If humans were to recognize all nonhumans as having intrinsic moral value, the logic of anti-compassionate conservation arguments would not hold up. Implementing compassion into conservation efforts shrinks the moral divide that Western societies have created between humanity and nonhumans, and would thereby alter how conservation actions are evaluated, and lessen the harm projected onto non-human individuals (Wallach et al. 2018). This concept of 'leveling the moral playing field' to inform conservation opens the door for multispecies justice ideologies, which expand upon concepts of compassionate conservation to advocate for justice for nonhumans. This occurs by equitably considering the livelihoods of all parties involved in conservation (Santiago-Ávila and Lynn 2020; Thomsen et al. 2021a).

7.5 Multispecies Justice and Posthumanism

Multispecies justice is coupled with posthuman philosophy which aims to decenter the human from its arbitrarily unique position as architype for all social-cultural and material importance. It evaluates human-caused cross-species injustices to challenge humans' positioning as the superior planetary species (Celermajer et al., 2020). Kohn describes fundamental differences in the ways humans and nonhumans think that, in part, is understood by symbolic communication versus symbiotic communication (2013). By dismissing sentient thought, humans measure

other living beings by their standards of intelligence in an exercise that amounts to narcissistic confirmation. Frans de Waal challenges this assumption in his book, *Are We Smart Enough to Know How Smart Animals Are?* (2016). Posthuman philosophy provides a language, theoretical positioning, and applicable strategy to examine human-centered narcissism while opening us up to the possibilities of a cosmic diplomacy (see Latour 2013). For example, 'Amerindian Perspectivism' is a term that discounts multiple valid cultural models to posit that human and nonhuman beings retain a common soul that possess a common value system and cultural framework (De Castro 2019). Kohn describes how 'Sylvan Thinking' is interchangeably linked with evolutionary timescales where ecosystems are shaped by thinking with other species (2018). That is, the very separation of human from nonhuman life has produced a cultural force of nature that amounts to the Anthropocene. Multispecies justice is the recognition of our own human positionality and its individual decentering's by providing space for nonhuman development as a right to evolutionary dynamics (both physical and metaphysical). Resistance to top-down forces, which actively oppress the material values of a less-dominant culture is multispecies justice. It is being applied across various disciplines including tourism (Fennell, 2020; Thomsen et al. 2021a), agriculture (Emel and Nimal, 2021), and public health (Tanana et al., 2021).

Celermajer et al. suggest that humans should transition away from using the term animals, because it reinforces our species' arbitrary separation from ecosystems and infers that nonhumans possess intrinsically less value than humans (2020). They posit that by practicing sustainable routines and mitigating human-caused planetary demise (e.g., pollution, green-

house gases) then humans can begin to build equitable 'multispecies resiliency' across ecosystems. Globally, they suggest that indigenous communities have sustainably practiced compatible ecosystem management skills that have been shown to increase biodiversity without arbitrarily killing nonhumans. Wallach et al. also challenge the mass killing of nonhumans in the name of biodiversity as ineffective (2015). By accepting alternative, subaltern perspectives and TEK, conservation science could develop an ethic of multispecies justice in practice, not just in scholarly debates. Instead of starting from a point of employing biopower to determine which individual nonhumans should persist, multispecies justice theorizes that all individuals are entitled to life. Only by decentering human, and particularly Western, environmental imperialism from conservation science, can an ethic of wildlife-human coexistence emerge. Brunello states that "environmental imperialism contradicts a central truth that in our relationship to the natural world, people have been dependent on it since the beginning. Even so, where economic and material growth is a priority humanity has colonized and stolen from other species" (2019: 196). So how can the killing of nonhumans in standard conservation science practice cease? I posit a posthumanist framework of multispecies justice and compassionate conservation below that begins to address this question.

7.6 Killing for the Greater Good

From an STS perspective, I interviewed dozens of conservation biologists inside and out of academe to better understand what informs their epistemological and ontological decisions. The ethical mantra 'for the greater good' permeated discourse at some point in nearly every conversation, as the trade-offs between killing an individual invasive (in)vertebrate to save an

at-risk (e.g., endangered) species percolated in discussions of wildlife-human relations. When speaking of wolves' right to persist on 'shared wildlife-human landscapes' (or simply earth), most of the conservation biologist interlocutors suggested that they were okay with killing individuals or packs of wolves if it meant that they were present on the landscape. David (pseudonym), who worked for a federal agency, stated:

> Livestock producers, tend to be more extreme and hardened. And then over time, if that seems to mellow, a little bit, and there's maybe a little more acceptance, or at least, resignation that, you know, these animals are gonna be on the landscape. And I'm sure a lot of that has to do with how they are managed, how the woods are managed, and what kind of flexibility these landowners have in terms of participating in the management. At least that's kind of what I've seen, or maybe even probably more accurately what I, what I've read, is that specifically allowing lethal control teams to ease tensions that livestock producers tend to have towards especially wolves.

When I asked a different conservation biologist, Jeff (pseudonym), "What is your perspective in terms of the ethical conversations and debates concerning the right to kill an individual to save one species over another in conservation biology?" He replied:

> Well, this is a dilemma that we all face. And I can give you a couple of examples, if it's useful of where I've dealt with this, specifically. But in general, I guess I'll just revert back to the vision. What we're trying to do with conservation biology is to preserve biodiversity. And I could specify native biodiversity. And then there's also varying degrees of threat. So, there's species and populations that are rare and threatened and on the precipice of extinction, and that there's other populations that are introduced, or over abundant, or pests. And given that, my, our mission is to preserve biodiversity globally, I'm supportive of, and I'm going to use a euphemism, managing populations, and that might include killing individuals to achieve your conservation objectives. So that might mean hunting, populations or through management, reducing populations of invasive species… I guess where I come down on this issue of just sort of my own personal view, is [to consider] the pain and suffering experienced by individual animals from any action that I do. That includes trapping animals and then releasing them again. But also, any management actions I might recommend or support, like removal or killing invasive species, the pain and suffering caused by individual animals has to be outweighed by the benefit to the whole. So that's where I've come down on it. But that's not to say that some of these choices aren't painful. When I think about it, like this might come up with wolves, right? So, it might come up that wolves are restored in Colorado, and Colorado Parks and Wildlife might well classify them as a game species, just like black bear are in Colorado, and mountain lions are hunted. And personally, I, I can't imagine going out and shooting these things, just not in favor. And almost, well, I just wouldn't be in favor of it. But I recognize that it might be necessary in order to allow wolves to persist with people or allow people to tolerate wolves. Same thing with lethal control of animals that are depredating on livestock or lethal control of carnivores that come in and break into houses like black bears, or lions that threaten people. You know, I'm not necessarily for

> killing individuals. But if that's what it takes for predators and humans to coexist, then maybe we sacrifice the individual animal for the greater good. Okay, tough question though, I don't know.

Jeff's response was generally indicative of most conservation biologists that I interviewed, in that his primary concern was to maintain species diversity and that conservation biology tolerated individual killings if it meant the greater good prospered. But what is 'the greater good', and who gets to decide what is best? This exercise of biopower was omnipresent throughout the entire study. Johns challenges the anthropocentric perspectives that prioritize human's tolerance of wildlife on shared landscapes, "while political regions add hundreds of thousands of humans, a few hundred wolves or cougars generate complaints of too many. How can 300 wolves in a region that contained thousands be considered meaningful recovery except in a blighted political landscape?" (Johns 2019: 3).

7.7 Grappling with Advocacy in Conservation Science

In his seminal article *What is Conservation Biology?*, Soulé states:

> Conservation biology differs from most other biological sciences in one important way: it is often a crisis discipline. Its relation to biology, particularly ecology, is analogous to that of surgery to physiology and war to political science. In crisis disciplines, one must act before knowing all the facts; crisis disciplines are thus a mixture of science and art, and their pursuit requires intuition as well as information. A conservation biologist may have to make decisions or recommendations about design and management before he or she is completely comfortable with the theoretical and empirical bases of the analysis (1985).

Though Soulé perhaps embraces the mentality of unfinishedness and messiness for the field's applied work akin to Yates-Doerr's anti-hero care (see Chapter 3) (2020), the field progressed over the past four decades as "practitioners have developed a suite of optimal decision-making tools that minimize subjective human influences, such as project prioritization protocols

(Joseph et al. 2009), protected area placement (Christensen et al. 2009; De Leenheer 2014) and species management (Lacy 1993; Possingham and Davies 1995)" (Griffin et al. 2020: 1). This inherent contradiction to remove the human element as much as possible from an applied field underscores the tensions within conservation biology, and across disciplines.

Jeff shared that "conservation biology, it's an applied science to maintain Earth's biological diversity. So, our mission as a scientist, as a society, as a field, is to conserve first biological diversity. And one thing I told the students in my con bio class is like, that's a value statement right there, right? I mean, we're in the definition of the field, and the mission statement of the society". He provided an illustrative example he regularly uses when trying to decide whether its ethical for a conservation biologist to advocate for wildlife and ecosystems:

> If we're not out there, disseminating the science on this issue, then who is?...A colleague of mine makes an interesting analogy here, which is that if the world's greatest works of art were being systematically destroyed, literally, museums across the globe being burned down, no one would fault an art historian to come in and say, look, these are precious, and we shouldn't lose them. Or if…books were being destroyed, nobody would argue with a book historian, literary historian to come in and advocate for preserving these precious things. Well, it's really no different with forms of life and being systematically destroyed. And so, it's up to scientists, to people who are the experts on the impacts, to say something.

When it came to the wolf-human relations, Jeff acknowledged that trying to remain neutral and provide 'objective' science was met with public resistance. He shared alternative perspectives of what it means to be an advocate:

> With the wolf issue, we were trying to sort of stick down the middle. But another definition for advocate and advocacy is to speak for somebody who doesn't have a voice. And, you know, I mean, ranchers have a voice, trust me, they have a voice, they have very powerful voices all over. And they have a voice for [Colorado's] ballot initiative. And that created a lot of the conflict. But who is the voice for animals or wildlife or nature, you know, who is going to be that voice?... I do think that there's a role for us to engage in this issue. And that another thing I'll say specifically about the wolf thing, is that we set up [our research to be] unbiased and neutral, a broker of information or scientific information. And in thinking about this, from talking with my social science colleagues, who recognize, as you said that science is a

> social endeavor, we all have biases. We started moving away from the term unbiased, even moving away from the term neutral. Because it's not really neutral. We're advocating for science, so it's not neutral. So, we started migrating towards a science based, a trusted science-based broker of information rather than unbiased or even maybe even neutral.

Though Jeff still accepts the utilitarian worldview that killing individual nonhumans is acceptable for the greater good, he began to recognize and embrace his positionality as a scientist in a position of biopower, which can lead to candid dialogue between stakeholders. He proceeded to express that he wrestled with whether or not to politically state his personal position that wolves should be reintroduced on the landscape, like a handful of other conservation biologists did leading up to the Colorado November 2020 vote on Proposition 114 (see Chapter 6). Following the vote, Jeff expressed remorse for not taking a stronger public, science-based stance on advocating for the repatriation of wolves on western U.S. landscapes ahead of the November vote.

In his book *Conservation Politics: the last anti-colonial battle*, David Johns amalgamates much of his previous research to suggest that science alone cannot facilitate environmental conservation (2019). Rather, human sociocultural and sociopolitical dynamics overshadow biology and its findings in practices. “Indeed, much conservation is focused on addressing symptoms rather than causes- on playing catch-up and clean-up rather than prevention…on seeking to maintain minimum viable populations of species and outdoor zoos rather than reclaiming much of the Earth.” (Johns 2019: 3). Johns illustrates historical and contemporary environmental imperialism to demonstrate how humans subjugate other species as support for his claims that moral and cultural values must shift to stave off species extinction and ecosystem ruin. He posits that scientists must embrace advocacy to overcome the ‘final colonial

battle' that is environmental imperialism. Below, I present a non-binary framework for conservation scientists to consider when evaluating their ethical and advocacy positions. It is rooted in multispecies justice and compassionate conservation to equitably consider the rights, agency, and welfare of individual nonhumans.

7.8 Interspecies Harm Prevention Framework

Multispecies justice works in conjunction with compassionate conservation by utilizing equitable levels of compassion for all species, nonhuman and human alike, when determining a system of justice for situations where one species' livelihoods infringes upon that of another (Santiago-Ávila and Lynn 2020; Thomsen et al. 2021a). This framework (see Figure 7.8.1 below) centers on preventing harm when interspecies conflict occurs, which can result in the death of individual nonhumans. It positions the purposeful killing of nonhumans as ethically unjust, and challenges conservation scientists, policy makers, and practitioners to innovatively generate novel solutions to context-specific issues that arise between species. It would be impossible to account for the endless instances of interspecies conflict and how to handle them. Rather, this nonbinary, *interspecies harm prevention framework* is intended to inform the ethical, epistemological, and ontological decisions that actualize in wildlife science, policy, and management. By reflexively attending to our own positionalities and advocating for compassionate conservation and multispecies justice, wildlife-human coexistence has the ability to proliferate in scholarship and practice.

FIGURE 7.8.1. NONBINARY, INTERSPECIES HARM PREVENTION FRAMEWORK

Step 1.) Recognize and acknowledge all species and individuals as equally deserving of respect and the right to live	Step 2.) Triage the root-cause of interspecies conflict and not just address the symptoms. Stop current harm (physical, emotional, psychological) from occurring	Step 3.) Prevent or stop harm from ensuing by providing ethical and legal rights to the species and individuals involved	Step 4.) All new endeavors should start from a position of 'free from harm', and social and political advocacy should be promoted

The *Nonbinary*, *Interspecies Harm Prevention Framework* is formed for two purposes. First, to identify the explicit harms leveraged to particular individual wildlife in biodiversity conservation efforts, and second, to use this knowledge to transform efforts from reducing harm, to ceasing harm, and finally to preventing harm. In Step 1, conservation scientists do not have to completely restructure their research or policy recommendations as they typically suggest that wildlife should persist at the species level. This shift to include individuals' interests, and focuses on collective harm outcomes and is included for the benefit of individual nonhuman actors. By embracing more than just a species-level focus on biodiversity conservation, individual actors gain recognition, which is the first step toward acquiring rights.

Step 2 centers on triaging the root causes of a specific interspecies conflict, rather than managing the symptoms of conflict which permeate wildlife-human relations, especially in a U.S. context (see Chapter 8). Within each conflict the end goal of conservation must be dissected through a root-cause analysis, and evaluated from all perspectives, including those deemed by humans as invasive. By embracing existing processes of knowledge production that value nonhuman individuals' lives, science can move from a position of causing harm, to

preventing it (e.g., Thomsen et al. 2021a). Achieving harm prevention appears elusive, as interspecies conflict is often debated without considering nonhumans' rights, agency, and welfare (see Chapter 8 and 9). The balance of biopower between species must be leveled to a point where the conservation of one species does not compromise the rights for individuals of another to persist. This does not have to negatively affect efforts to curb biodiversity-loss. Rather, by taking lethal control 'off the table', it forces conservation scientists, policymakers, and the public at large to develop innovative solutions to interspecies conflict when it occurs.

Step 3 attends to the concept of embracing an ethical position that equitably foregrounds nonhumans' interests in any decision that effects them. By considering a pluralistic approach to species and individuals, conservation scientists could employ science-based evidence to socially champion legal protections for nonhumans. Though these concepts are more nuanced and deserve greater attention (see Chapters 6, 8, and 9), they are imperative to foreground here to demonstrate the urgency of nonhumans' interests in conservation science. In a Euro-American context, humans pervasively favor knowledge, ethical, and policy paradigms that foreground human interests, and typically those of special interest groups. By recognizing and recentering ethical and legal positions that justly represent all stakeholders, no matter the species, then an ethic of harm prevention can emerge through multispecies justice.

Steps 1-3 center on how to ameliorate instances of ongoing interspecies conflict within science and society. Step 4 is included to demonstrate that conservation scientists, practitioners, and policy makers should proactively take a compassionate conservation and multispecies justice

approach to any new issue or decision that arises when nonhuman individuals' interests are involved, directly and indirectly. As Soulé articulated nearly four decades ago (1985), conservation biology is an applied field that is entrenched in the messiness of interspecies relations. Like multispecies ethnographers, conservation biologists, and conservation scientists in general, can no longer afford to remain apolitical. They must advocate for a multispecies livelihoods approach through their science, its dissemination, and in practice to fairly consider all species' right to persist except in instances of sustenance hunting or security (Thomsen et al. 2021a). Otherwise, speciesist decisions will continue to saturate wildlife-human relations that often result in the death of individual nonhumans (see Chapter 8). Ethical positions are not binary but exist on a spectrum. As does potential solutions to interspecies conflict. By foregrounding all individuals and species' rights, agency, and welfare, conservation scientists are collectively challenged to develop new solutions to combat biodiversity loss, without sacrificing a single individual in the process.

7.9 Conclusion

This chapter challenged technocratic biopower dynamics, and the implicit and explicit decisions that conservation scientists are forced to make daily. I described the ethical tensions that inform key debates within conservation biology, including advocating socially and politically for wildlife, as well as why individual nonhuman's rights, agency, and welfare should be considered in all cases that affect them, but especially in those that involve interspecies conflict. I demonstrated how all science is subjective, and that by owning one's positionality it frees conservation scientists to advocate for all nonhumans' interests. Key informants' perspectives,

combined with an assessment of critical multispecies justice and compassionate conservation literature informed the *nonbinary, interspecies harm reduction framework* presented in Figure 7.8.1 above. The framework is a straightforward approach to theoretically and ethically assist conservationists to understand their role within wildlife-human relations. This framework underscores the necessity of attending to the outsized role humans have when determining the fate of nonhumans' livelihoods. In the following chapter (Chapter 8), I criticize the nonhuman animal genocide that occurs in the U.S. *daily* to present a posthumanist pluralities framework that cogitates nonhumans' interests at the species and individual levels.

Part 4- Reimagining a Future of Multispecies Justice & Equality

Part 4 includes two chapters. Chapter 8 discusses how certain words are used to distance humans from other species, which is used to reinforce human exceptionalist views in ecosystem governance. It also details the nonhuman animal genocide that occurs by state and federal agencies in the U.S., which sets up the core arguments of the thesis in Chapter 9. Chapter 9 is the culmination of the thesis, and makes a clear argument for legal nonhuman personhood for *all* individual nonhumans and species. It calls for a new paradigm of ecological rehabilitation that foregrounds nonhumans' rights, agency, and welfare in multispecies relations.

Chapters in Part 4:

Chapter 8- Posthumanist Pluralities: Advocating for nonhuman species' rights, agency, and welfare in ecosystem governance

Chapter 8 is under review in *Advances in Ecological Research*, and the submitted version is attached as Appendix 2.

Chapter 9- Ecological Rehabilitation: A new paradigm for multispecies justice

Chapter 8- Posthumanist Pluralities: Advocating for nonhuman species' rights, agency, and welfare in ecosystem governance

Never doubt that a small group of thoughtfully committed citizens can change the world. Indeed, it's the only thing that ever has.

– Margaret Mead

8.1 Introduction

Ecosystem governance is too often anthropocentric and centers on conflict between competing human stakeholder groups who speak for and about wildlife, without their consent. Though difficult ontological and ethical questions are at stake in arguments for nonhumans' welfare, rights, and agency (Hamilton and Taylor 2017; Fennell and Sheppard 2021; Thomsen 2021 (i.e., Chapter 4), humans have a moral responsibility to consider these issues in any potential decision that affects nonhumans' interests. By attending to the zoological and ecological uncertainties that inform public debates and policy about wolf-human coexistence in a contemporary U.S. context, an ethic of coexistence can be seen to emerge through highly contentious debates about the cultural and political context of not just wolf, but wildlife in general.

I interrogate common ethical stances and terminology employed to distance humans from other species, implicitly and explicitly, which shape and reinforce socially constructed norms in wildlife-human relations. I confront the effects of speaking for and about wildlife in the abstract to proffer a pluralistic ethical framework based in multispecies livelihoods (Thomsen and Thomsen 2020; Thomsen et al. 2021a, b), and translational ecology, which theorizes how to

inform science-based decision making in environmental policy, governance, and management (see Enquist et al. 2017; Hallet et al. 2017, Thomsen et al. 2021a). The posthumanist wildlife-human coexistence framework (see Figure 8.9.1 below) is premised on a critique of human-dominated power relations that considers nonhumans' livelihoods and capacity to act in social-ecological systems (SES).

Though most wildlife-human conflict and coexistence studies center on charismatic species such as the gray wolf (*Canis lupus*), wolf is a useful species with which to conceive a wildlife-human coexistence conceptual framework due to its polarizing effects on various stakeholder groups that are steeped in Euro-American history, culture, and politics (Kunstler 1991; Blécourt 2007; Lappalainen 2019; Thomsen 2021). Wolf politics came to the foreground in Colorado in November 2020, as more than 3,000,000 Coloradans voted narrowly to pass a state ballot initiative, Proposition 114 (Brasch 2020a) (see Chapter 6). The initiative mandates Colorado Parks and Wildlife (CPW) to use science-based evidence and solicit community input to reintroduce wolf to the 'Western Slope' of the state by December 31, 2023. Voter demographics were largely split (generally) between pro-wolf, 'liberal' (in the U.S. sense of the word) urbanites and anti-wolf, conservative ruralites (Sponarski et al. 2013). The vote was much closer than previous public opinion polls had suggested (Pate et al. 1996; Meadow et al. 2005; Niemiec et al. 2020). For example, researchers based at Colorado State University conducted a survey in January 2020 of 734 participants, representative in terms of age, gender, and geography throughout Colorado, and found that approximately 84% supported wolf

reintroduction (Niemiec et al. 2020). Studies are currently underway to try and determine what may have led to differences between prior public opinion surveys and actual ballots cast.

Starting in December 2020, CPW's Wildlife Commission began the process to develop a plan to implement Proposition 114. In two initial public meetings streamed live on YouTube, one in December 2020 and one in January 2021, commissioners emphasized that diverse stakeholder voices should be included in the process to create an equitable plan that is satisfactory to varied human stakeholders. This chapter examines the perspectives and concerns of a range of stakeholders in the western U.S. concerning the reintroduction and repatriation of gray wolf in the lower 48 U.S. states since the mid-1990s, and specifically Colorado following Proposition 114. The central question addressed includes how to equitably represent nonhumans' rights, welfare, and agency in the governance of 'other' species to foster wildlife-human coexistence?

8.2 Social-ecological Systems and Postcolonial Studies

Social-ecological systems emerged in the past couple three decades (see Chapter 1) as an interdisciplinary attempt to integrate the natural and social sciences and move beyond the commodification and dominance of nonhumans in human-environment systems (Berke et al. 1998; Fabinyi et al. 2014). Social-ecological systems is considered "a system that includes societal (human) and ecological (biophysical) subsystems in mutual interactions" (Harrington et al. 2021: 2773). Holzer et al. state that recent calls in the literature "suggest that effective conservation policy and management require multiple and integrated forms of knowledge, including knowledge of ecosystems and their function, and the understanding of human

societies, which interact with and depend on those systems" (2018: 808). However, SES has been criticized for relying too heavily on the power of institutions and a macro-level focus on the 'environmental resilience paradigm' that does not adequately attend to (human) social dynamics (Fabinyi et al. 2014).

Social-ecological systems' growing popularity in theory and practice inspired several efforts to redress social questions of the framework, such as 'whose resiliency, whose agency, or whose power?' (Béné et al. 2012; Olsson et al. 2015; Matin et al. 2018). Fabinyi et al. argue that "while understanding the diverse perspectives of different interest groups in SES is important, power relations mean that these different voices can be marginalized or privileged, easy to identify or invisible" 2014: 7). This marginalization of certain groups such as indigenous, women, ethnic or racial minorities aligns with postcolonial studies that includes decolonial ecology (Roy 2015; Arcari 2019; Pulido & De Lara 2020). Decolonial ecology amalgamates social and political ecology, along with ecofeminism to consider the entangled embodiments of historical (post)colonial legacies, systems of oppression and violence, and environmental degradation to unpack new pathways toward socioenvironmental justice (Ferdinand et al. 2020).
Similarly, postcolonial or decolonial approaches focus on groups who are made subservient to another based on power dynamics (Spivak 1988; Galastri 2018; Thomas 2018; Thomsen 2021), where "the experiences of subjects [are] marginalized by scientific and political structures of representation" (Watson 2011: 55). Some postcolonial scholars have embraced nonhumans as postcolonial subjects (see Mitchell 2002; Arcari 2019; Thomsen et al. 2021a); Roy argues that nonhumans should be understood as historically oppressed subjects:

> We have seen that nonhuman animals had an indelible effect on imperial history, and that their subalternity was manifest in at least three distinct ways: they were victims of imperial violence; they were products of imperial regimes of subjectification; and they were usually marginalized in imperial historiography (2015: 70).

Norton examines the plight of postcolonial subjects in the 'Atlantic World' through a technological framework to argue that "since at least Aristotle technē [technology] was used invidiously by elites to refer to 'the lowly knowledge of how to make things or produce effects, practiced by animals, slaves, and craftspeople' and in contrast with prestigious episteme of 'learned' men invested in abstractions" (2017: 25). This distancing of marginalized subjects cultivates the production of abstract discourse, which stimulates rationalities that propagate violence, oppression, and discordance concerning nonhumans' agency. In the case of U.S. wolves, they experienced similar systematic persecution and murder to other marginalized groups (Fritts et al. 2003; Lynn 2010), as targets of a eugenic logic employed to justify wolf's extirpation in the U.S. from the 1860s-1940s (Spiro 2009).

During the study, nearly every interlocutor (post-positivist term for informant or respondent), pro or anti-wolf supporter, could be said to be guilty of some form of "speciesism". Ryder coined the term speciesism in the 1970s to mean discrimination that favors certain species or groups of species over other individuals (Horta & Albersmeier 2020). 'Anti-wolfers' perpetuated European-American cultural stereotypes of wolf as villain to be feared (Lappalainen 2019; Thomsen et al. 2021a), where some argued that wolves are only good for the '3 S's': shoot, shovel, and shut-up' (Fritts et al. 2003). However, several 'pro-wolfers' were quick to launch a 'what about' argument concerning the purported crimes of other species', such as 'What about

bears or cougars? They kill more cattle than wolves ever do'. This othering displaces blame without addressing the real fears of livestock ranchers who want to protect their cattle and livelihoods. Posthumanism complements efforts to challenge existing power relations and provides a 'more than human' theoretical grounding for an equitable, pluralistic, wildlife-human coexistence framework.

8.3 Posthumanism

Posthumanism is a post-modern philosophical paradigm that challenges the separation of nature and society to consider all species and individuals equally in wildlife-human relations (Fabinyi et al. 2014; Cohen 2019; Thomsen 2021) (see Chapter 1). Cielemęcka and Daigle problematize the concept of human exceptionalism in sustainability to "focus on developing environmentally ethical projects suitable for our times…[and] offer a concept of posthuman sustainability that decenters the human, re-positions it in its ecosystem and, while remaining attentive to difference, fosters the thriving of all instances of life" (2019: 67). Posthumanism deconstructs humans' dominance over nature to theorize a 'more-than-human' wildlife-human relations positioning and posits a paradigm of coexistence (Cohen 2019; Thomsen et al. 2021). However, Braidotti challenges this theoretical standing for its reliance on working within current power structures:

> The posthuman subject is not postmodern, because it does not rely on any anti-foundationalist premises. Nor is it deconstructivist, because it does not function within the linguistic turn or mediation. Not being framed by the ineluctable powers of signification, the posthuman subject is consequently not condemned to seek adequate representation of its existence within a system that is constitutionally incapable of granting due recognition (2016: 24).

Whether posthumanism can be displaced or isolated from postmodernism or human exceptionalism is beyond the scope of this chapter, but we echo Braidotti's efforts to confront systematic oppression, violence, and suffering of nonhumans (Fennell & Thomsen 2021).

Posthumanism nonetheless challenges anthropocentric notions of superiority, and the power humans exert over nonhumans by way of direct action, such as environmental degradation (Min et al. 2020; Jackson et al. 2020) or the killing of nonhumans for population 'control' and 'management' (Jiguet 2020; Castelblanco-Martínez et al. 2020), and indirectly through quotidian norms such as the use of single-use plastics that are discarded and consumed by marine life (Good et al. 2020). We caution, however, that it would be reductive to equate all humans as equally responsible or homogenic in the production of nonhuman (flora and fauna) degradation, which is unmistakably entangled with late-stage global capitalism and dominated by patriarchal, often Western, authorities of the 'Global North' who commit 'state-corporate crime' (Kramer & Michalowski 2012). In addition, the uneven distribution of human responsibility is shaped by histories of colonial conquest. Corporate and nation-state hegemonies' anathema of marginalized multispecies groups (Gonzales 2017) distances subservient subjects to reproduce and perpetuate violence, oppression, and subjugation in favor of profit and power (Faber & Schlegel 2017; Alcadipani & de Oliveira Medeiros 2019). Nor does posthumanism divorce humans from the environment in favor of everything more than human (Wolfe 2010; Bolter 2016; Copeland et al. 2021); rather, it engages multispecies livelihoods and technologies in an assemblage of lifeways (Copeland 2021; Thomsen and Thomsen 2020; Thomsen 2021; Thomsen et al. 2021a, 2021b).

Technological aspirations of posthumanism are also beyond the scope of this chapter, but nonetheless force us, as individual human agents, to analyze and question reflexively what it means to be human, and our relationship with other life forms, both biological and artificial (Bolter 2016; Larrivee 2020). A posthumanist wildlife-human coexistence framework is paramount in theory and practice if wildlife is to persist, as more than 60% of the world's wildlife has perished in the last 50 years (Grooten and Almond 2018). Manfredo et al. state that humans must "consider wildlife as part of their broader social community, deserving of rights and caring treatment" (2020: 3). But how can humans move beyond caring for nonhumans in the abstract, to create meaningful protections for individuals' interests in practice?

8.4 Multispecies Livelihoods and Translational Ecology

Multispecies livelihoods is a posthumanist approach to wildlife-human coexistence that attends to the rights, welfare, and agency of humans and nonhumans (Copeland 2020, 2021; Thomsen & Thomsen 2020; Thomsen et al. 2021). Hyvärinen defines multispecies livelihoods as "the diverse and particular practices of securing the necessities of life through sharing lifeworlds with human and non-human others" (2019: 366). Thomsen et al. extend Hyvärinen's definition:

> Multispecies livelihoods [is] the right for human and nonhuman animal species to not only exist but to secure the necessities of life in a manner that does not infringe on another species' right to live, except for sustenance hunting or legitimate safety concerns to foster optimal conditions for wildlife-human coexistence (2021a: 4).

A multispecies livelihoods approach has been applied to a range of wildlife-human interactions, particularly when wildlife encroaches on human livelihoods, or vice versa (Copeland 2020; Thomsen and Thomsen 2020; Thomsen et al. 2021a, 2021b). Copeland et al. (2021)

problematize fisheries management in the North Pacific for anthropocentric practices that value certain 'commercially important' species (e.g., salmon [*Salmo salar*]) while diminishing the rights and ecosystem functions of competitor species' (e.g., seals [*Pinnipedia*] and sea lions [*Otariinae*]).

Thomsen et al. (2021b) consider the role of wildlife ecotourism as a conduit for sustainable development and the conservation of the critically endangered Marsican (or Apennine) brown bear (*Ursus arctos marsicanus*). Similarly, Thomsen (2021) visited five wolf ecotourism operators, including four 'wolf sanctuaries' and a protected area, Yellowstone National Park (YNP). Thomsen's findings suggested that no WTA – including, and perhaps especially, YNP – was an ideal model of wildlife ecotourism, as wolves did not have the right to exist free of exogenous threats, and could be legally shot, trapped, or harvested if they left the park's artificial boundaries (Paybarah 2021). Even though YNP is an ethically complex example of 'protected area' nature-based tourism, non-captive environments are optimal for the application of multispecies livelihoods frameworks. While wildlife ecotourism is a practical human livelihood to apply a posthumanist multispecies livelihoods approach in practice for its focus on wildlife-human interactions, this chapter responds to Thomsen et al.'s (2021a) call for a broader posthumanist wildlife-human coexistence framework that could materialize through translational ecology in policy, discourse, scholarship, and governance.

Translational ecology addresses highly complex environmental issues by using cross-disciplinary research concerning "the sociological, ecological, and political contexts of an environmental

problem" (Enquist et al. 2017: 541). It champions evidence-based interventions in ecosystem governance that will "inform and improve decision making for environmental management and conservation" (Enquist et al. 2017: 541). Its most promising theoretical contribution is perhaps its ability to account for the "deliberate engagement with end-users and an understanding of the social and cultural contexts in which a research project functions" (Wall et al. 2017: 551). Though collaboration between stakeholders in ecosystem governance can be a mercurial process, Bodin et al. (2020) suggest that developing trust and managing risk may enhance cooperation within stakeholder networks. Hallet et al. state that:

> Interest in translational ecology (TE) – a research approach that yields useful scientific outcomes through ongoing collaboration between scientists and stakeholders – is growing among both of these groups. Translational ecology brings together participants from different cultures and with different professional incentives (2017: 578).

While TE may conflict with 'mainstream basic scientific research' for its applied approach and engagement with stakeholders, it has nonetheless been embraced across a wide variety of environmental issues (e.g., water rights, forest fire mitigation, owl population management, etc.) to translate theory in practice (Hallet et al. 2017). In this chapter, posthumanist, multispecies livelihoods, and translational ecology serve as the basis for the pluralistic posthumanism wildlife-coexistence framework.

8.5 Multispecies Ethnography

Multispecies ethnography examines the intersectionality of wildlife-human interactions in shared landscapes (Haraway 2008; Kohn 2013; Parathian 2018; Thomsen et al., 2021). Kirksey and Helmreich (2010) discuss how animals are regarded as part of the landscape, food for

humans, and as symbols of culture – *zoe* (bare life) – that have materialized within the realm of *bios* (specific life) alongside humans. Locke (2018) argues that multispecies ethnography is an 'anthropology beyond life' that perceives nonhuman life in terms of its political, social, and economic utility (Ingold 2013). This reframing has permitted various nonhumans to gain legible biographical and political lives, such as Sandra the Orangutan (*Pongo*), who was granted nonhuman personhood in Argentina by Judge Elena Liberatori (see Chapter 9). Judge Liberatori declared that after living in captivity for more than 20 years at the Buenos Aires Zoo, Sandra had been wrongly imprisoned for most of her life, was a nonhuman person, and entitled to better living conditions and some of the same legal rights as humans (Elassar 2019). The now 35-year-old Sandra was resettled to the accredited ape sanctuary, Center for Great Apes, in Florida, U.S. in 2019. Multispecies ethnography was useful in this study as it complements posthumanism to deconstruct human exceptionalism while maintaining the core tenets of human agency, and challenges humans to rethink the distribution of consciousness and the capacity to act, with its attendant concepts of rights and responsibilities in shared landscapes (Aisher and Damodaran 2016). However, this chapter heed's Kopnina's (2017) warning to multispecies ethnographers that they cannot remain apolitical when writing about nonhumans' plight, which I provide examples for below.

8.6 Triggers

Findings reaffirm previous studies on wolf's ability to problematize human interactions and serve as a symbolic vehicle for understanding human cultural or socioeconomic strife (Fritts et al. 2003; Lappalainen 2019; Thomsen 2021; Thomsen et al. 2021a). However, this chapter

departs from debates solely about wolf-human conflict to explore how wolf helps to reconsider how humans can coexist with wildlife in a time of increasingly polarized socio-political discourse. Ranchers and state wildlife agents in the Intermountain West of the U.S. (geographical area between the Cascade/Sierra and Rocky Mountain Ranges) speak of 'trigger words', including 'coexistence'. The Montana Livestock Loss Board Executive Director, George Edwards, detailed how terms such as coexistence immediately "trigger" ranchers and put them on the defensive when speaking with people they consider 'others', such as environmentalists or urbanites, who do not share their views, beliefs, culture, or lifestyle. Triggers are relatively new in common vernacular and mean a word or topic that evokes strong emotions in a person. Wolf also permitted diverse stakeholders to speak about their views, attitudes, and beliefs about several other species. This included how ranchers care for domesticated livestock destined for slaughter, or self-proclaimed environmentalists who fight for wolf's reintroduction to Colorado but are quick to berate other nonhumans such as coyotes (*Canis latrans*) or bears (*Ursidae*). However, most utterances of wolf were offered as abstract statements, rather than a reference to a specific individuals' interests – human or nonhuman –demanding a pluralistic conception of wildlife-human ethics in theory, and through translational ecology in practice.

8.7 Animal Ethics and Posthumanist Wildlife-human Coexistence Framework

The posthumanist wildlife-human coexistence framework is grounded in animal ethics, and embraces virtue ethics at the individual-level, rather than just concentrating on a utilitarian ethical positioning that permeates ecological discourse (Franklin 2005; Washington and Maloney 2021). Utilitarianism refers to "a teleological or ends-based theory that focuses on

optimum outcomes, ends or consequences of an action" (Fennell 2012: 240). Simply, it is a focus on prioritizing the greatest good for the greatest number, which is logical at the macro-level when attempting to preserve species from a biodiversity conservation perspective (Fennell and Sheppard 2021). However, "within this view, it is almost impossible to avoid sacrificing individual beings" (Winter 2020: 8). Yazevich et al. (2019) criticize utilitarianism for its overt anthropocentricity:

> In the system of anthropocentric attitudes, nature is perceived as an object of human activity, where the goal of its interaction with nature is the satisfaction of various utilitarian needs. In this logic, the notion of a "pragmatic imperative" is asserted, where it is right and normal to recognize that it benefits and maximizes the benefits to a person (Chernikova, 2007). This position is strengthened with the help of utilitarian ethics, which received its natural spread in the conditions of the modernization and development of the market economy (p. 4).

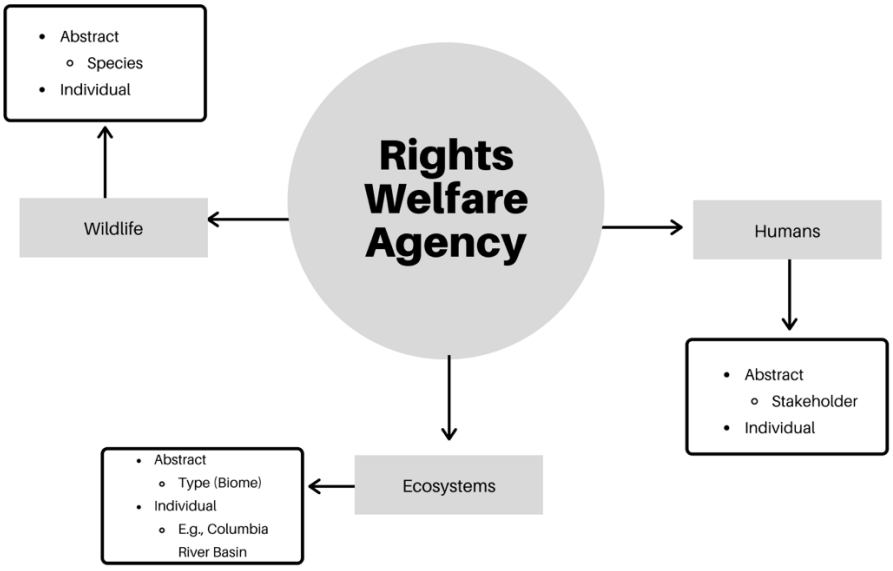
Though utilitarianism considers nonhumans as sentient beings with an interest in self-preservation (Winter 2020), it distances us, as humans, from nonhumans when considering the biopower we exercise over individuals. Several interlocutors from across the U.S., including pro-wolf conservation biologists, expressed a willingness to accept that the hunting and trapping of wolves may be necessary to appease anti-wolfers if a certain (yet to be determined) artificially constructed and anthropocentric threshold of wolves were present on Colorado's landscape. At the ecosystems level, this is a logical, ethically justified utilitarian response to convince anti-wolfers to coexist with these apex predators on shared landscapes. However, the utilitarian ethical lens reinforces an abstract view of wolf rooted in Cartesian dualism, which promulgates sentiments that humans have a moral right to determine the fate of other species.

Ecological studies have also been impacted by social carrying capacities rather than only 'objective' ecological data. In 2016, CPW "launched controversial predator control studies that involved trapping and killing" of black bears (*Ursus americanus*) and mountain lions (*Puma concolor*) (Blevins 2019: 1). On March 30, 2021, U.S. District Court Chief Judge Marcia Krieger, based in Denver, CO, ruled that "the U.S. Fish and Wildlife Service illegally helped pay for a Colorado program to kill dozens of mountain lions and black bear in an experiment to determine if the predators were partly responsible for declining mule deer populations…[and] failed to do a required analysis of the program's environmental effects" (Anderson 2021: 1). Considering the current ecological crisis (Steffen et al. 2011), such actions engender the question of how it remains ethical to kill nonhumans? If life is valued, how do can each particular nonhuman's right to exist be foregrounded from a multispecies livelihoods perspective?

Virtue ethics provide individual-level foci toward nonhumans that examine "what sort of person should I be" (Fennell and Sheppard 2021: 320) (see Chapter 4). Clearly, the extent to which animals might share in virtue ethics depends on the question of how we understand nonhumans to participate in reason and will. The posthumanist wildlife-human coexistence framework is a coupled multispecies livelihoods and translational ecology conceptual approach that considers the rights, agency, and welfare of three key constituents in wildlife-human relations: wildlife, humans, and ecosystems. Only by equally valuing each constituent at the abstract and individual-levels (utilitarianism *and* virtue ethics), can a pluralistic ethic for wildlife-

human coexistence be applied in practice through translational ecology. I apply the conceptual framework to each constituent following Figure 8.7.1 below.

FIGURE 8.7.1. POSTHUMANIST WILDLIFE-HUMAN COEXISTENCE FRAMEWORK



8.8 Wildlife

Wolves have been poached (a distancing word used in the U.S. to mean the illegal killing signifying murder) with little recourse, as Montana's newly elected state Governor Greg Gianforte "trapped and killed a wolf near Yellowstone National Park without first taking a mandated trapper education course", on 15 February 2021, where "Morgan Warthin, spokeswoman for Yellowstone National Park, said the Wolf, No. 1155, was born in the park, was estimated to be 6 or 7 years old and had been collared by park biologists in 2018. We use terms the terms 'killing' and 'murder' to indicate a clear ethical perspective with respect to nonhumans' interests. 'Once the wolf left the park, it no longer was considered a Yellowstone

wolf"' (Paybarah 2021: 1). Wolf No. 1155 (another application of human distancing from wildlife by assigning a number to the wolf in lieu of a name) lost its life for leaving its invisible cage of YNP; Governor Gianforte was merely issued a written citation. Paybarah continues: "The one-time certification class, which lasts about three hours, teaches trappers about wolf biology, best practices for trapping and related regulations, Mr. Lemon [spokesman for Montana Fish, Wildlife and Parks (MFWP)] said. 'The class is geared toward the ethical harvest of wolves'" (Paybarah 2021: 1.).

Montana's Wolf Management Plan outlines the minimum criteria required to 'take' or 'harvest' a wolf legally (MFWP 2020). The words 'taking', and 'harvesting' are used advantageously to mitigate potential reactions by the public regarding the murder and maiming of wolves. They may even promote the killing of wolves depending upon one's perspective. Cambridge Dictionary (n.d.) defines the word harvest as a verb: "to pick and collect crops, or to collect plants, animals, or fish to eat" (Cambridge 2021). Though Merriam-Webster's (n.d.) definition includes the application of population control in relation to wildlife harvest, we contest the use of the word by MFWP, or any other actor, to justify killing wildlife without the intent of nutritional consumption. The use of harvest to justify the hunting, trapping, and killing of wolves ethically results in what could be considered systematic state-sanctioned murder.

The United States Department of Agriculture's Wildlife Services (USDAWS) 'killed or euthanized' 68,360,467 individual wildlife (all species) in the United States from 1996-2020, including 7,123 (Timber) gray wolves, and 19 Mexican gray wolves (*Canus lupus baileyi*) (USDA 2021a). The gray

wolf population is estimated at ~6,000 gray wolves in the lower-48 U.S. states (USFWS 2017). Table 8.8.1 below displays these figures, which only cover federal data, and do not include nonhuman animals killed or euthanized by individual states not using USDAWS, or unreported data on private lands. If I were speaking of humans, this would be called genocide. Van Sittert contends that "by broadening the anthropocentric focus of the emerging genocide literature on colonial settlement frontiers to include other species it becomes possible to track the post-conquest deployment of genocide technologies and practices" (2016: 2). It is difficult to call 68,360,467 wildlife deaths over the past 25 years anything but nonhuman animal genocide.

TABLE 8.8.1. USDA WILDLIFE SERVICE # OF ALL ANIMAL SPECIES, INVASIVE SPECIES AND WOLVES KILLED/EUTHANIZED 1996-2020*

Year	# of All Nonhuman Species Killed/ Euthanized	# of Invasive Nonhuman Animal Species Killed/Euthanized	# of Gray Wolves (Timber) Killed/ Euthanized Intentional	# of Gray Wolves (Timber) Killed/ Euthanized Unintentional/ Nontarget	# of Gray Wolves (Mexican) Killed/ Euthanized Intentional	# of Gray Wolves (Mexican) Killed/Euthanized Unintentional/ Nontarget
1996	1,501,901	N/A	0	0	0	0
1997	1,816,539	N/A	0	0	0	0
1998	1,242,284	N/A	183	1	0	0
1999	4,082,575	N/A	172	1	0	0
2000	3,267,839	N/A	174	0	0	0
2001	1,759,469	N/A	118	0	0	0
2002	1,455,759	N/A	192	2	0	0
2003	1,690,227	N/A	184	3	0	0
2004	2,767,152	N/A	190	0	0	1
2005	1,746,248	N/A	251	1	1	0
2006	1,642,823	N/A	277	1	3	0
2007	2,420,270	N/A	338	2	4	0

2008	4,997,172	N/A	396	0	0	0
2009	4,120,291	N/A	478	2	0	0
2010	5,008,928	N/A	452	0	0	0
2011	3,752,356	N/A	365	0	0	0
2012	3,352,378	1,765,446	501	2	1	0
2013	4,378,456	2,336,840	319	1	1	0
2014	2,715,467	1,404,838	321	1	0	0
2015	3,206,238	1,524,955	383	1	1	0
2016	2,726,870	1,137,377	415	0	0	0
2017	2,307,122	987,047	355	1	1	0
2018	2,652,405	1,155,630	357	0	0	0
2019	2,240,802	982,064	301	1	1	0
2020	1,508,896	1,075,704	381	0	5	0
Total:	**68,360,467**	**12,369,901 (2012-2020)**	**7,103**	**20**	**18**	**1**

*Source: (USDA 2021a)

Further human-nonhuman hierarchies include subjective Western scientific principles that justify murder of certain invasive species, such as Nutria (*Myocastor coypus*) in riparian ecosystems and fail to recognize invasives that serve human interests such as domesticated livestock. Oregon defines invasive species as “non-native organisms that cause economic or environmental harm and are capable of spreading to new areas of the state; not including humans, domestic livestock, or non-harmful exotic organisms” (OregonLaws 2020). This law demonstrates an anthropocentric value-laden policy privileging humans and domestic livestock, suggesting that individual wildlife could be equally protected under human laws. Wildlife Services began capturing data on the amount of invasive nonhuman animal species they killed or euthanized in 2012. Between 2012-2020, 12,369,901 invasive individuals were killed or

euthanized (see Table 1), representing 49.3% of the 25,088,634 total nonhuman animal deaths during that time span.

The recruitment of a 'scientific' justification for their destruction is conceivably dependent on who serves human interests versus who does not - the latter being subject to state prosecution in Oregon. Human effects on entire ecosystems and individual habitats are treated less seriously than that of nonhuman effects, and blame is passed down through human hierarchies that 'speak' for nonhumans. This often occurs directly and indirectly, such as where ocean acidification and resulting climate change effects are perpetuated by human populations at the detriment of 'lesser' living ecosystems (Doney et al. 2009; Compton et al. 2011; Radford 2019). The posthumanist framework already accounts for current practices that favor a species-level approach, and its merits include the recovery of some endangered species who were at the brink of extinction, such as the bald eagle (*Haliaeetus leucocephalus*) (Winder and Watkins 2020). However, the data presented in Table 8.8.1 stress the critical urgency required to protect all nonhuman life, and foreground every species' rights, welfare, and agency at the individual level.

8.9 Humans

Few interlocutors could speak about a particular individual wolf outside of wolf WTAs, and if they did, the wolf typically did not have a name. Occasional stories of individual wolves have captured the imaginations of biologists, ecotourists, ranchers, and the public, such as the charismatic and complex story of YNP wolf 'O-six', named for her birth year. In *American Wolf*,

Blakeslee (2017) vividly describes the life of O-six and her interactions with hunters, cattle ranchers, and competing packs. He unpacks the intricacies of wolf-human conflict in the western U.S., where wolf is often used as a symbol in human conflict, as Euro-American ruralites fight to maintain their way of life, while environmentalists champion ecological restoration. Indigenous rights and perspectives, including their traditional ecological knowledge (T.E.K.), are rarely considered, if at all, in debates about who has the power to shape contemporary human life and our relations with other species on shared landscapes (Ferguson and Messier 1997; Shelley et al. 2011; Cortes-Vasquez and Zedalis 2013).

From the posthumanist conceptual approach to wildlife-human coexistence, humans should not be disparaged, as we are a part of ecosystems, but we must consider two levels of coexistence. The first is to represent all human perspectives equitably, as CPW is attempting to do in its effort to develop a wolf management plan for Colorado. By embracing diverse stakeholder groups such as indigenous tribes, cattle ranchers, environmentalists, and conservation scientists, biopower can be dispersed to represent all human groups in wildlife-human relations equitably, at least at the abstract level. Intraspecies battles (i.e., humans) for power will most likely persist, but only by engaging all stakeholders, particularly marginalized groups, and by providing equal platforms for debate can change occur to improve multispecies welfare. The second key criterion is to consider individuals' agency and their collective power. This is evidenced by the passing of Proposition 114, where Coloradoans had the right to vote, and ushered in a new era of democratic conservation after four failed attempts to gain authorization to reintroduce wolves to the state over the past 40 years (CPW 2020; see Chapter

6). Multispecies livelihoods are not limited to human and nonhuman animals, however, as "we exist in a time of increasing 'plant blindness'… [where] vegetation is experienced as a homogenous 'greenery', rather than an assemblage of particular species (Wandersee and Schussler 2001)" (Sochacka 2021: 5). The ecological crisis demands that we consider wildlife-human relations through a pluralistic ethical lens, within and of ecosystems, especially due to humans' unprecedented effects on the biosphere (Brook et al. 2008; Ellis 2018).

8.10 Ecosystems

In 2008, wolf dispersed from YNP, Idaho, and British Columbia, Canada to repatriate parts of eastern Washington and Oregon. This dispersal occurred in the greater Columbia Basin Region (CBR) that extends across parts of seven western U.S. states and Canada to the Pacific Ocean (see Figure 8.10.1 below).

FIGURE 8.10.1. USEPA MAP OF COLUMBIA RIVER BASIN



The Columbia River watershed covers parts of seven states and extends into British Columbia, Canada.

Source: (USEPA 2020b).

"Biodiversity fragmentation risk, or conditions that prevent viable unification of natural areas", (referring to the ecological use of the term signifying habitats for nonhuman species), "include limited spatially protected areas (Chapin et al., 2009), urban sprawl (Radeloff et al., 2005), wildlife-human conflict (Hill, 2015), large-scale industrialization projects (Harte et al., 2010), and human-human conflict (Redpath et al., 2013)" (Thomsen et al. 2021: 9). Keystone species, often apex-predators such as large carnivores including the gray wolf, have been reintroduced to targeted areas such as YNP in 1995-6 to ameliorate biodiversity fragmentation through a process called rewilding (Navarro and Pereira 2015). Rewilding has gained popularity in practice worldwide as these keystone species have had a positive effect on ecosystems due to the ecological trophic cascades they are believed to create (Pereira and Navarro 2015). In Yellowstone, wolves have been credited for altering elk behavior to foster the recruitment of aspen (*Populus tremuloides*), willows (*Salix spp*.), and cottonwoods (*Populus spp.*) to the area (Halofsky and Ripple 2008; Ripple and Beschta 2012). However, some critics challenge the rewilding model's levels of impact on ecosystems as being overstated (Barber-Meyer 2015), and some perceive large carnivores as a threat to human lives (Butler et al. 2010), as well as human livelihoods such as cattle ranching (Sommers et al. 2010). Nonetheless, rewilding provides a promising option to consider individual ecosystems welfare and agency in practice.

Human actors' hierarchical interests have problematized similar conservation narratives that prioritize human benefits over that of living ecosystems and their individual habitats. These include terrestrial forest biomes, riparian habitat, and their inhabited flora and fauna. The rights of individual riparian habitat within the Columbia River Basin ecosystem can be

considered through the federal Clean Water Act (CWA), which requires states to report the quality of its surface waters every two years (USEPA 2020a). The individual welfare of rivers and streams, lakes, reservoirs, estuaries, watersheds, beaches, and oceans were extended by implementing the 2018/2020 integrated report on November 12, 2020 (see DEQ 2020):

> Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters… The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs [Total Maximum Daily Loads] for these waters - a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards (DEQ 2020a; interactive story map).

While the rights and welfare of water basins can be considered through environmental laws and management, the agency that represents more natural ecological flows, and processes can be overlooked when humans wield unequal power over nonhumans throughout entire ecosystems. Current practices in ecosystem governance often fail to recognize the intrinsic value of nonhumans and are typically assessed for the beneficial use for human populations.

The prioritization of certain nonhumans' rights over others (e.g., cattle over trees) has also created immense tensions between human stakeholders as ecosystems are frequently denied welfare, rights, and agency in the U.S., especially under the Trump Administration. Trees have demonstrated mycelium networks which contribute to learning and memory (Simard 2018; Fisher and Glass 2019; Piñuela et al. 2021). Nimble policy frameworks must account for flora such as trees to be understood as living individuals with extensive movement and communication that extends throughout nearby habitat and greater ecosystems. This perspective, however, is not simply theoretical. In 2014, after more than 70 years of governmental management, New Zealand ushered in what is believed to be the first instance of

granting an ecosystem personhood and the legal rights that accompany it. The former national park, *Te Urewera*, was entrusted to the indigenous Tūhoe, who "are legally responsible for the rainforest's care. They protect the precious site through an ancient Maori practice known as *kaitakitanga*, which can be roughly translated to mean 'guardianship' and is a way of managing the environment based on a Māori worldview" (Gibson 2020: 1). From the posthumanist wildlife-human coexistence framework lens, ecosystems must be granted equal rights, welfare, and agency, if individual wildlife and humans are to persist within, and contribute to their welfare.

8.11 Conclusion

Findings from this study suggest that humans must recognize the grave disparities in power relations between human stakeholders, as well as between species in wildlife-human relations. Power imbalances persist through implicit and explicit biases toward multispecies marginalized groups, are often informed by utilitarian ethics, and reproduced by employing distancing words. Tensions between competing human stakeholder groups will endure, especially when considering the current state of U.S.'s extreme-polarization and 'cultural wars' that transpired in political discourse during this study. The study was limited by focusing primarily on a charismatic species that may generate different human emotions and conceptions of wildlife than a less-polarizing species such as cottontail rabbits (*Sylvilagus spp.*). It was also limited by the COVID-19 pandemic in some regards, as participant observation was limited, and the study had to be altered to foreground digital ethnographic methods (Hanna 2012).

Nearly all interlocutors, and corresponding public discourse, shared similarities in that they primarily spoke for and about the wolf, and wildlife in general, in the abstract. This pluralistic ethical TE approach demonstrates that the predominant utilitarian ethics paradigm in conservation management is inadequate on its own, evidenced by the horrific nonhuman genocide that goes unchecked in the U.S. This effort to coalesce utilitarian and virtue ethics complements the compassionate conservation and multispecies justice efforts that champion individual nonhuman rights and welfare in theory and practice (see Santiago-Ávila & Lynn 2020). The posthumanist wildlife-human coexistence conceptual framework is, nonetheless, a simple attempt to challenge the 'traditional conservation paradigm' (Santiago-Ávila & Lynn 2020) and foreground marginalized multispecies groups who continue to suffer. However, if this framework can occur in practice through translational ecology, nonhumans could gain previously unimaginable rights, at least in a U.S. perspective.

Future studies should test this framework in a myriad of settings and cultures as "numerous factors, including biological, geographic, political, economic, social, institutional, financial, cultural, and historical features, make each conflict or coexistence situation unique" (Madden, 2004: 249). The posthumanist wildlife-human coexistence conceptual framework challenges us as humans to heuristically consider the rights, welfare, and agency of all humans, nonhumans, and ecosystems– especially marginalized multispecies stakeholders - in every decision that affects them. This prompts the question, what would the effects be if nonhumans' interests were equitably considered at the abstract and individual level when creating wildlife policies, and enacting them through management and governance?

Chapter 9- Ecological Rehabilitation: A new paradigm for multispecies justice

The fact is, that each time there is a movement to confer rights onto some new "entity," the proposal is bound to sound odd or frightening or laughable. This is partly because until the rightless thing receives its rights, we cannot see it as anything but a *thing* for the use of "us"- those who are holding rights at the time.

- Stone 2010: 4

9.0 Introduction

In their timely article *Ecodemocracy in Practice: Exploration of Debates on Limits and Possibilities of Addressing Environmental Challenges within Democratic Systems*, Kopnina et al. assess democracy's capability to enact a non-anthropocentric paradigm of ecological democracy. They posit, "what is needed to secure democratic legitimacy for policy measures to benefit nonhuman species?" (2021: 9). Throughout this dissertation, I demonstrated the entangled Euro-American sociocultural dynamics that perpetuate human exceptionalism, and how they affect wildlife policy through institutionalized speciesism (e.g., state and federal wolf bounties), industrial complexes (e.g., large-scale industrial meat production), nonhuman genocide (e.g., USDA Wildlife Services' 'killing or euthanizing' *68,360,467* individual wildlife over the past 25 years), prevailing nonhuman animal ethics in Western science (e.g., the doctrine of biodiversity in Chapter 7.3), Euro-American folklore (e.g., reducing wolf to tropes of myth, warrior, or villain), and by the (neo)colonial subjugation of subalterns (e.g., biopolitical power of artificial boundary-making). I align myself with the core tenets of compassionate conservation where "all sentient beings should be recognized as *persons* (Wallach et al. 2020a). A person, in an ethical sense, is someone (rather than something) whose moral status is respected" (Wallach et al. 2020b: 2). Compassionate conservation is:

> Based on the ethical position that actions taken to protect biodiversity should be guided by compassion for all sentient beings. Critics argue that there are 3 core reasons harming animals is acceptable in conservation programs: the primary purpose of conservation is biodiversity protection; conservation is already compassionate to animals; and conservation should prioritize compassion to humans (Wallach et al. 2020a: 1097).

While Wallach et al. deconstruct the three purported claims using argument analysis (2020a), these common criticisms and nonhuman animal genocide demand a more drastic step if nonhumans' interests are to be equitably attended to in theory and practice. Compassionate conservation justly defends the scientific and ethical bases for nonhuman personhood (Bekoff 2010; Ramp and Bekoff 2015; Wallach et al. 2015,2018,2020a,2020b), and ecodemocracy considers how to grapple with the realities of enhancing nonhumans' rights in practice (Gray and Curry 2016, 2020; Gray et al. 2021; Kopnina et al. 2021). In this chapter, I redress this theoretical and practical gap concerning how to transition away from the biopolitical power that perpetuates the *status quo*, that is, the global suffering and killing of billions of nonhumans annually (Kopnina 2017). I draw on Wallach et al.'s articles to complement my response to Kopnina et al.'s question, "what is needed to secure democratic legitimacy for policy measures to benefit nonhuman species?" (2021: 9): due to the pervasive anthropocentric tendencies to distance other species from humans in nearly every instance of biopolitical power, granting *all* nonhumans legal personhood is the final option to attend to the rights of each individual nonhuman *and* species.

This argument builds off of Stone's call for 'natural object' personhood. "I am quite seriously proposing that we give legal rights to forests, oceans, rivers and other so-called 'natural objects' in the environment-indeed, to the natural environment as a whole" (1972: 456; 2010). Though I

depart from Stone's views concerning the extent to which nonhumans receive legal rights, or how to operationalize nonhuman personhood in practice (1972; 2010), it should not be lost on us that he called for granting nonhumans rights 50 years ago - back when we had not yet lost 68% of the world's wildlife (Grooten and Almond 2018). My case for nonhuman legal personhood and a new paradigm of ecological rehabilitation will not be well received by many who read this, and that is okay with me. My ambition is to challenge our collective and individual understandings of what it means to be human, and what we owe each other – no matter the species. I intend to make everyone uncomfortable, because it is only through living within these tensions that candid discourse can transpire to shed our implicit and explicit roles in perpetuating nonhuman animal genocide, ecosystem collapse, and biodiversity loss.

***

Wallach et al. summarize the surmounting scientific evidence that suggests killing for conservation is not only ethically unjust, but ineffective (2015). Though this is contested (see Callen et al. 2020; Griffin et al. 2020), it is now widely accepted amongst conservation scientists that predators, including wolf, perform critical ecological functions (Ripple et al. 2014), as "trophic cascade theory explains the role of apex predators in regulating populations of their prey and mesopredators" (2015: 1482). Wallach et al. argue that it is crucial to protect (apex) predators and cease outdated science that problematically assumes that humans can perform the same ecological function as apex predators through the lethal control of endemic, non-native, and invasive species alike. "Faith in, and tolerance for, killing for conservation is waning (Bekoff 2013; Ramp & Bekoff 2015). Despite this, killing still monopolizes conservation. Visions

of restoring ecological communities to ancestral configurations are fantasies that continue to harm millions of animals globally each year" (Wallach et al. 2015: 1483). This study provided yet another example of how nonhuman animal genocide is undoubtedly entangled with human exceptionalism and adjudicates traditional conservation efforts as deficient.

> Critics of compassionate conservation generally deny the personhood of all beings but humans by calling for the continuation of programs that harm sentient beings, who are often intelligent, emotional, and social, for the perceived greater good of conservation. On scientific and ethical grounds, there are good reasons to extend personhood to nonhuman animals (Midgley 1985; Rose 2011; Dayan 2018). The burden of proof should no longer lie with those who seek to expand conservation's moral community, but with those who wish to enforce narrow boundaries (Laham 2009) (Wallach et al. 2020a: 1103-1104).

Kopnina et al. (2021) succinctly overview the concepts and contexts that could facilitate or prevent ecodemocracy from materializing, and unpack the inherent contradictions in how to justly represent nonhumans' interests in practice if and when pro-nonhuman policies do emerge (Lundmark 1998; Dobson 2010; Gray and Curry 2020).

Similar to the posthumanist pluralities framework presented in Chapter 7, compassionate conservation attends to the rights, welfare, and agency of nonhumans, while building a scientific and ethical argument of nonhuman personhood for *sentient beings* that include mammals, birds, and cephalopods (Wallach et al. 2015). Sentience is considered to be the 'capacity to experience' where "sentient beings can experience suffering and well-being" (Dunayer 2013: 34). Weary states that "one reason for the reluctance of scholars to seriously address the issue of animal suffering may be that they are still influenced by the charming but outdated notion that the job of the scientist is to study the 'facts', and leave the difficult discussions around 'values' to others" (2020: 156). Social anthropology and multispecies

ethnography provide insights concerning how to engage with the human exceptionalist values that perpetuate harm of nonhumans, such as deconstructing biopolitical power in multispecies relations, which violates the founding principle of compassionate conservation: 'first, do no harm' (Bekoff 2010). Weary continues, "the term suffering is infused with moral loading, explaining why it is often used in the rhetoric of animal advocates and in criminal law, and this moral loading has likely led academics to shy away from the concept" (2020:156).

9.1 The Limits of Relying on Sentience

The study of nonhuman animals has largely focused on the difference between 'us' and 'them' to justify the use of other species as having merely instrumental value to humans (Digard 2009). Since World War II, animal science (a different field than animal studies) has largely focused on the economic efficiencies and biomass of livestock production where the lives of certain domesticated nonhumans are concentrated in spatially uneven ways (Neo and Emel 2017). That is, livestock are becoming more concentrated and confined while the industry is dominated by only a few major players to the detriment of small-scale family farms. An emphasis on the well-being of nonhumans has transitioned focus towards new production standards and practices (see Flower and Weary 2001; Von Keyserlingk et al. 2009; Beaver et al. 2021). Yet, 'social demand' for nonhuman consumption is "defined less in terms of the preferences of consumers and is more a heterogeneous, multiform, and more or less informed expression of a shared unease" (Le Neindre et al. 2017: 20).

The fields of comparative and experimental psychology, and cognitive ethology aim to relinquish the grasp of anthropomorphic tendencies to understand the ways consciousness is expressed between species (Bekoff 2013; Scapini and Cassatella 2014; Birch et al. 2020). The *Cambridge Declaration of Consciousness* confers that "non-human animals, including all mammals and birds, and many other creatures, including octopuses' possess neurological substrates complex enough to support conscious experiences" (Birch et al. 2020: 1; see also Low et al. 2012). The study of nonhuman emotions largely focuses on mammals to argue that 'deep homologies' explain how these taxonomic groups share the mechanics of human emotions (see Allen and Trestman 2017; Panksepp and Burgdorf 2003), pioneering a science dedicated to nonhuman psychology as the basis for moral grounds (Shevlin 2020). However, Dawkins argues that the science of cognition is limited and that the movement for nonhuman animal welfare would be better suited to focus on what nonhumans may want and need rather than developing a basis of scientific consensus to determine which animals are worthy of rights and agency (Dawkins 2012).

Where compassionate conservation's arguments falter is in the persistent emphasis on sentience as the guiding tool in which to make a scientific and ethical claim of nonhuman personhood. The issue here is that sentience is still contingent on humans' understandings of other species' intelligence and capacity to experience suffering and well-being. Birch et al.'s groundbreaking *Review of the Evidence of Sentience in Cephalopod Molluscs and Decapod Crustaceans*, concludes that decapod crustaceans such as lobsters (*Nephropidae*) are sentient, where "[sentience] is not simply the capacity to feel pain, but feelings of pain, distress or harm,

broadly understood, have a special significance for animal welfare law" (2021: 7). On the basis of this government commissioned report, the United Kingdom will add these species in the "U.K.'s Animal Welfare (Sentience) Bill. When passed into law, the bill will establish an Animal Sentience Committee and ensure that the wellbeing of these invertebrates is considered in new laws" (Aridi 2021). "In 1993, the UK amended the Animals (Scientific Procedures) Act to include one invertebrate species, the common octopus (Octopus vulgaris)" (Shmuely 2021: 1). This demonstrates that focusing on sentience as the guiding principle for nonhuman personhood is flawed as it still relies on the ability for humans to scientifically prove that a given species possesses sentience. Instead, the common-law precedence of 'presumed innocent until proven guilty' should be practiced (Metzmeier 1996), where nonhumans are assumed to possess sentience unless we can definitively prove otherwise. Even then, should another living being not possess legal rights to persist free of harm?

Like most social movements, broad-based consensus is achieved through the sustained dedication to a cause by a 'minority of committed individuals' (Kopnina et al. 2021). Incremental change only favors those who already hold (bio)political power (Stone 2010). "It is unlikely that incremental change based on individualistic understanding of society will suffice to bring about sufficient change" (Baum 1993: 35), in matters of social, environmental, or multispecies justice. My argument is rooted in multispecies justice (MSJ), which attends to the intrinsic value of nonhumans by positioning itself outside of ubiquitous perceptions of human exceptionalism in environmental politics (Kopnina 2017; Celermajer et al. 2021; Tschakert

2021). Celermajer et al. locate the emerging MSJ field as one situated in justice theory, but misunderstood (2021):

> An account of MSJ is required to rectify false assumptions and longstanding misconceptions in justice theory. Principal amongst these is the fictitious idea of human beings as individual, isolated, unattached and unencumbered, and the correlative presumption that more-than-human nature is mere passive background. Beyond rejecting the belief that humans alone merit ethical or political consideration, multispecies justice rejects three related ideas central to human exceptionalism: a) that humans are physically separate or separable from other species and non-human nature, b) that humans are unique from all other species because they possess minds (or consciousness) and agency and c) that humans are therefore more important than other species (Srinivasan, & Kasturirangang 2016).

In a follow up conversation with an interlocutor, Dakota (pseudonym), asked me what my core argument was going to be now that I had finished my fieldwork. After sharing how my findings and personal ethics led me to focus on multispecies justice and the case for nonhuman legal personhood, she responded, "I think someone will ask the question, where do you draw the line, species wise, for providing rights"? It's a reasonable question, but also identifies the fundamental problem of human exceptionalism in multispecies relations. Why do we have to 'draw a line' about which species, let alone individuals, are deserving of rights based on our human perceptions of intrinsic value? Who are we to decide who lives and dies when issues of personal security or sustenance are not in question? The concept of intrinsic value specifically and explicitly precludes humans from 'drawing a line', as intrinsic value refers to the value that something possesses in and of itself, irrespective of any valuation by another (Chisholm 2005). In the following sections, I examine the legal bases for nonhuman personhood and then unpack how a new paradigm of ecological rehabilitation, rooted in multispecies justice, would upend our anthropocentric notions of superiority to facilitate equitable multispecies livelihoods and foster wildlife-human coexistence (Thomsen and Thomsen 2021; Thomsen et al. 2021a).

9.2 Legal Personhood

When the concept of compassionate conservation was introduced, many academics took issue and argued that humans were of a separate and higher moral community than that of nonhuman species, and therefore nonhumans could not be identified as possessing personhood (Wallach et al., 2020a). Nearly every Westernized theory of moral ethics necessitates that membership of a moral community is qualified by possessing moral autonomy (Frey 1987). In *Can Animals be Moral?,* Mark Rowlands argues that animals have a sense of right and wrong that rivals that of humans (2012). To illustrate this, Rowlands draws on examples of elephants supporting their dying matriarch in her final moments, and a chimpanzee (*Pan troglodytes*) who rescued a small boy that fell into his enclosure at a zoo. He also criticized the definition of morality as evaluating the moral standing of all beings through a human lens, and alternatively suggests that morality is not defined by human contexts. Eller states that currently, "a 'person' has legal rights and responsibilities that a nonperson (such as a plant or an animal) does not" (2018: 128). The granting of personhood to nonhuman beings involves the establishment of legal rights and responsibilities which pertain directly to the being's quality of life. Eller asserts that "nonhuman species, things, and forces or phenomena can have personhood in their own right" (2018: 134).

Western cultures have long exploited conceptions of personhood to maintain biopolitical power over subaltern individuals (Schroer 2005). Dyschkant articulates "so far as legal theory is concerned, a person is any being whom the law regards as capable of rights and duties. Any being that is so capable is a person, whether a human being or not" (2015: 2076). This

disproves the assumption that personhood and humanity are synonymous and provides a legal standing on which nonhumans may be granted personhood should they fit the criteria. Cases petitioning for personhood typically take the form of the *habeas corpus* writ. Habeas corpus is "a prerogative (legal] writ used to challenge the validity of a person's detention, either in official custody (e.g. when held pending deportation or extradition) or in private hands" (Oxford Reference 2021). Native Americans were not granted personhood until 1879 (Starita 2009), and full citizenship until the *Indian Citizenship Act of 1924* (White 2018). On May 1, 1879, the court case *Ma-chu-nah-zha v. George Crook* commenced in the Omaha, Nebraska U.S. District Court. In *The Case of Standing Bear: Establishing Personhood under the Law*, Joe Starita intertwines court transcripts with his analysis of the legal interpretations of the ground-breaking case that granted Standing Bear, of the Ponca tribe, legal personhood using habeas corpus (2009). Opponents to granting any nonhuman entity legal personhood often argue that autonomy is a distinctly human characteristic that defines personhood, and as such, the concept of personhood cannot apply to nonhumans (Bandura, 1991). However, the same perspective has been applied to nearly every other subaltern human group in contemporary Euro-American legal contexts:

> The legal rights of children have long since been recognized in principle, and are still expanding in practice. Witness, just within recent time, *In re Gault*,[7] guaranteeing basic constitutional protections to juvenile defendants, and the Voting Rights Act of 1970.[8] We have been making persons of children although they were not, in law, always so. And we have done the same, albeit imperfectly some would say, with prisoners,[9] aliens, women (especially of the married variety), the insane,[10] Blacks, foetuses,[11] and Indians (Stone 1972: 451).

Returning to Stone's opening quote to the chapter, this resistance should be expected. Though his 1972 language seems a bit outdated by today's standards, his point is no less valid. In

Western cultures, we continue to perpetuate violence toward nonhumans and often rely on speciesist notions of moral superiority (Wallach et al. 2015; Celermajer et al. 2021).

In Western societies, once a subaltern subject acquires legal rights, sociocultural perceptions that perpetuated the subjugation and negative perceptions toward that entity generally enervate over time. A few examples of this include the U.S.'s women's suffrage movement in the early 20th century and the civil rights movements in the mid-20th-century (Kopnina et al. 2021). However, systemic racism and sexism persist and simply granting personhood will not serve as a cure to human exceptionalism.

Recent research shows that even though White millennials (generation born between 1980-1995) in the U.S., hold less 'old-fashioned' racist views from a 'bygone' Jim Crow era and are generally more accepting of diversity (DeSante and Smith 2019), "the average level of racial resentment is lower among millennials, racial resentment has a more virulent effect for this group in comparison to their predecessors" (DeSante and Smith 2020: 967). DeSante and Smith argue that racial progress has stagnated, and a 'less is more effect' has materialized. The minority of "racially resentful millennials rely on old-fashioned stereotypes, adopt notions of 'reverse discrimination,' and are much less like likely to support policies that aim to produce greater racial equity than are older, prejudiced whites" (2020: 967). This suggests that granting nonhumans personhood will not resolve the abhorrent treatment of nonhuman subalterns in every instance, but that it is merely a starting point to enhance multispecies justice and halt nonhuman animal genocide. After all, humans granted legal personhood to the abstract

concept of the business corporation. If an *idea* can possess personhood, why are subaltern nonhumans not legally protected as persons?

9.3 Corporate Personhood

In the argument for nonhuman rights, it is impossible to overlook the distinct personhood that has been granted to U.S. corporations and how this status could grant a nonhuman entity similar agency and rights to that of a human. While this legality dates back to business practices for the 'common good' in the 18th century, the fact remains that within law, the concept of a person exists outside that of a citizen (Pollman 2011; Kirsch 2014). A corporation legally exists as both a person and nonperson, where these unliving entities have gradually been recognized "as persons in some respects and as nonpersons for other purposes" (Berger 2004: 181). Similar to Dyschkant, Dewey defines the term person as "convey[ing] no implications, except that the unit has those rights and duties from which the courts find it to have." (1926: 656). By this logic, a person can be defined legally aside from how that status is upheld informally within society. This distinction can be used to grant an entity some or all rights held by legally defined persons, which opens up different debates concerning the extent to which nonhumans acquire legal personhood; a debate that would be welcome once nonhumans acquire a foundation of such rights.

The idea of the 'corporation as person' is further defined in the early 20th century as having 'real-entity', wherein the physical and living aspects of a corporation direct it, compose it, and ultimately, are offered the same rights as a living being under a separate legal entity. All of

which are based on the idea of the natural, 'real heart' of the corporation (Manning 1984; Blair 2013). This abstract idea materialized following Chief Justice Marshall's ruling in *Dartmouth v. Woodward* (1819) - and proceeded U.S. indigenous personhood by 95 years. A corporation was expected to have 'immorality and individuality' due to its being a person, and a person can be expected to be: 1) moral and 2) an individual, with moral defined as "creatures which have moral rights" (Ripken 2009; Ripken 2019). In the Supreme Court's 2010 decision on *Citizens United v. FEC*, corporations' status of personhood was upheld (Pollman 2011). If corporations, which require outside influence to subsist, possess the necessary level of autonomy to be defined as a person in the eyes of the law, then certainly nonhumans also possess adequate autonomy to qualify for personhood. If this extension of personhood can be granted to non-sentient businesses, surely it can be given to *living*, nonhuman beings.

9.4 Efforts to Establish Nonhuman Legal Personhood

"Legal personhood is a legal precondition for rights, and a court or a legislator must first recognize an entity as a legal person before it can hold rights" (Kurki 2021: 52). In 2013, the Nonhuman Rights Project petitioned the New York Supreme Court for the immediate release of two chimpanzees based on the writ of habeas corpus. After a series of appeals, the case was denied in 2015, citing a lack of precedence to accept a habeas corpus argument by a nonhuman party *(The Nonhuman Rights Project, Inc. - v. - Samuel L. Stanley Jr., MD., [2015])* (Cupp 2017). In a similar case in 2017, the New York appellate rejected the Nonhuman Rights Project's attempt to grant chimpanzees legal personhood status in *In re Nonhuman Rights Project, Inc. v. Lavery* (Cupp, 2017). Kurki states:

> The claim was primarily substantive rather than conceptual. The court held that the conferral of habeas corpus to chimpanzees would be inappropriate.[17] Tackling this substantive claim is a task for moral and political argumentation. For instance, Wise's (2019) point that "millions of New Yorkers and Americans [such as children] are legal persons with legal rights despite their inability to bear duties" (p. 372) puts the court's claim in a strange light (2021: 54).

The court's decision argued that humans should evolve ecological practices to protect nonhumans rather than dispense with 'animal' legal personhood (Cupp, 2017), reminiscent of the anachronistic underpinnings that founded Western 'civilization' and "the end of nature" (Wallach et al. 2018: 962). This was not a surprising outcome as "most attempts at getting animals recognized as legal persons have faced severe resistance by the courts and have failed in all but one case, which took place in Argentina…the chimpanzee Cecilia was declared a subject of law/rights (*sujeto de derecho*)" (Kurki 2021: 47-59). Nonhumans have since been granted personhood in India and Pakistan (CBS and Associated Press 2021). However, this Argentinian case for habeas corpus provided a foundation on which a U.S. precedence may be based. The U.S. legal system relies heavily on the doctrine of *stare decisis* or, "the doctrine under which courts adhere to precedent on questions of law in order to insure certainty, consistency, and stability in the administration of justice with departure from precedent permitted for compelling reasons (as to prevent the perpetuation of injustice)" (Merriam-Webster's Dictionary of Law 2021). Based on this doctrine, a single court ruling of habeas corpus that petitions for nonhuman personhood could set the precedence for all future U.S. court cases, providing the federal Supreme Court a previous decision to reference, and a legal framework to rely on. One such case demarks an intermediate attempt for nonhuman personhood.

Notorious drug kingpin Pablo Escobar illegally imported several hippopotamuses (*H. amphibius*) into his Colombian ranch in the late 1980s. Escobar died in a fatal shoot-out with police in 1993, leaving the hippos to thrive with no natural predators. Approximately 80 hippos have descended from the original herd and their presence in Colombia was recently questioned by scientists. The group of Colombian scientists declared that the species posed a significant threat to the area's biodiversity and human lives, and recommended that the hippos either be killed or sterilized (Cheng 2021). The Animal Legal Defense Fund repudiated the petition and asked Cincinnati federal magistrate Judge Karen Litkovitz to grant hippos 'interested persons' status (Seewer 2021). In a landmark decision, Judge Liktovitz granted the motion declaring the 'cocaine hippos' legal protections under U.S. law (Seewer 2021). The pivot in ideological legal thinking with this ruling could disrupt notions of human superiority (Gibbs et al. 2019). Though Judge Litovitz's ruling is largely symbolic due to the court's lack of jurisdiction, it does establish a U.S. pro-nonhuman precedence for future court cases.

However, these legal petitions for nonhuman personhood are not only temporally and spatially contextual, but culturally as well. In *Rats, Pigs, and Statues on Trial: The Creation of Cultural Narratives in the Prosecution of Animals and Inanimate Objects*, Paul Schiff Berman details a thorough history of how nonhuman animals and inanimate objects in Europe endured the same trials that humans faced from the ninth-19th centuries. "Individual animals were tried – usually for killing human beings – in secular courts according to common law precedents…many animals were tried in courts as public nuisances" (1994: 289). He continues:

> The historical evidence indicates that communities viewed these trials seriously…but despite scholarly arguments that animals could not summon the requisite intent to be found guilty, the practice continued…no doubt the motivations – psychological, economic, religious – varied from community to community, and from one social class to another. Nevertheless, it would be unwise to dismiss the animal trials as the unenlightened custom of a bygone era" (290).

This historical perspective of trying nonhumans for crimes under common-law suggests that they have been selectively treated as persons in the 'eyes of the law' when it suits human interests. Berman suggests that even though it would have been simpler to determine the fate of the accused nonhuman without going to trial, the practice was culturally significant to resolve (perceived) injustices, and humans were expected to abide by the courts' rulings, even in the rare cases when a nonhuman individual was found not guilty (1994). However, not all cultures perceive nonhumans as subordinate to humans, historically or contemporarily. There have been several recent instances where 'natural objects', including nonhuman flora and ecosystems, have gained legal personhood status, and whose management of the entity was turned over to indigenous groups.

9.5 The Rise of Environmental Personhood and Indigenous Guardianship

According to *Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples*, indigenous peoples' rights are understood to include the protection, maintenance, and control of their culture and traditional ecological knowledge (TEK); these rights have rarely been acknowledged in practice (Robinson et al. 2021). Helander-Renvall investigates the cultural beliefs pertaining to interspecies relations within the Sami peoples, whose historical territories range across the present-day Nordic countries and Russia. Within the Sami culture, it is believed that there are numerous kinds of persons, such as humans, nonhumans, and spirits, which are

believed to be characteristic of an animistic culture. Here, it is important to understand the nature of the relationship held between two entities, referred to as inter-subjectivity (2009).

Similarly, Robinson (2014) discusses the Mi'kmaq (First Nations) people, who are believed to be one of the largest tribal groups in North America prior to the pre-Columbian era, and occupied what is now the eastern Maritime Provinces of Canada. In Mi'kmaq culture, nonhuman animals are believed to be siblings and persons who sacrifice themselves for food. Additionally, it is believed that human and nonhuman animal life are eternal and can be reincarnated. What's interesting here is a clear difference in ontological and epistemological beliefs between certain First Nations cultures such the Mi'kmaq peoples, and predominant Euro-American cultures as it relates to interspecies relations (Nadasdy 2005). Though these are only a couple of examples, they illustrate indigenous cultural perceptions that often consider nonhumans as persons, rendering the necessity for legal nonhuman personhood as an overt Euro-American cultural necessity. Mi'kmaq peoples' recognition of nonhumans as persons does not preclude them from killing or consuming nonhumans for sustenance.

Drawing from (non-homogenous) indigenous cultural perspectives that are often 'pro-nonhuman', environmental personhood bestows rights upon individual nonhuman entities such as rivers, species, or entire ecosystems (Stone 2010; Kahui 2021; Kushwaha 2021), though some Western theological examples do occur as well, such as Franciscan theology that views all as brothers and sisters, including the sun and moon (Delio et al. 2020). Global efforts to recognize indigenous laws and their attributed rights toward nature are beginning to gain traction. Many

of these acts of personhood stem from a need for human safety, which only comes from granting these 'natural objects' legal personhood. We see this creation of personhood mostly pertaining to rivers and other waterways or ecosystems that are often considered by many in Euro-American cultures as commodities. Natural objects cannot advocate for themselves, hence why personhood has developed to become a new pathway to protect the environment. While the push for environmental personhood in the United States has been slow, it is becoming increasingly common globally; Ecuador has included legal rights for nature in their constitution for many years (McDonough 2019).

In February 2021, the Muteshekau Shipu (Magpie) River in Quebec, Canada was granted legal environmental personhood and was the first river in Canada to do so (Kahui 2021). The Innu indigenous tribe and the Canadian Society for Nature and Parks pushed for this legislation. This case is particularly significant because the river was given the legal right to sue if its rights are encroached upon. In the U.S., the Yurok Tribal Council granted the Klamath River in present-day California and Oregon, personhood in an effort to establish protections against degradation. The Klamath River is intertwined with Yurok culture, including their religious and fishery practices (Yurok Tribal Council 2019). The river is threatened by pollution, rising temperatures, placement of industrial dams, and toxic algae blooms (Thompson 2020). Colombia has gone through multiple processes of granting personhood to entities in nature, where the first was to protect the Atrato River Basin. This basin is under the guardianship of both the Colombian government and the indigenous communities located near the river basin. Following this designation in 2018, the Colombian Supreme Court granted the Amazon River and the

surrounding ecosystems personhood to conserve the forest from deforestation (Kushwaha 2021).

Since European colonization in New Zealand, the Māori people fought to regain their rights as stewards of the land, specifically the Whanganui River and the Te Urewera wilderness, formerly considered a national park (see Chapter 8). In 2014 the human face of the Te Awa Tupua was created; this was made up of two representatives, one from the Whanganui River and one from the government who would serve as guardians to represent the river. The Te Urewera Board now protects the decommissioned national parkland (Charpleix 2018). These cases illustrate that alternative pro-environmental relations can emerge through legal and social pathways. But do we, as humans, possess the audacity to not only consider the sociocultural and legal rights of nonhumans, but to begin to embrace *all* individuals and species with the same respect that so many indigenous cultures do?

9.6 Ecological Rehabilitation

Euro-American's hegemonic sociocultural and legal treatment of nonhumans cannot persist. It takes the will of a dedicated, usually small community-based movements to engender debates about how to call out injustice, and undertake brash action through legal protections, which then leads to sociocultural change. To accomplish this, a new paradigm of multispecies justice, what I call ecological rehabilitation, must emerge to halt ecosystem degradation, species extinction, biodiversity loss, and individual nonhuman animal genocide. I define ecological rehabilitation as a new paradigm of interspecies reconciliation that equitably perceives

multispecies rights, agency, justice, and welfare through legal and sociocultural mediums. Shifting-baseline syndrome suggests that humans do not know what has been lost if they never knew it existed. "It results in a drift away from true natural conditions, and as a consequence a change in perception of ecological change varying from generation to generation" (Vera 2010: 98). As nearly 70% of the world's wildlife has died-off in the past 50-years, conserving or preserving 'nature', or biodiversity is insufficient, which is evidenced by the current ecological crisis. Ecological rehabilitation departs from traditional notions of conservation or compassionate conservation by embracing all species, not just those of which we consider to be, presently, sentient. Nor does the ecological rehabilitation paradigm aim to conserve 'Nature', or center on greenwashed ideologies of sustainability (De Vries et al. 2015). Sustainability is increasingly viewed as a desired goal of development and environmental management…[it] may be defined broadly or narrowly, but a useful definition must specify explicitly the context as well as the temporal and spatial scales being considered" (Brown et al. 1987: 713). Scoones states that:

> Sustainability must be one of the most widely used buzzwords of the past two decades. There is nothing, it seems, that cannot be described as 'sustainable': apparently everything can be either hyphenated or paired with it. We have sustainable cities, economies, resource management, business, livelihoods – and, of course, sustainable development. Sustainability has become, par excellence, what Thomas Gieryn (1999) calls a 'boundary term': one where science meets politics, and politics meets science. The 'boundary work' around sustainability – of building epistemic communities of shared understanding of and common commitment to linking environmental and economic development concerns – has become a major concern across the world (2010: 589).

The biological understanding of conservation is similarly deficient to usher in a new paradigm of ecological rehabilitation. The International Union for Conservation of Nature (IUCN) defines conservation as "the protection, care, management and maintenance of ecosystems, habitats,

wildlife species and populations, within or outside of their natural environments, in order to safeguard the natural conditions for their long-term permanence" (IUCN 2021:13). Instead, ecological rehabilitation focuses on the purposeful and sustained actions necessary to engender ecological healing. In other words, protecting what we still have is insufficient and we must collectively seek to reframe humans as inextricably linked within nature. This can be materialized in practice through increasingly popular initiatives such as rewilding. "Originally defined as a conservation method based on 'cores, corridors, and carnivores' (Soulé and Noss, 1998), the term is now broadly understood as the repair or refurbishment of an ecosystem's functionality through the (re-)introduction of selected species" (Pettorelli et al. 2019: 1). Though the merits of rewilding are debatable, it is a step toward rehabilitating human-caused environmental destruction.

By coupling ecological rehabilitation, or the active direct and indirect effort to not only restore ecosystems, maintain biodiversity, and facilitate conditions for nonhuman and human individuals to thrive, with nonhuman legal personhood we may collectively halt nonhuman animal genocide and ecosystem collapse. A new paradigm of ecological rehabilitation will ultimately rely on the agency of individual humans to usher in the messiness and unknown practices of ecodemocracy (Kopnina et al. 2021). Humans must demand legal protections for nonhumans and subaltern humans if predominant views of human exceptionalism are to be curbed, let alone altered. As humans, we cannot remain apathetic in our views toward nonhumans, without risking an existential, and ultimate, regret that we could have intervened. Ecological rehabilitation starts with granting nonhumans legal personhood, but will depend on

ecodemocracy to materialize (Kopnina et al. 2021). It is merely the next step to equitably represent multispecies livelihoods in practice (Thomsen et al. 2021a). In the end, the question remains for each of us: will we support ecological rehabilitation in theory and practice, or remain apathetic and cemented in our positionality?

Thesis Conclusion

Introduction

At the beginning of this study, I set out to understand what factors facilitate wildlife-human coexistence against the backdrop of the ecological crisis. Though I had read extensively about the history of wolf's plight in North America since the mid-18th-century, I did not adequately comprehend the extent to which abstract ideas of wolf permeated contemporary discourse and resulted in the deaths of thousands of wolves in the U.S. over the past couple of years alone (see Introduction, Chapter 8). My findings suggest that despite an individual human's agency to engender their own perspectives toward wolf, beliefs and attitudes toward the species were undoubtedly intertwined with centuries of Euro-American folklore and biopolitical rhetoric (see Young 1946; Lappalainen 2019). Indigenous perspectives are more likely to perceive wolf in a favorable light (see Wilson 1999; Shelley et al. 2011), though individual human perspectives are surely not homogenous. Sociocultural dynamics, rooted in dominance over 'Nature' perspectives (see Manfredo et al. 2016), persist in the North American wildlife management model (see Feldpausch-Parker et al. 2017) even though the vast majority of North Americans now perceive wildlife favorably and deserving of rights (Manfredo et al. 2020). Manfredo et al.'s findings starkly contrast with the institutionalized biopower at the state and federal levels that continue to perform acts of 'killing and euthanizing' wildlife that amounts to nonhuman animal genocide (see Chapter 8).

The institutionalized state biopower that perpetuated these mass killings largely remain unchallenged in conservation biology due to the 'doctrine of biodiversity' (see Chapter 7),

where individual deaths are tolerated for the sake of maintaining biodiversity. Compassionate conservation scholars have challenged this binary approach to wildlife management over the past two decades (Bekoff 2010; Wallach et al. 2015, 2018), argue for nonhuman personhood on scientific and ethical bases (Wallach et al. 2020a, b), and are supported by multispecies justice and ecodemocracy scholars (Gray and Curry 2020; Celermajer et al. 2021; Kopnina et al. 2021). However, the conservation biology literature overwhelmingly maintains that individuals do not matter if biodiversity is at stake (e.g., Brown 2009), and my interviews with conservation biologists confirmed that this positionality persists. Wallach et al. challenge this scientific doctrine as faulty and increasingly outdated (2015). I showed how all science is subjective in some context due to the sociocultural dynamics that influence a scientist's positionality that is an assemblage of biases, ethics, spacial, and temporal contexts (see Chapter 7). However, many interlocutors expressed that they grapple with their belief in valuing biodiversity over what happens to individual nonhumans in practice and suggests that the doctrine of biodiversity is a morally complex terrain for conservation biologists. Drawing from compassionate conservation and multispecies justice, I presented a straightforward *nonbinary, interspecies harm prevention framework* (see 7.8.1) for conservation scientists to consider when attending to the rights, welfare, and agency of individual nonhumans that may be affected by their work, implicitly and explicitly.

Three primary themes emerged from this study: 1.) nonhuman animal genocide persists, 2.) biopower relations reproduce colonial dominion over subalterns, and 3.) the ethical decisions of scientists have implicit and explicit consequences for wildlife. My findings provided yet

another example of how predominant scientific beliefs reinforce the North American wildlife management model. These conservation biology views are aligned with the sociohistorical legal policies that permit state and federal agencies to commit nonhuman animal genocide (see Chapter 7 and 8). In the Introduction, I foregrounded Kopnina's critique of multispecies ethnography for remaining apolitical, even though the anthropology discipline has a long and storied history of advocating for their study participants' rights, welfare, and agency in scholarship and practice (2017). I clearly stated my positionality throughout this thesis, which includes the perspective that wildlife-human coexistence can only emerge if 'lethal control' options are not legally available when wildlife-human conflict occurs. How humans collectively speak for and about nonhumans in the abstract materializes to affect particular subalterns in the 'real world'. While this abstract discourse has been employed to distance humans from nonhumans and influenced wildlife policy and management (see Chapter 4), it also suggests that biopower can shift through human dialogue. Indigenous cosmologies and cultural beliefs could also inform a pluralistic approach to knowledge acquisition, that equitably considers traditional ecological knowledge and Western science (see Ramos 2018).

My findings, positionality, and scholarship are clearly aligned with compassionate conservation and multispecies justice. The ecological rehabilitation conceptual approach is intended to extend beyond their respective literatures, and include all species in questions of legal nonhuman personhood, not just ones that humans deem sentient. To be more direct, alternative perceptions of biopower can exist that justifiably attend to multispecies relations and foster legal protections for nonhumans. I hold the belief that 'theory for theory's sake'

lacks substance and validity when exercising our privilege to discuss the death of billions of particular nonhuman lives annually (Kopnina 2017). What basic science can proffer, however, are well-supported arguments based on scientific-evidence and sound theoretical frameworks. Multispecies ethnography should challenge scholars, practitioners, citizens, and governmental agents that possess biopower to grapple with their own positionality toward the rights, welfare, and agency of nonhumans. In the following sections, I reflect on the primary and secondary research questions, as well as the theoretical frameworks that informed this study and my positionality. I then discuss the research limitations, before assembling a short summary of key findings from each Part that supported my core argument for nonhuman legal personhood and a new paradigm of ecological rehabilitation. I then offer some final parting thoughts that speculate on what this proposed paradigm could like in scholarship and practice.

Primary Research Questions

PRIMARY RESEARCH QUESTION #1:

1.) What are humans' moral obligations to nonhumans (flora and fauna)?

PRIMARY RESEARCH QUESTION #2:

2.) How do we coexist with nonhuman 'Others' given the contemporary ecological crisis?

These overarching research questions are rather simplistic in form but packed with an underlying assemblage of human values, ethics, beliefs, attitudes, and feelings toward nonhumans that are intertwined within spatial and temporal contexts. In other words, sociocultural dynamics influence the science, policy, management, and popular discourse about

nonhumans. This study demonstrated that the answer to these questions are subjective, and were developed as a response to the (Euro-American) biopower in the U.S. that favors select human interests over other stakeholders, no matter the species. The findings in this study provided another example of human's influence on the environment (meaning a nature that humans are clearly a component of), to a growing body of conservation literature that shows species extinction, biodiversity loss, and ecosystem collapse are accelerating and human caused (Steffen et al. 2011; Grooten and Almond 2018). My study aligned with aspects of postmodernism, suggesting that there is no objective, universal truth that can concretely answer my two primary research questions (Best and Keller 2020). Rather, biopower and biopolitics manifest in neocolonial power dynamics that subjugate subaltern nonhumans as subordinate to state level interests, who dictate which nonhuman species and individuals are allowed to persist. The secondary research questions that emerged from my study provided insight in how to conceptually attend to nonhumans' interests.

Secondary Research Questions that Emerged from the Study

SECONDARY RESEARCH QUESTION #1:

1.) Who are we to determine the fate of other living beings?

SECONDARY RESEARCH QUESTION #2:

2.) Why is the most common 'solution' to wildlife-human conflict death?

SECONDARY RESEARCH QUESTION #3:

3.) Why aren't nonhumans represented legally in every decision that affects them?

These questions developed as a response to the frequent exercises of human biopower over subaltern nonhumans that transpired during my study. The first question aligns with the primary research questions in that its answer depends on whose power, resiliency, and judgement are privileged in positions of biopower at a specific time and place. In this thesis, I posited (to some) a seemingly radical critique of wildlife-human relations that questioned why humans do not equitably attend to nonhumans' interests. The second question builds off of the first, at least in a Euro-American context. My findings suggest that nonhuman animal genocide persists because humans (in the U.S.) allow it to, implicitly and explicitly (see Chapter 8). The other, perhaps simpler answer is that maybe humans find it more convenient to kill something than engage with multispecies relations when conflict occurs. Killing nonhumans is culturally embedded, spatially and temporally contextual, and reliant on arbitrary human laws for legitimacy (Berman 1994). Corporations, which are nothing more than abstract ideas, were granted personhood, suggesting that protecting nonhumans through legal personhood is a simple choice that humans can implement if they so choose.

I showed throughout this thesis that other cultures, particularly indigenous ones, are arguably more tolerant of nonhumans than in the highly-polarized political climate of present-day U.S., and that indigenous cosmologies, cultural beliefs, and traditional ecological knowledge may help to influence an ecological rehabilitation paradigm rooted in multispecies justice (see Ramos 2018; Emel and Nirmal 2021; Tschakert 2021; Chapter 9). Compassionate conservation, multispecies justice, and ecodemocracy are critical steps in scholarly and practical endeavors to engender a legal and social environment of wildlife-human coexistence. However, state laws to

eradicate wolf and other wildlife (see Introduction, Chapter 2, and Chapters 5-9) suggest that the only way to immediately protect nonhumans from nonhuman animal genocide is to legally protect them, with rights that extend beyond the Endangered Species Act.

I ultimately argued in Chapter 9 that legal nonhuman personhood is the final pathway to equitably attend to the rights, welfare, and agency of nonhumans. The ecological crisis demands that 'more-than-human' scholarship, policy, and management materialize, quickly, to protect the environment and human health. Though I clearly distance myself from anthropocentric arguments of 'saving the planet' for human's sake alone, it does provide a theoretical gateway into difficult conversations about what humans owe other species, and how to foster wildlife-human coexistence. Only by challenging incremental change that favors those who currently hold biopower and granting legal nonhuman personhood can an era of ecodemocracy emerge and force humans to develop innovative solutions to intra and interspecies conflict. Though I triangulated my data to inform my arguments for legal nonhuman personhood and a new paradigm of ecological rehabilitation, the study, like any other, was not without limitations.

Research Limitations

Many of the theoretical arguments in this thesis were devoid of traditional participant observation in anthropology, due to the COVID-19 pandemic. I strived to minimize discussions about the global pandemic throughout the thesis because I still acquired sufficient data to support my claims. Nonetheless, I would be remiss not to share a few of the ways in which my

study was altered, which in many ways Yates-Doerr's concept of anti-hero care helped me to embrace the unfinishedness and messiness of my fieldwork (2020; see Chapter 3). In the first few months of my study, I conducted a couple dozen interviews and performed an increasing amount of participant-observation at a variety of nonprofit organizations. I made concrete plans to follow cattle ranchers and wildlife biologists in the 'back country' of Eastern Oregon and Washington, where most wolves lived within state boundaries. An indigenous bison rancher also spoke with me several times and invited me out to their ranch once "the mud dried-up". This was a common sentiment, where nearly all my cattle ranching, and wolf biology fieldwork was to be conducted in late-spring into early fall.

The pandemic unfolded in March 2020, and for safety concerns, most interlocutors rescinded their invitations to allow me to visit in person. This was understandable, but forced me to reconsider my study design, location, and objectives. Perhaps serendipitously, my final graduate seminar at Oxford was on digital ethnography (see Hjorth et al. 2017). As the pandemic progressed and people expressed to me a feeling of restlessness, the amount of interlocutors willing to speak with me over *Zoom* increased. In some ways, this turned out to be a benefit to my study, as it allowed me to interview more stakeholders from a wider geographic area across the western U.S. I still conducted substantial participant-observation at wolf sanctuaries (including YNP), environmental nonprofits, in the classroom through environmental education, and with conservation scientists in person. I also had invitations to visit indigenous tribal lands revoked, and my subsequent communication attempts went unanswered.

However, like I presume many other anthropology doctoral students worldwide felt, I thought I had missed out on this disciplinary 'rite of passage'. So, with all its limits, my study still progressed, and Yates-Doerr's anti-hero care (2020), and Günel et al.'s 'patchwork ethnography' helped me to keep my study objectives and outcomes in perspective (2020). I would like to continue this multispecies ethnographic work beyond my D.Phil. in hopes of better understanding wildlife-human relations over time. I would like to include more diverse stakeholders, and especially more indigenous perspectives, and will continue to do so. Nonetheless, I complete this D.Phil. thesis with the knowledge that 'I made it work'. In the following section I briefly outline the key takeaways from each Part (1-4).

Part 1- Preparing for the Field

This part of the thesis was integral to framing the study theoretically and methodologically. I grounded my interdisciplinary study between social-ecological systems (SES) for its focus on bridging the natural and social sciences; Science, Technology, and Society (STS) studies for it insight into how knowledge is produced; and multispecies ethnography for its attention to the sociocultural dynamics of multispecies relations. I also included animal ethics, and in particular posthumanism and the 'animal-turn' within the social sciences, to move beyond predominant utilitarian worldviews in conservation science that favor 'the greater good' at the expense of particular individual subalterns. Postcolonial studies, and specifically subaltern studies and decolonial ecology helped to situate the study as one clearly entangled with concepts of biopower and biopolitics (Spivak 1988; Mitchell 2002). Historical ecology of the wolf provided greater insight as to how abstract ideas of wolf permeate Euro-American folklore and

contemporary views toward wolf. The research design, entrenched in multispecies ethnography, aided me in my effort to embrace the biological sciences and better understand how other disciplines engage in nonhuman science and multispecies relations. Even though the study had its limitations, I was able to still conduct a substantive amount of interviews and participant observation, along with archival data to inform my seemingly radical critique of Euro-American multispecies relations.

The cultural and historical background of the Cascadia bioregion, and cattle ranching culture in the western U.S. situated this study as one within a multicultural, yet increasingly polarized U.S. landscape. Wolf population data and contemporary wolf politics located the study's background to shape the severity of recent wolf-hunting laws that occurred in 2021 following the species' delisting from the ESA. Chapter 3 was included in this section as it was highly methodological, but also served as a transition between the pre- and post-fieldwork portions of the study. Yates-Doerr's aforementioned anti-hero care, and my atypical methodological choice of leveraging my privileged position as a tenure-track academic faculty (staff) forced me to evaluate my findings from a different perspective than I would have otherwise. I was able to train my students while having them serve as my research assistants. This challenged me to embrace my positionality and align my theoretical and methodological choices with my personal ethics, which situated this study as one within 'a_political' multispecies ethnography (Kopnina et al. 2017). Part 2 provided insight into current wildlife governance management paradigms and limitations.

Part 2- Current Wildlife Governance Paradigms and their Limitations

This section was perhaps the most ethnographically descriptive section of the thesis, as I was able to draw on my participant-observation with wildlife sanctuaries and Yellowstone National Park. In Chapter 4, I leveraged a posthumanist framework to evaluate the complex ethical contexts of each individual wolf sanctuary based on Fennell and Sheppard's (2021) 'scales of justice' framework. Findings from this chapter suggested that popular perceptions of 'what is ethical' in how we treat nonhumans is highly dependent on the individual wolf's (or other wildlife) background and circumstances. Yes, a non-captive existence is most likely ideal for wildlife, but for those individuals who suffered from injury or were born into captivity, they would most likely not survive if re-released. This necessitated that I examine individual wolf's rights, welfare, and agency from a posthumanist framework that attended to their specific situation, rather than romanticized ideals of what wolf ecotourism should look like in practice. In Chapter 5, I questioned the efficacy of protected areas and showed how these 'invisible cages' are exercises of biopower, where wolves and indigenous subalterns were regulated to outdoor zoos or 'reservations' (some might argue whether there is even a difference given the historical oppression of Native Americans). I relied on Spence's influential work to show how the modern concept of wilderness is entangled with current wildlife management and policy, particularly in North America. I then unpacked the paradoxical dynamics of contemporary wildlife conservation efforts that suggest protected areas are one of the primary methods for preserving species. I explored global attempts to improve protected area management through wildlife corridors, buffer zones, and corridors of tolerance. This section illustrated the fallacies

of separating humans from nature, and set up Part 3, which discussed current attempts to challenge the *status quo* in wildlife-human relations.

Part 3- Invoking Agency for Change

This section centered on paradigm shifts in wildlife-human relations. Chapter 6 detailed the first known attempt to usher in a 'democratic conservation' approach to purposefully reintroduce a species, the wolf, by democratically voting on Colorado Proposition 114. This democratic approach to species management subverted existing biopower structures in the State, as Colorado's Wildlife Commission refused to reintroduce wolf on four separate occasions since the early 1990s. Though this example does not fully align with ecodemocracy (see Gary and Curry 2016, 2020), because it turned wolf reintroduction over to Colorado Parks and Wildlife, it did establish a new precedence to engage a part of ecodemocracy in the U.S. This pro-wolf movement was entangled with wolf's history over the past 175 years in the U.S., as well as the eugenics movement in the early 20th-century. Similarly, Chapter 7 showed how predominant beliefs in science, defined in this thesis as the production of knowledge, are shaped by spatial and temporal contexts, and sociocultural dynamics (e.g., beliefs, attitudes, socioeconomic class, etc.) affect a scientist's positionality in practice.

I presented a straightforward nonbinary, interspecies harm prevention framework (see Figure 7.8.1) for scientists to consider when their work may affect an individual nonhuman's livelihoods and interests. In both chapters, I demonstrated alternative, seemingly radical approaches (e.g., compassionate conservation and multispecies justice) to those currently

holding biopower. Each chapter provided alternative pathways to foregrounded nonhumans' interests in multispecies relations. This background was paramount in setting up Part 4, that moved beyond what is currently being done, to confront nonhuman animal genocide and our role in facilitating a new ecological rehabilitation paradigm that equitably attends to the rights, welfare, and agency or all individuals and species.

Part 4- Reimagining a Future of Multispecies Justice & Equality

The entire thesis built up to this section in several ways. First, Kopnina's (2017) challenge to multispecies ethnographers situated this study as one in deconstructing biopower dynamics between human stakeholders. Wildlife, and most nonhumans, do not possess the legal rights to protect their interests when interspecies conflict occurs. I detailed how the United States Department of Agriculture's Wildlife Services 'killed or euthanized' *68,360,467* individual wildlife over the past 25 years (USDA 2021), and argued that it could not be considered anything other than nonhuman animal genocide. This ethical claim aligns with compassionate conservation and multispecies justice approaches to multispecies relations (see Bekoff 2010; Wallach et al. 2020a), and provided hard data to challenge a complex value-laden assemblage of wildlife policy and management that favors human exceptionalist views.

I developed a pluralistic posthumanist framework that suggested that individual and species level rights, welfare, and agency must be considered simultaneously in any decision that affects wildlife. This positioned my core argument of my thesis: the optimal pathway to equitably represent nonhumans' interests in multispecies relations is to protect them through legal

nonhuman personhood. Incremental steps favor those holding biopower, and only by forcing humans to grant each individual nonhuman legal personhood rights will it force scholarly and public discourse to engage with ecodemocracy (Kopnina et al. 2021). I suggested that a new ecological rehabilitation paradigm (grounded in legal nonhuman personhood) could facilitate a new pathway toward multispecies relations that dismisses human exceptionalism. Part 4 does not provide concrete solutions to complex multispecies relations, but does offer scholars and practitioners a conceptual framework to redress our neocolonial subjugation of nonhumans.

Parting Thoughts

Only by confronting humans' actions toward nonhumans, implicitly and explicitly, can we begin to answer the study's research questions in a manner that attends to nonhumans' interests. I ultimately concur with Kopnina that multispecies ethnographers cannot remain apolitical in their work (2017). Nonhumans, like many subalterns, suffer daily. However, survey responses concerning human perceptions of wildlife (Manfredo et al. 2016, 2020) suggest that, at least in a Euro-American context, most humans believe wildlife are deserving of rights and possess intrinsic value. The question that then arises, is how can an individual human take meaningful action to protect nonhumans legally and socially? The ecological rehabilitation paradigm presents a new pathway for scholarship and practice, where humans can engage with the research questions that informed this study. Ecological rehabilitation should be a purposeful effort, a paradigm, that finally ushers in ecodemocracy and works to embrace the many challenges that would occur if nonhumans possessed equal representation, legally and socially, in every decision that affects them. In the end, Manfredo et al.'s findings suggest that most

Euro-Americans want to protect nonhumans in practice (2020). Granting nonhuman legal personhood and embracing indigenous perspectives beyond tokenistic acknowledgement is one pathway to halt nonhuman animal genocide and spark an ecological rehabilitation paradigm.

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Appendix 1

Title: Wolf Ecotourism: A posthumanist approach to wildlife ecotourism

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Abstract: In the last 50 years, more than 60% of the world's wildlife has died-off, leading to earth's sixth-mass extinction event. For most humans, wildlife tourist attractions (WTAs) are one of the few opportunities to observe wildlife in person, and an estimated 100,000,000 nonhuman animals work in entertainment globally. However, welfare, rights, and agency are rarely foregrounded in practice and only emerged in the tourism literature over the last couple of decades. This chapter presents a posthumanist conceptual framework for WTAs in theory and practice, based on a multi-sited, multispecies ethnographic study of gray wolf-human conflict and coexistence (*Canis lupus*) in the United States under the Trump Administration. Five wolf WTAs are analyzed under the posthumanist conceptual framework, problematizing a 'one size fits all' approach to nonhuman welfare, rights, and agency in WTAs and policy.

Key Words: Wildlife ecotourism, posthumanism, subaltern, gray wolf, animal personhood

Introduction

Humans frequently exercise unilateral power over nonhuman animals at wildlife tourist attractions (WTAs) in a myriad of ways. We dictate nearly every aspect of nonhumans' quotidian life and milieu: when and what to eat, when to perform or socialize, and where to bed down or play – the list goes on. Our fascination and interest in nonhumans are perhaps fundamental to our identity and understanding of the world (Clayton, 2003; van der Werff et al., 2013), evidenced by more than 100,000,000 nonhumans working in entertainment annually (Fennell, 2013a). Some scholars estimate that 20-40% of all tourist attractions involve animals in some capacity (Moorhouse, 2017), and for many humans, WTAs may be one of the few opportunities to encounter other species as the current ecological crisis has devastated wildlife populations, and billions of 'wildlife' now live in captivity (Mason, 2010; Baker & Winkler, 2020). More than 60% of the world's wildlife has died-off in the past 50 years (Grooten & Almond, 2018), urban sprawl and habitat destruction show no signs of slowing (Matović, 2020), and the human-caused ecological crisis has led to earth's sixth-mass extinction event (Steffen et al., 2011). These conditions demand that we, as global citizens, problematize our relationship with 'other' species at the abstract and individual levels to question: how can we, as humans, equitably speak for nonhumans and foreground their agency, welfare, rights, and interests in any decision that affects them? This question engenders arduous ethical and ontological issues as it is inherently an exercise of humans speaking for and about nonhumans without their consent.

Nonetheless, wildlife ecotourism provides an optimal lens to explore this ethical question for its focus on human-nonhuman encounters, and its ubiquitous spectrum of wildlife welfare and justice across different types of WTAs (Fennell & Sheppard, 2021). In this chapter, I draw on a multispecies, multi-sited ethnographic study that investigated wolf-human conflict and coexistence in the western U.S. during the Trump Administration. The gray wolf (*Canis lupus*) was chosen for its exceptional ability to provoke human-human and wildlife-human conflict as a symbol for other sociocultural and socio-environmental issues entrenched in Euro-American culture, politics, and history (Jürgens & Hackett, 2017; Lappalainen, 2019). During the study, the only opportunity to directly interact with wolves at the individual level occurred at five WTAs. Four of the WTAs could be described as 'wolf sanctuaries' that promoted tourists to interact with wolves at different levels ranging from petting wolves and taking 'selfies', to 'hands-off' observations through chain-link fences. The fifth was Yellowstone National Park (YNP), which is a protected area where park rangers strictly enforce laws aimed to safeguard wolves. Preconceived notions of what ethical wildlife ecotourism should look like may propagate initial conceptions as to which of these models optimally foregrounds wolf's interests. However, through a posthumanist analysis I unpack the ethical entanglements of each WTA model to proffer an alternative perspective that considers the complexity and context in which they operate. I will first present a brief history of wolf's plight in the U.S., and then engage relevant theoretical perspectives before analyzing each of the WTAs' models.

Short History of Wolf in the U.S.

Except for a small population in Minnesota that historically persisted, U.S. and state-level governments sanctioned bounty programs to systematically extirpate wolf throughout the lower-48 U.S. states from the 1860s to 1940s (Mech 2012). Following World War II, attitudes towards wolf, and wildlife in general, positively shifted culminating in the passing of the Endangered Species Act (ESA) in 1973 and wolf's listing on it in 1978 (Ripple et al. 2014; Carroll et al., 2021). Sixty-six gray wolves were reintroduced to YNP and central Idaho in 1995-6 (Wilson 1997; Foreyt et al. 2009), and the species has since dispersed to surrounding states. Wolf was delisted in the western-U.S. states of Montana, Wyoming, Idaho, Utah, and the eastern third of Washington and Oregon in 2011, even though wolf has only recovered to an estimated 6,000 individuals nationwide (USFWS, 2019).

In October 2020, the Trump Administration announced wolf's delisting from the ESA, set to come into effect 4 January 2021 pending legal challenges (Rott, 2020). The decision was highly controversial, as critics charge that the decision was socio-politically motivated and not driven by science. If the delisting survives the lawsuits, wolf 'management' would be turned over to individual U.S. states, where anti-wolf sentiments proliferated in rural, conservative-leaning areas in the western U.S. For example, in 2019 the Idaho Fish and Game Commission awarded a $23,065 grant to a northern Idaho nonprofit, Foundation for Wildlife Management, to compensate hunters and trappers up to $1,000 per wolf 'harvested' (Peacher, 2019). Between 1 July 2019 and 30 June 2020, a record 570 wolves were killed in Idaho, mostly by hunters and trappers, up from an average of 400 annual deaths (Plank, 2020). In this study, wildlife

sanctuary operators universally condemned these practices and cited these data as evidence to support their missions of educating humans about wolves.

Nonhuman Animal Ethics in Wildlife Ecotourism

The emergence of animal ethics in the tourism literature (see Fennell 2008; Shani & Pizam, 2008) offers insight into how humans can exercise their power to promote equality with subaltern nonhumans inside and out of WTAs. Subaltern studies developed out of postcolonial theory to signify how indigenous, racial and ethnic minorities, women, and nonhuman groups, among others, have been marginalized and made subordinate to more dominant patriarchal interests on the basis of power (Spivak, 1988; Mitchell, 2002; Thomsen et al. 2021a). Subaltern studies, coupled with posthumanism, provide a complementary lens to reflexively analyze our power over nonhumans and to deconstruct human exceptionalism in our collective treatment of 'other' species. Posthumanism is a postmodern philosophical line of research "rooted in late twentieth-century feminist and anti-racist critiques of modern Western social and political institutions…[that] seeks to erase the human-animal divide, thereby rejecting the basic premise of human exceptionalism" (Cohen, 2019, p. 416). Cohen recognizes the inherent paradoxes of posthumanism where humanists criticize posthumanists' reliance on human exceptionalism to develop their scholarly arguments (Chagani, 2014). He cites Soper's (2012) defense of human exceptionalism in that "we need […] to defend human exceptionalism, and resist blurring the human-animal divide", as exceptionalism provides the needed 'footing' for binding moral obligations (p. 423). Cohen declares:

> Posthumanist thinkers thus failed to recognize sufficiently the importance of a critical point: that there is no reciprocity from animals in the sphere of morals; they do not share our ethical precepts nor respond to them. Posthumanist ethics cannot serve as the basis of a covenant between humans and animals (p.423).

However, posthumanists would counter to argue that humanists' insistence on contouring arbitrary boundaries between species is counterproductive in this ecological crisis, especially when their core argument is rooted in a 'we were here first' mentality (Badley, 2017). Posthumanists would also refute Cohen's assertation for being anthropocentric and falling into the same logical 'trap' lodged by humanists, by stating that animals 'do not share our ethical precepts nor respond to them'. Under humanistic logic, how can he know this?

Cohen does acknowledge that animal ethology may help us to untangle our human limitations and (mis)understandings of interspecies communication, intelligence, and emotion (De Waal, 2016; Turnbull & Bär, 2020). Cohen has advocated for nonhuman welfare and justice on multiple occasions and his critique of posthumanism is a scholarly exercise rather than a criticism of nonhuman-welfare (Cohen 2009; Cohen 2019b; Cohen & Fennell, 2019). He states that posthumanism is essentially absent from tourism scholarship, and suggests how it could contribute to deconstructing the human-nonhuman divide:

> Insistence on animal personhood and critique of anthropocentrism, could reinforce contemporary efforts to reduce animal abuse in tourism, and help to balance the presently often one-sided approach in contemporary tourism studies to the relationship between tourists and animals. Posthumanist attitudes could certainly sensitize tourist practitioners and researchers to issues overlooked in current touristic practices, especially in the field of embodied human-animal interaction (p. 424).

The following analysis considers how posthumanism applies in wildlife ecotourism, in an effort to respond to Cohen's call to balance nonhumans' welfare in theory and practice. It also

cogitates about the inherent paradoxes and complexities in determining whether a specific WTA is truly ecotourism, and if so, to what degree.

Applying Posthumanism to WTAs

At their best, WTAs provide the potential to observe nonhumans exercising their own agency under "natural conditions that are completely unframed, according to Cohen, 2009" (Fennell & Sheppard, 2021, p.330). At their worst, WTAs perpetuate the depravity of humanity, condemning nonhumans to slavery, torture, mental and physical abuse, and even death (Idfwru et al., 2013; Moorhouse et al., 2015; D'Cruze et al., 2017; Fennell & Sheppard, 2021). Most WTAs operate somewhere between these extremes, and research on nonhuman welfare and rights in (eco)tourism has materialized over the past two decades (see Cohen 2009; Hayward et al., 2012; Fennell, 2013b; Cohen, 2019; von Essen et al., 2020; Thomsen & Thomsen, 2020). Wildlife ecotourism transcends wildlife tourism by embracing non-consumptive activities such as wildlife sightseeing, compared to consumptive practices such as hunting or fishing (Burns, 2017), to equally stress ecological sustainability and human (economic) livelihoods (Duffy & Moore, 2010; Karanth et al., 2012; Sheppard & Fennel, 2019; Thomsen et al., 2021b).

Moorehouse et al. (2015) suggest that tourists are not typically educated on how to identify poor animal-welfare conditions that may reinforce horrific practices such as inadvertently funding the illegal wildlife trade. Newsome (2017) contends that in addition to demographics such as age, and sex, culture was a key influence concerning who engages in wildlife-based tourism and how animals are treated. Accordingly, von Essen et al. (2020) caution against a

cultural relativism approach for its anthropocentricity, as it can normalize and reinforce utilitarian views of human dominance over nature (Peterson & Nelson, 2017). von Essen et al. cite Juvan and Dolnicar's (2014) attitude-behavior gap, as well as Kline (2018) to argue that it is common for some people to leave their pro-environmental values 'at home' when traveling and engage in WTA activities that may perpetuate negative animal welfare.

Fennell and Sheppard (2021) coalesce two common animal ethics approaches in the tourism literature, normative ethics (i.e., what we are told to do or believe based on rights, welfare, utilitarianism, ecocentrism, and contractarianism perspectives) against virtue ethics, in conceptualizing a 'scales of justice' approach to animal welfare in ecotourism. Utilitarianism, which is most applicable to the present study, is "informed by the doctrine of "the greatest good for the greatest number" (p. 318), whereas virtue ethics "is focused not on what we are told to do, but rather on 'what sort of person I should be'. Virtues are positive traits of character such as altruism, compassion and loyalty, which if practiced regularly in the proper shaping of our desires through reason and will, allow individuals to flourish" (p. 320). Based on their framework, WTAs can be assessed for their ethical treatment of nonhumans, moving from 'No Justice' at the low-end, through 'Shallow Justice' and 'Intermediate Justice', towards 'Deep Justice' at the high end. The deeper the justice, the greater the emphasis for nonhuman animals in moving from welfare to rights in the recognition of animal agency.

Baker and Winkler (2020) argue that the ability for many species to exist outside of captivity is severely limited by human power dynamics, social carrying capacities, and habitat destruction.

In the case of wolf, natural habitat is ecologically abundant in the western U.S. as wolves are 'habitat generalists' able to exist in most landscapes, but are hindered by livestock ranching, natural resources extraction, and hunting activities (Bangs et al., 2005). Socio-political policy and discourse pose a 'real' threat of state-legitimized hunting, trapping, and culling programs, and illegal poaching endures with little or no negative consequences (Brasch, 2020). Coupled with the practical complexities of releasing captive, human-dependent wolves into 'wilderness', captive wolf ecotourism WTAs present a morally ambiguous case study. A posthumanist conceptual framework should not argue for maintaining the status-quo in wildlife ecotourism (e.g., commodification), but rather aim to improve the quality of an animal's life, and protect them from existential harm in our efforts to be ethical and just.

Conceptualizing a posthumanist approach to wolf ecotourism

There are well-established animal welfare models that evaluate an individual's welfare based on a combination of 'physical or functional domains', and 'affective experience domains' such as Mellor and Beausoleil's (2015) 'Five Domains model for animal welfare assessment'. Similarly, Fraser's 'Practical Ethics for Animals' (2012) examines four principle criteria of human-animal welfare relations: keeping animals, causing intentional harm to animals, affecting animals in direct but unintended ways, and affecting animals indirectly by distributing life-sustaining processes and balances of nature (Fraser & McRae, 2011). However, a posthumanist perspective extends existing models by considering the opportunity cost of what an individual's existence could be under specific temporal and spatial contexts. Wolf presents an even more nuanced analysis for the aforementioned sociocultural, socio-political, and socio-environmental

conditions they face in the U.S. during the Trump Administration. Like elephants (*Loxodonta*), wolf is a charismatic species that polarizes humans' perceptions. Fennell's (2013b) paper, *Contesting the zoo as a setting for ecotourism, and the design of a first principle*, provides a convincing outlook as to "what might constitute the ethical use of animals in an ecotourism setting". He departs from utilitarianism to present his 'first principle of ecotourism' that "corresponds to the deontological school of ethics, which reasons that what is morally right is that which abides by rules, guidelines, duties or principles independent of the consequences of actions or inactions" (p.10). Fennell posits that we should:

> Reject as ecotourism all practices that are based on or support animal capture and confinement, or other forms of animal use that cause suffering, for human pleasure and entertainment. Embrace as ecotourism interactions that place the interests of animals over the interests of humans. This would include encounters with free-living animals that would have the liberty to engage or terminate interactions independent of human influence (p.10).

On this account, Fennell declares that zoos are not ecotourism, because they severely limit the ability of animals to participate in normal behavior, and in so doing, deny nonhuman animal rights and agency. Some of the enclosures for wolves in this study may appear similar to zoos in terms of size and setting, but small differences between the WTAs either reinforce or violate Fennell's *first principle of ecotourism*. Four key criteria should be considered to develop a posthumanist conceptual framework for wildlife ecotourism (see Figure 1 below). These include: 1.) Quality of life of the animal prior to living in the WTA, 2.) Animal welfare conditions at the WTA that includes the physical, mental, and emotional health and well-being, 3.) Agency of animal to determine what to do and when based on rights granted, and 4.) Right to exist free of exogenous threats. These criteria are not presented in a linear progression, but rather as equally-weighted elements that must be considered to evaluate the ethics of a specific WTA's

operations. This posthumanist conceptual approach departs from Fennell's *first principle of ecotourism* to consider whether or not a WTA's model is ecotourism by focusing not on what the species' rights and welfare should be in a non-captive setting, but by comparing the quality of life that the individual animal experienced prior to, and at the WTA. Following the figure, I ethnographically describe each wolf WTA's model and then assess it compared to the posthumanist conceptual framework.

Figure 1. Posthumanist Conceptual Framework for Wildlife Ecotourism

1.) Quality of life of the animal prior to living in the WTA	2.) Animal welfare conditions at the WTA that includes the physical, mental, and emotional health and well-being	3.) Agency of animal to determine what to do and when, based on rights granted	4.) Right to exist free of exogenous threats

Posthumanist Analysist of Wolf WTAs

Wolf 'Sanctuary' #1: No Contact, Wolves Paired in Separate Enclosures

The rain finally broke as we pulled into the sanctuary's parking lot. As my research assistant and partner, Jenn, and I stepped out of the truck, the hair on the back of my neck stood up and a grin spread across her face. About a half-a-kilometer away wolves were howling. It had been three years since we saw a wolf in person, and I was eager to observe wolves as part of an actual academic study. Five minutes later, the executive director (ED) was giving us a private tour through the sanctuary, providing a mix of standard tour rhetoric with her own insights as a

biologist regarding the welfare of the wolves in her care, as well as the conflicts that plagued their 'wild cousins', as she phrased it. Tourists are not guaranteed a wolf sighting, humans do not interact with wolves and even the sanctuary workers have extremely limited contact. About 50 individual wolves are in residence, and once an individual enters the sanctuary its physical, emotional, and mental well-being, such as 'enrichment' activities (mental and physical games and stimuli), are provided for the rest of their life. The sanctuary changed its original model from breeding gray wolves decades ago to only taking in 'at risk' individuals in need of care. The sanctuary is one of 170 sites nationwide that engages in captive-breeding programs of either red (*Canis rufus*) or Mexican wolves (*Canis lupus baileyi*) (USFWS, 2020). These 'species survival programs' (SSP) are partnerships between the United States Fish and Wildlife Service (USFWS), the Association of Zoos and Aquariums (AZA), and various sanctuaries and zoos nationwide. In these SSPs, wolf pups are selected for cross-fostering reintroduction at the discretion of USFWS to ensure genetic variability. This is explained in great detail on tours at the sanctuary, as wolf education is emphasized, and visitors learn about current wolf affairs in the U.S.

Photo 1. Wolf in Enclosure at Wolf Sanctuary #1 Here

After the ED opened the gate, we approached the first enclosure cautiously as the 13-year-old male had recently lost his partner. The ED's eyes teared-up as she described how he was still in mourning, and that he regularly 'set off the choir' by initiating constant howls of sorrow. As we slowly circled the sanctuary, we learned innate details about each wolf, their background, and why they were paired with each other. Every wolf or wolf-dog hybrid was born in captivity, and

wolves were typically brought to the sanctuary once they reached full maturity, and when humans realized that 'the cute pups aren't domesticated dogs and demand different needs than a companion dog would'. In one instance, the wolf had lived for over a year-and-a-half in a two-bedroom apartment without even going outside – ever.

Enclosures, though modest compared to non-captive environments, range between 1/3 and 3 acres, and are a massive quality of life improvement for the wolves in their care. The ED stressed that if mature, adult wolves were released into the wild they would not survive long due to a lack of survival-skills and dependence on humans. The ED described that with increased monetary or in-kind donations they could further improve the size and quality of the enclosures. The ED strongly objected to any type of wolf-human physical contact, and the focus of the sanctuary was to stay current on academic literature, avoid wolf-human contact, and use the best available science to foster wolf welfare. In this case, wolves' rights, agency, and welfare were foregrounded, and since they are guaranteed lifetime care once they enter the sanctuary, their quality of life seemed to be drastically improved. Each individual always has the ability to ignore humans, and though conditions could always improve, most posthumanists might agree that these conditions were beyond adequate given the previous abuse these individual wolves endured. By applying the posthumanist conceptual framework to Fennell and Sheppard's (2021) scales of justice framework, wolves at this WTA experience 'deep justice' for the degree to which their quality of life improved.

Wolf 'Sanctuary' #2: Wolves Paired in Separate Enclosures, Wolf-human Contact Encouraged

Nine months later, we headed to a Colorado-based sanctuary right before the Proposition #114 vote to learn how this ballot initiative to reintroduce the gray wolf to the state may influence discourse onsite (Blevins, 2020). Before Jenn and I conducted interviews with four volunteers and employees we paid to take the standard hour-long tour. Like the first sanctuary, none of the wolves were purposely born in the sanctuary except for the Mexican wolves as part of the SSP. What stood out in this regard was the extra level of security surrounding the Mexican wolves, as all wolves in the SSPs are 'property' of the USFWS. At wolf sanctuary #1, there were few obvious differences between the enclosures, whereas at wolf sanctuary #2 the Mexican wolves had extra fencing and were not allowed to engage with tourists. The first two models were similar in many regards, including the enhanced quality of life at the sanctuary compared to the individual's previous captive conditions.

Photo 2. Fencing Differences at Wolf Sanctuary: Gray wolf (left), Mexican wolf (right) Here

Wolves generally had the right to ignore tourists, as guides attempted to attract them with treats but quickly moved to the next enclosure if the wolf ignored them. However, this sanctuary diverted from the first for its overt commercialization of wolves. The educational components of the tour were scientifically accurate, but were tempered with guides trying to 'up-sell' the ability to pet a wolf and take a selfie for a charge 10-20 times the price of admission, depending on the package purchased. In this way, wolves were commodified beyond their educational contribution (Burns, 2017; Belicia & Islam, 2018; Cohen, 2019), redolent of any other zoo experience that violates Fennell's 'first principle of ecotourism'

(2013b). From a posthumanist lens this sanctuary rates highly for wolf's improved captivity conditions and guaranteed lifetime care. However, the treatment of wolves as capitalistic prop is counterproductive and problematizes the idea of what a sanctuary should be. Wolf's commodification was anthropocentric, and the economic focus promulgated sentiments of deception and increased opacity concerning the individual wolves' rights, agency, and welfare. For these reasons, this sanctuary rates rather low at 'shallow justice'.

Wolf 'Sanctuary' #3: No Wolf-human contact, Wolves in Packs

Before embarking on the wolf tour, we gathered with other visitors in an educational room that was filled with posters, books, pictures, and skulls. As I watched the kids in the room, I felt a sense of nostalgia-like comradery with them, as if we had come here together on a primary school class field trip. The entire experience centered on education, and we spent 20 minutes learning about wolf as a species including their diet, mating, and behavioral norms. As we transitioned outside, six-meter-tall fences and an unkindness of ravens (*Corvus corax*) dominated the scenery. We learned that this was natural behavior for ravens, as they not only tried to steal pieces of flesh from wolves' meals at the sanctuary, but this behavior was commonplace in non-captive settings as well (Stahler et al., 2002). Only four gray wolves resided here, and were rescued from other captive environments.

The primary focus of this organization was the Mexican wolf and it was also a member of the SSP. There were two packs of Mexican wolves, and no human interaction was permitted except for occasional contact for staff veterinarians. The wolves were allowed to live together as they

were members of a pack, though packs were split from each other. The tour guide informed us that aside from the wolf pups involved in the SSP's cross-fostering program, no wolves would ever purposely be reintroduced to non-captive settings. They were strict in limiting human contact so that if something catastrophic occurred such as wildfire, which was a constant threat, then wolves would be better equipped to survive on their own. The sanctuary also had metal fire-proof boxes that would protect the wolves in case of wildfire, and on a couple of occasions, they had to place the wolves in them as wildfires came over the ridge before being fought off by local fire crews.

This sanctuary had a small gift shop and engaged in traditional nonprofit fundraising activities to support operational costs including fundraisers and sponsorships. However, unlike wolf sanctuary #2, they did not commodify the wolves for financial gain, and all calls for funding were aimed at humans. Though captive breeding occurs for the SSPs, the wolves were able to exercise some agency and live with family members. Those who came from previous captive situations had their quality of life improved, and wolves were guaranteed life-long care and protections from natural disasters such as wildfire to the best of the sanctuary's ability. Short of a fully non-captive existence, this sanctuary WTA model ideally promotes a posthumanist wolf ecotourism paradigm and qualifies as 'deep justice'.

Wolf 'Sanctuary' #4: Wolf pack, Wolf-human Contact Encouraged for Education

Out of the five wolf WTAs we visited this organization produced the most challenging ethical dilemma from a posthumanist perspective. The two breeding wolves were rescued from similar captive situations as the wolves in sanctuaries #1 and #2. However, the wolves were purposely

bred to create a pack. Initial criticisms of captive breeding could be made, but counter arguments of a nonhuman's right to reproduce also murky the context (Wickins-Dražilová, 2006). The wolves were empowered to fully practice their agency in the captive context. The co-founders of the sanctuary co-existed in a quasi-domesticated setting where the wolves lived like pets inside the home, and each wolf was provided its own physical space in the form of a custom-made den- like crate. The wolves were able to go outside into a 10-acre fully fenced area at any time, and regularly practiced natural behaviors such as digging dens. This is possible because all of the wolves are from the same pack, and their welfare, rights, and agency were always foregrounded.

Both directors worked externally to offset the costs of the wolves' care, and it would be difficult for anyone to question their dedication and compassion to the wolves. They were politically active fighting for the species' rights and welfare in the U.S., and regularly promoted wolf and wildlife education in local schools. The directors were hard-pressed to take even a week's vacation a year, and spend nearly $20,000 per month for their food, medical, and insurance requirements. Jenn, a Doctor of Physical Therapy and Certified Canine Rehabilitation Practitioner, performed physical exams on two of the wolves during our most recent visit. We visited this pack on multiple occasions before and during the study. As the directors give private educational seminars during the 'wolf experience', tourists could engage in wolf-selfies. The wolves can come and go as they please, but only inside the captive environment. Though wildlife-selfies are generally condemned for good reason (Moorhouse et al., 2017), and the captive breeding of gray wolves is questionable and should not be encouraged, this

organization seems to be one of the rare exceptions where a posthumanist may condone these acts considering how well the wolves are treated 'behind the scenes'. This ethical context was by far the most complex from a posthumanist perspective. It elucidated the challenges of trying to develop an overarching theory concerning wolves' rights, agency, and welfare across WTAs, and further research into the ethical dilemmas of captive wildlife is needed from a posthumanist lens. The complexities of this specific case are rife in ambiguity, resulting in a rating of high 'shallow justice' to low 'intermediate justice'.

Wolf 'Sanctuary' #5: Wolves in Protected Areas (Yellowstone National Park)

Yellowstone National Park (YNP) is arguably the most famous protected area for wolves in the world. It is the epicenter of wolf reintroduction in the western U.S., and has contributed to billions in increased revenue over the past 25 years (Middleton et al., 2020). "Park visitors spent more per person to the see wolves (around US$160 per day), compared to elk hunters who are a primary voice of opposition to the wolves' reintroduction, (at about $39 per day)" (Thomsen et al., 2018, p.203). In December, we spent two eight-hour days with a private ecotourism operator as it is one of the best times of year to observe wildlife. We stayed on the Montana side of the North Park Entrance, and had to leave the hotel at 6:45 AM to be able to spend as much time in the park before sunrise when wolves are most active. Our guide had been operating his business for seven years and had developed strong connections with 'regulars' at the park that included the winter wolf research team and nearby locals who come to 'glass' wolves through telescopes as a hobby. Wolf sightings weren't guaranteed, and it is extremely rare to see one with the 'naked eye', though other species such as bison (*Bison bison*) and elk

(*Cervus canadensis*) are commonly found roadside. What transpired over the two days was awe-inspiring as we glassed wolves chasing herds of elk, bison, and big horned sheep (*Ovis canadensis*), bedding (lying) down and howling, yearlings playing, and consuming an elk carcass as ravens and magpies (*Pica pica*) competed for scraps.

Photo 3. Glassing wolves at Yellowstone National Park Here

The YNP experience was a microcosm of the omnipresent wildlife-human conflict and coexistence issues in the western U.S. On the one hand, wolves were living a natural life free from captivity – in most regards. For scientific purposes, wolves are routinely tranquilized via helicopters where biologists take blood samples and collar wolves with bulky GPS monitors around their necks. From a posthumanist perspective, this is ethically ambiguous as scientific data is used to inform policy, but simultaneously infringes on an individual wolf's agency and welfare. Wolves enjoy strong protections inside the park's boundaries including laws that limit humans coming closer than 100 yards or engaging in any activity that may alter their natural behavior, though this is arguably hypocritical given the air-induced tranquilizations that occur. This percolates questions concerning how environmental policy is socially constructed and special interest human groups legitimize what is and isn't acceptable human behavior toward wildlife. We witnessed two park rangers investigate and then fine an amateur wildlife photographer who hiked up the side of the mountain to photograph wolves consuming the elk carcass, but was clearly visible through scopes to more than 20 people watching the activity.

Human-wolf conflict in the surrounding states of Montana, Wyoming, and Idaho is prevalent. In Wyoming, humans can legally kill a wolf without a permit in 85% of the state as long as they report the 'take' within 10 days. As these borders are socially constructed by humans and invisible to wolves, exogenous threats to wolf safety is a real threat and demands us to question how ethical protected areas are if the surrounding areas are insecure with limited ecological corridors. Posthumanists would argue that protected area WTAs are just as ethically complex as captive WTAs due to the compounding threats and lack of wildlife laws and policies that equitably represent nonhumans' welfare, rights, and agency outside of them, at least in the U.S. context. The coupling of helicopter-based tranquilizing and exogenous threats reduce the ranking of this WTA from 'deep justice' down to 'intermediate justice' at best.

Pathways Toward a Posthumanist Future in Wildlife Ecotourism

Cohen's (2019) *Posthumanism in Tourism* article was influential as it was one the first to apply posthumanism to the tourism literature. Though Cohen theoretically supported humanists' objections to posthumanism as a valid theory divorced from humanism, he supported its application to tourism in practice. However, humanists' can launch these claims because they represent utilitarian human-dominance perspectives who have maintained power since the Enlightenment. Posthumanism blurs these lines and in the context of subaltern wildlife, a posthumanist conceptual framework provides wildlife ecotourism theorists and practitioners an approach to shed binary humanist arguments and consider wildlife rights, agency, and welfare at the individual level. Chrulew (2021) argues that "wildlife conservation should […] be seen as an art and a science of ontological ethopolitics: an anthropogenic apparatus tasked with

maintaining animals in their very being, a cosmo-political and -ecological experiment in coexistence".

This chapter responded to Fennell and Sheppard's (2021) call for further research into the ethics of 'animals-in-tourism research', and Cohen's (2019) call to balance nonhumans' welfare in theory and practice, in an attempt to untangle complex ethical situations at five wolf WTAs in the U.S. Since all captive wolves had never experienced a non-captive existence, a posthumanist approach demanded that the WTAs be evaluated for their treatment of wolves at the individual level, rather than what the species should experience in a non-captive environment. Fennell and Sheppard's *scales of justice* framework provided an optimal model to compare the posthumanist conceptual framework for its focus on emphasizing nonhuman welfare, rights, and agency. Due to the captive focus of the first four WTAs, and the omnipresent exogenous threats that linger outside of YNP, not a single model in this study could be championed as a 'utopian model' for wildlife ecotourism. However, all five WTAs could be considered ecotourism for at least providing shallow justice, as the YNP wolves experienced non-captive lives and the wolf sanctuaries improved the quality of life for individual captive wolves.

Captive wildlife sanctuaries should be considered a 'stop-gap' effort to remedy poor welfare conditions of individual nonhumans. The magnitude of the ecological crisis demands that we no longer tolerate the status quo of treating nonhumans as subaltern. Wildlife ecotourism researchers and practitioners should advocate for three key goals to promote equitable

wildlife-human coexistence: 1.) facilitate deep justice conditions for all nonhumans at all times, 2.) promote non-captive conditions whenever possible for nonhumans where their welfare, rights, and agency are equitably considered in any decision that affects them, and 3.) lobby for nonhumans to be granted personhood and even citizenship. Gombay (2015) describes the meaning of personhood where, "as a person, one is a holder of rights and responsibilities that form the basis of citizenship" (p.13). Posthumanists must continue to deconstruct postcolonial power structures at WTAs and in wildlife policy to overcome the horrific practices that reinforce abhorrent welfare conditions of subaltern nonhumans, if they are to ever consistently experience deep justice, let alone personhood or citizenship.

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Appendix 2

Title: Posthumanist Pluralities: Advocating for nonhuman species' rights, agency, and welfare in ecosystem governance

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Abstract:

Ecosystem governance is a highly contested issue where competing human stakeholder groups wield unequal power over nonhuman species. Pluralistic approaches to ecosystem governance consider a diversity of voices and disciplines to apply translational ecological knowledge to policy. However, the rights, agency, and welfare of nonhuman species – at the abstract and individual levels – are rarely considered, distancing nonhumans from human interests. This 'othering', results in nonhumans being treated as subservient to humans in power relations, which can result in poor welfare and even death. This chapter draws on multispecies ethnography, posthumanism, multispecies livelihoods, decolonial ecology, and translational ecology literature to critically review current paradigms in ecosystem governance and questions how to equitably represent nonhumans in ecosystem governance. This essay also considers qualitative data collected during 15 months of a multi-sited, multispecies ethnographic study that explored wolf-human (*Canis lupus*) relations in the western United States during the Trump Administration. A pluralistic posthumanist wildlife-human coexistence framework for translational ecology is presented that emphasizes nonhumans' rights, welfare, and agency in ecosystem governance.

Keywords: Posthumanism, Ecosystem Governance, Translational Ecology, Animal Ethics, Multispecies Livelihoods, Decolonial Ecology, Wildlife Conservation, Multispecies Ethnography

"Never doubt that a small group of thoughtfully committed citizens can change the world. Indeed, it's the only thing that ever has." – Margaret Mead

1. Introduction

Ecosystem governance is too often anthropocentric and centers on conflict between competing human stakeholder groups who speak for and about wildlife, without their consent (Thomsen et al., 2021a). Though difficult ontological and ethical questions are at stake in arguments for nonhumans' welfare, rights, and agency (Hamilton & Taylor, 2017; Fennell & Sheppard, 2021; Thomsen, 2021), we maintain that humans have a moral responsibility to consider these issues in any potential decision that affects nonhumans' interests. This chapter draws on archival and qualitative data collected from a multispecies, multi-sited ethnographic study of wolf-human conflict and coexistence in the western United States during the Trump Administration. By attending to the zoological and ecological uncertainties that inform public debates and policy about wolf-human coexistence in a contemporary U.S. context, an ethic of coexistence can be seen to emerge through highly contentious debates about the cultural and political context of not just wolf, but wildlife in general.

We interrogate common ethical stances and terminology employed to distance humans from other species, implicitly and explicitly, which shape and reinforce socially constructed norms in wildlife-human relations. Conservation science, management, and policy, particularly in a Western context, are typically governed by utilitarian ethics, where vernacular and worldviews assemble to fortify the Cartesian-dualism of human exceptionalism over nature (Cohen, 2019; Yazevich et al., 2019; Winter, 2020; Washington & Maloney, 2021). Santiago-Ávila and Lynn (2020) argue that "'traditional conservation' customarily engages in the dismissal of individual

non-human animal claims when these conflict with human interests or prevailing ideas of biodiversity" (p.247). We confront the effects of speaking for and about wildlife in the abstract to proffer a pluralistic ethical framework based in multispecies livelihoods and translational ecology, which theorizes how to implore science-based decision making in environmental policy, governance, and management (see Enquist et al., 2017; Hallet et al., 2017, Thomsen et al., 2021a). The posthumanist wildlife-human coexistence framework (see Figure 1 below) deconstructs human-dominated power relations, and better considers nonhumans' livelihoods and agency in social-ecological systems (SES).

Though most wildlife-human conflict and coexistence studies center on charismatic species such as the gray wolf (*Canis lupus*), the wolf is a useful species with which to conceive a wildlife-human coexistence conceptual framework due to its polarizing effects on various stakeholder groups that are steeped in Euro-American history, culture, and politics (Kunstler, 1991; Blécourt, 2007; Lappalainen, 2019; Thomsen, 2021). Wolf politics came to the foreground in Colorado in November 2020, as more than 3,000,000 Coloradans voted to narrowly pass a state ballot initiative, Proposition 114 (Brasch, 2020). The initiative mandates Colorado Parks and Wildlife (CPW) to use science-based evidence and solicit community input to reintroduce wolf to the 'Western Slope' of the state by December 31, 2023. Voter demographics were largely split (generally) between pro-wolf, 'liberal' (in the U.S. sense of the word) urbanites and anti-wolf, conservative ruralites (Sponarski et al., 2013). The election was much closer than previous public opinion polls had suggested (Pate et al., 1996; Meadow et al., 2005; Niemiec et al., 2020). For example, researchers based at Colorado State University conducted a survey in

January 2020 of 734 participants, representative in terms of age, gender, and geography throughout Colorado, and found that approximately 84% supported wolf's reintroduction (Niemiec et al., 2020). Studies are currently underway to try and determine what may have led to differences between prior public opinion surveys and actual ballots cast.

Starting in December 2020, CPW's Wildlife Commission began the process to develop a plan to implement Proposition 114. In two initial public meetings streamed live on YouTube, one in December 2020 and one in January 2021, commissioners emphasized that diverse stakeholder voices should be included in the process to create an equitable plan that is satisfactory to diverse human stakeholders. This chapter examines the perspectives and concerns of a range of stakeholders in the western U.S. concerning the reintroduction and repatriation of gray wolf in the lower 48 U.S. states since the mid-1990s, and specifically Colorado following Proposition 114 to question: how can we equitably consider nonhumans' rights, welfare, and agency in policy and governance of 'other' species to foster wildlife-human coexistence?

2. Theoretical Background

2.1 Social-Ecological Systems & Postcolonial Studies

Social-ecological systems emerged in the past few decades as an interdisciplinary attempt to coalesce the natural and social sciences and move beyond the commodification and dominance of nonhumans in human-environment systems (Berke et al. 1998; Fabinyi et al. 2014). Harrington et al. (2021) define social-ecological systems as "a system that includes societal (human) and ecological (biophysical) subsystems in mutual interactions" (p. 2773). Holzer et al.

(2018) state that recent calls in the literature "suggest that effective conservation policy and management require multiple and integrated forms of knowledge, including knowledge of ecosystems and their function, and the understanding of human societies, which interact with and depend on those systems" (p. 808). However, SES has been criticized for relying too heavily on the power of institutions and a macro-level focus on the 'environmental resilience paradigm' that does not adequately attend to (human) social dynamics (Fabinyi et al., 2014). Cotes and Nightingale (2012) argue that resilience frameworks propose "a systems approach to human-environmental relations that fits well with attempts to predict or model social-ecological change. However, it has mainly evolved through the application of ecological concepts to society, problematically assuming that social and ecological system dynamics are essentially similar" (p. 575).

Social-ecological systems' growing popularity in theory and practice inspired several efforts to redress social questions of the framework, such as 'whose resiliency, whose agency, or whose power?' (Béné et al., 2012; Olsson et al., 2015; Matin et al. 2018). Fabinyi et al. (2014) argue that "while understanding the diverse perspectives of different interest groups in SES is important, power relations mean that these different voices can be marginalized or privileged, easy to identify or invisible" (p. 7). This marginalization of certain groups such as indigenous, women, ethnic or racial minorities aligns with postcolonial studies that includes decolonial ecology (Roy, 2015; Arcari, 2019; Pulido & De Lara, 2020). Decolonial ecology amalgamates social and political ecology, along with ecofeminism to consider the entangled embodiments of historical (post)colonial legacies, systems of oppression and violence, and environmental

degradation to unpack new pathways toward socioenvironmental justice (Ferdinand et al., 2020).

Similarly, postcolonial studies focuses on groups who are made subservient to another based on power dynamics (Spivak, 1988; Galastri, 2018; Thomas, 2018; Thomsen, 2021), where "the experiences of subjects [are] marginalized by scientific and political structures of representation" (Watson, 2011, p.55). Some postcolonial scholars have embraced nonhumans as postcolonial subjects (see Mitchell, 2002; Arcari, 2019; Thomsen et al., 2021), as Roy (2015) argues that nonhumans have historically been oppressed:

> We have seen that nonhuman animals had an indelible effect on imperial history, and that their subalternity was manifest in at least three distinct ways: they were victims of imperial violence; they were products of imperial regimes of subjectification; and they were usually marginalized in imperial historiography (p.70).

Norton (2017) examines the plight of postcolonial subjects in the 'Atlantic World' through a technological framework to argue that "since at least Aristotle technē [technology] was used invidiously by elites to refer to 'the lowly knowledge of how to make things or produce effects, practiced by animals, slaves, and craftspeople' and in contrast with prestigious episteme of 'learned' men invested in abstractions" (p. 25). This distancing of marginalized subjects cultivates the production of abstract discourse, which stimulates rationalities that propagate violence, oppression, and discordance concerning nonhumans' agency. In the case of U.S. wolves, they experienced similar systematic persecution and murder as other marginalized groups (Fritts et al., 2003; Lynn, 2010), as eugenics was employed to justify wolf's extirpation in the U.S. from the 1860s-1940s (Spiro, 2009).

During the study, nearly every interlocutor (post-positivist term for informant or respondent), pro or anti-wolf supporter, was guilty of some form of speciesism. Ryder coined the term speciesism in the 1970s to mean discrimination that favors certain species or groups of species over other individuals (Horta & Albersmeier, 2020). 'Anti-wolfers' perpetuated European-American cultural stereotypes of wolf as villain to be feared (Lappalainen, 2019; Thomsen et al., 2021), where some argued that wolves are only good for the '3s': shoot, shovel, and shut-up' (Fritts et al., 2003). However, several 'pro-wolfers' were quick to leverage a 'what about' argument concerning other species' 'crimes', such as 'What about bears or cougars? They kill more cattle than wolves ever do'. This othering displaces blame without addressing the real fears of livestock ranchers who want to protect their cattle and livelihoods. Posthumanism complements efforts to challenge existing power relations and proffers a 'more than human' theoretical grounding for an equitable, pluralistic, wildlife-human coexistence framework.

2.2 Posthumanism

Posthumanism is a post-modern philosophical paradigm that challenges the Cartesian dichotomization of nature and society to equally consider all species and individuals in wildlife-human relations (Fabinyi et al. 2014; Cohen, 2019; Thomsen, 2021). Cielemęcka and Daigle (2019) problematize the concept of human exceptionalism in sustainability to "focus on developing environmentally ethical projects suitable for our times…[and] offer a concept of posthuman sustainability that decenters the human, re-positions it in its ecosystem and, while remaining attentive to difference, fosters the thriving of all instances of life" (p. 67). Posthumanism deconstructs humans' dominance over nature to theorize a more than human

wildlife-human relations positioning, and posits a paradigm of coexistence (Cohen, 2019; Thomsen et al., 2021). However, Braidotti (2016) challenges this theoretical standing for its reliance on working within current power structures:

> The posthuman subject is not postmodern, because it does not rely on any anti-foundationalist premises. Nor is it deconstructivist, because it does not function within the linguistic turn or mediation. Not being framed by the ineluctable powers of signification, the posthuman subject is consequently not condemned to seek adequate representation of its existence within a system that is constitutionally incapable of granting due recognition (p. 24).

Whether posthumanism can be displaced or isolated from postmodernism or human exceptionalism is beyond the scope of this chapter, but we echo Braidotti's efforts to confront systematic oppression, violence, and suffering of nonhumans (Fennell & Thomsen, 2021).

Posthumanism nonetheless challenges anthropocentric notions of superiority and the power humans exert over nonhumans by way of direct action, such as environmental degradation (Min et al., 2020; Jackson et al., 2020) or the killing of nonhumans for population 'control' and 'management' (Jiguet, 2020; Castelblanco-Martínez et al., 2020), and indirectly through quotidian norms such as the use of single-use plastics that are discarded and consumed by marine life (Good et al., 2020). We caution, however, that it would be reductive to equate all humans as equally responsible or homogenic in the production of nonhuman (flora and fauna) degradation, which is unmistakably entangled with late-stage global capitalism and dominated by patriarchal, often Western, authorities of the 'Global North' who commit 'state-corporate crime' (Kramer & Michalowski, 2012). Corporate and nation-state hegemonies' anathema of marginalized multispecies groups (Gonzales, 2017) distances subservient subjects to reproduce and perpetuate violence, oppression, and subjugation in favor of profit and power (Faber & Schlegel, 2017; Alcadipani & de Oliveira Medeiros, 2019).

Nor does posthumanism divorce humans from the environment in favor of everything more than human (Wolfe, 2010; Bolter, 2016; Copeland et al., 2021); rather, it engages multispecies livelihoods and technologies in an assemblage of lifeways (Copeland, 2021; Thomsen, 2021; Thomsen et al., 2021a, 2021b). Technological aspirations of posthumanism are also beyond the scope of this chapter, but nonetheless force us, as individual human agents, to reflexively analyze and question what it means to be human, and our relationship with other life forms, both biological and artificial (Bolter, 2016; Larrivee, 2020). A posthumanist wildlife-human coexistence framework is paramount in theory and practice if wildlife is to persist, as more than 60% of the world's wildlife has perished in the last 50 years (Grooten & Almond, 2018). Manfredo et al. (2020) state that humans must "consider wildlife as part of their broader social community, deserving of rights and caring treatment" (p. 3). But how can humans move beyond caring for nonhumans in the abstract, to create meaningful protections for individuals' interests in practice?

2.3 Multispecies Livelihoods & Translational Ecology

Multispecies livelihoods is a posthumanist approach to wildlife-human coexistence that attends to the rights, welfare, and agency of humans and nonhumans (Copeland, 2020, 2021; Thomsen & Thomsen, 2020; Thomsen et al., 2021). Hyvärinen (2019) defines multispecies livelihoods as "the diverse and particular practices of securing the necessities of life through sharing lifeworlds with human and non-human others" (p.366). Thomsen et al. (2021a) extend Hyvärinen's definition:

> Multispecies livelihoods [is] the right for human and nonhuman animal species to not only exist but to secure the necessities of life in a manner that does not infringe on another species' right to live, except

> for sustenance hunting or legitimate safety concerns to foster optimal conditions for wildlife-human coexistence (p.4).

A multispecies livelihoods approach has been applied to a range of wildlife-human interactions, particularly when wildlife encroaches on human livelihoods, or vice versa (Copeland, 2020; Thomsen & Thomsen, 2020; Thomsen et al., 2021a; Thomsen et al., 2021b) Copeland et al. (2021) problematize fisheries management in the North Pacific for anthropocentric practices that value certain 'commercially important' species (e.g., salmon [*Salmo salar*]) while diminishing competitor species' (e.g., seals [*Pinnipedia*] and sea lions [*Otariinae*]), rights and ecosystem functions.

Thomsen et al. (2021b) consider the role of wildlife ecotourism as a conduit for sustainable development and the conservation of the critically endangered Marsican (or Apennine) brown bear (*Ursus arctos marsicanus*). Similarly, Thomsen (2021) visited five wolf ecotourism operators, including four 'wolf sanctuaries' and a protected area, Yellowstone National Park (YNP), as wildlife tourist attractions (WTAs) are one of the few opportunities for most humans to interact with wolves or other wildlife at the individual level. Thomsen's findings suggested that no WTA – including, and perhaps especially, YNP – was an ideal model of wildlife ecotourism, as wolves did not have the right to exist free of exogenous threats, and could be legally shot, trapped, or harvested if they left the park's artificial boundaries (Paybarah, 2021). Even though YNP is an ethically complex example of 'protected area' nature-based tourism, non-captive environments are optimal for the application of multispecies livelihoods frameworks. While wildlife ecotourism is a practical human livelihood to apply a posthumanist multispecies livelihoods approach in practice for its focus on wildlife-human interactions, this

chapter responds to Thomsen et al.'s (2021a) call for a broader posthumanist wildlife-human coexistence framework that can be applied through translational ecology in policy, discourse, and governance.

Translational ecology addresses highly complex environmental issues by using cross-disciplinary research concerning "the sociological, ecological, and political contexts of an environmental problem" (Enquist et al., 2017, pp. 541). It champions evidence-based interventions in ecosystem governance that will "inform and improve decision making for environmental management and conservation" (Enquist et al., 2017, pp. 541). Its most promising theoretical contribution is perhaps its ability to account for the "deliberate engagement with end-users and an understanding of the social and cultural contexts in which a research project functions" (Wall, McNie, & Garfin, 2017, pp. 551). Though collaboration between stakeholders in ecosystem governance can be a mercurial process, Bodin et al. (2020) suggest that developing trust and managing risk may enhance cooperation within stakeholder networks. Hallet et al. (2017) state that:

> Interest in translational ecology (TE) – a research approach that yields useful scientific outcomes through ongoing collaboration between scientists and stakeholders – is growing among both of these groups. Translational ecology brings together participants from different cultures and with different professional incentives (p. 578).

While TE may conflict with 'mainstream basic scientific research' for its applied approach and engagement with stakeholders, it has nonetheless been embraced across a wide variety of environmental issues (e.g., water rights, forest fire mitigation, owl population management, etc.) to reify theory in practice (Hallet et al. 2017). In this chapter, the posthumanist

multispecies livelihoods and TE theoretical coupling serves as the basis for the pluralistic posthumanism wildlife-coexistence framework to equitably account for nonhumans' livelihoods at the species and individual-level in any decision that affects them.

3. Methodology

3.1 Multispecies Ethnography

The first author conducted a multi-sited, multispecies ethnography of wildlife-human conflict and coexistence, with a focus on the gray wolf for its ability to problematize wildlife-human relations. Multispecies ethnography examines the intersectionality of wildlife-human interactions in shared landscapes (Haraway, 2008; Kohn, 2013; Parathian, 2018; Thomsen et al., 2021). Kirksey and Helmreich (2010) discuss how animals are regarded as part of the landscape, food for humans, and as symbols of culture – *zoe* (bare life) – that have materialized within the realm of *bios* (specific life) alongside humans. Locke (2018) argues that multispecies ethnography is an 'anthropology beyond life' that perceives nonhuman life in terms of its political, social, and economic utility (Ingold, 2013). This reframing has permitted various nonhumans to gain legible biographical and political lives, such as Sandra the Orangutan (*Pongo*), who was granted nonhuman personhood in Argentina by Judge Elena Liberatori. Judge Liberatori declared that after living in captivity for more than 20 years at the Buenos Aires Zoo, Sandra had been wrongly imprisoned for most of her life, was a nonhuman person, and entitled to better living conditions and some of the same legal rights as humans (Elassar, 2019). The now 35-year-old Sandra was resettled to the accredited ape sanctuary, Center for Great Apes, in Florida, U.S. in 2019. Multispecies ethnography was useful in this study as it complements

posthumanism to deconstruct human exceptionalism while maintaining the core tenants of human agency, and challenges humans to redistribute their ideologies pertaining to other beings and consider nonhumans' agency in shared landscapes (Aisher & Damodaran, 2016).

3.2 Data Collection

Ethnographic data collection consisted of participant observation, semi-structured interviews, online public lectures and meetings, and archival research. The study was conducted over 15 months in Oregon, Washington, Idaho, Montana, Wyoming, Yellowstone National Park (YNP), Colorado, and California, U.S. Archival research included document analysis from publicly available sources (e.g., Idaho State Wolf Management plan) and internal organizational documents shared with the first author. More than 120 formal and informal interviews were completed with a variety of stakeholders that included U.S. state-level wolf and wildlife agents, cattle ranchers, pro-wildlife environmental nonprofit organizations, conservation scientists (biological and social), pro and anti-wildlife activists, among others. Snowball sampling techniques were used to gain access to key stakeholders actively involved in wolf discourse and governance (Acharya et al., 2013). Collective demographic information of the informants included age ranges from 22-78 years old, gender representation of approximately 60% male to 40% female, about 85% had at least a bachelor's degree, but greater than 90% of interlocutors appeared to be racially white. This lack of diversity could possibly be attributed to a potential implicit bias by the first author, but it was not due to a lack of effort to engage minority representation including indigenous perspectives, where multiple emails and phone calls went unreturned. Perhaps, it may reflect the underrepresentation of ethnic and racial minorities in

the conservation field, which was also addressed in CPW's January 2021 public meeting streamed on YouTube.

Nearly half of all interviews were conducted online, e.g., via *Zoom*, to permit a greater distribution of informants across the western U.S., and to account for lockdown restrictions during the COVID-19 pandemic (Hanna, 2012). Hand-written field notes were completed by the first author during and or immediately following interviews, and at the end of each day of participant observation. This allowed for the authors to later reflect and conceptualize the study by considering past perceptions and observations, as "so much of ethnographic fieldwork depends on the researcher's own experience and perspective—i.e., the 'I' must be acknowledged—it really does matter where you as that researcher 'stand' relative to the process of your own fieldwork and ultimately to the subject of your study" (Hoey, 2014, p.4).

3.3 Data Analysis

Except for public figures who agreed to be publicly identified, all research participants were anonymized to facilitate open discourse and protect individuals' identities. Formal interviews lasted between 26 and 106 minutes and were digitally recorded and transcribed. About 60% of interviews were conducted during participant observation and were rarely digitally recorded. "During their observations, ethnographers routinely use informal or conversational interviews, which allow them to discuss, probe emerging issues, or ask questions about unusual events in a naturalistic manner. Because of the 'casual' nature of this type of interview technique it can be useful in eliciting highly candid accounts from individuals" (Reeves et al., 2008, p.513). Authors four through 12 assisted the first author to ensure that digitally recorded transcriptions were

accurate and were then loaded into *NVIVO* software for coding and analysis. Data was coded using an inductive 'bottom-up' approach where codes were data-driven, rather than fitting the data to preestablished theoretical codes (Clarke & Braun, 2014; Creswell & Creswell, 2017). Findings were coded thematically, with saturation reached prior to finishing the interviews. Due to the extensive amount of data collected, certain themes and findings unrelated to this chapter's argument were omitted.

4. Findings and Discussion

Findings reaffirm previous studies on wolf's ability to problematize human interactions and serve as a symbolic vehicle for understanding human cultural or socioeconomic strife (Fritts et al., 2003; Lappalainen, 2019; Thomsen, 2021; Thomsen et al., 2021a). However, this chapter departs from debates solely about wolf-human conflict to explore how wolf helps us reconsider how humans can coexist with wildlife in a time of increasingly polarized socio-political discourse. Ranchers and state wildlife agents in the Intermountain West of the U.S. (geographical area between the Cascade/Sierra and Rocky Mountain Ranges) speak of 'trigger words', including 'coexistence'. The Montana Livestock Loss Board Executive Director, George Edwards, detailed how terms such as coexistence immediately trigger ranchers and put them on the defensive when speaking with people they consider 'others', such as environmentalists or urbanites, who do not share their views, beliefs, culture, or lifestyle. Wolf also permitted diverse stakeholders to speak about their views, attitudes, and beliefs about several other species. This includes how ranchers care for domesticated livestock destined for slaughter, or self-proclaimed environmentalists who fight for wolf's reintroduction to Colorado but are quick to berate other nonhumans such as coyotes (*Canis latrans*) or bears (*Ursidae*). However, most

discourse in this study was performed in the abstract, with little deliberation of specific individuals' interests – human or nonhuman – demanding the need to consider a pluralistic ethical reconception of wildlife-human relations in theory, and through translational ecology in practice.

4.1 Animal Ethics & Posthumanist Wildlife-human Coexistence Framework

The posthumanist wildlife-human coexistence framework is grounded in animal ethics, and embraces virtue ethics at the individual-level, rather than just concentrating on a utilitarian ethical positioning that permeates ecological discourse (Franklin, 2005; Washington & Maloney, 2021). Utilitarianism refers to "a teleological or ends-based theory that focuses on optimum outcomes, ends or consequences of an action" (Fennell, 2012, p. 240). Simply, it is a focus on prioritizing the greatest good for the greatest number, which is logical at the macro-level when attempting to preserve species from a biodiversity conservation perspective (Fennell & Sheppard, 2021). However, "within this view, it is almost impossible to avoid sacrificing individual beings" (Winter, 2020, p. 8). Yazevich et al. (2019) criticize utilitarianism for its overt anthropocentricity:

> In the system of anthropocentric attitudes, nature is perceived as an object of human activity, where the goal of its interaction with nature is the satisfaction of various utilitarian needs. In this logic, the notion of a "pragmatic imperative" is asserted, where it is right and normal to recognize that it benefits and maximizes the benefits to a person (Chernikova, 2007). This position is strengthened with the help of utilitarian ethics, which received its natural spread in the conditions of the modernization and development of the market economy (p. 4).

Though utilitarianism considers nonhumans as sentient beings with an interest in self-preservation (Winter, 2020), it distances us, as humans, from nonhumans when considering the power we exercise over individuals. Several interlocutors from across the U.S., including pro-

wolf conservation biologists, expressed a willingness to accept that the hunting and trapping of wolves may be necessary to appease anti-wolfers if a certain (yet to be determined) artificially constructed and anthropocentric threshold of wolves were present on Colorado's landscape. At the ecosystems level, this is a logical, ethically justified utilitarian response to convince anti-wolfers to coexist with these apex predators on shared landscapes. However, the utilitarian ethical lens reinforces an abstract view of wolf rooted in Cartesian dualism, which promulgates sentiments that humans have a moral right to determine the fate of other species.

Ecological studies have also been impacted by social carrying capacities rather than only 'objective' ecological data. In 2016, CPW "launched controversial predator control studies that involved trapping and killing" of black bears (*Ursus americanus*) and mountain lions (*Puma concolor*) (Blevins, 2020, p. 1). On March 30, 2021 U.S. District Court Chief Judge Marcia Krieger, based in Denver, CO, ruled that "the U.S. Fish and Wildlife Service illegally helped pay for a Colorado program to kill dozens of mountain lions and black bear in an experiment to determine if the predators were partly responsible for declining mule deer populations…[and] failed to do a required analysis of the program's environmental effects" (Anderson, 2021, p. 1). Considering the current ecological crisis (Steffen et al., 2011), how can we ethically continue to kill nonhumans? If we value 'life', how do we consider each individual's right to exist from a multispecies livelihoods perspective?

Virtue ethics provide individual-level foci toward nonhumans that are "focused not on what we are told to do, but rather on 'what sort of person I should be'. Virtues are positive traits of

character such as altruism, compassion and loyalty, which if practiced regularly in the proper shaping of our desires through reason and will, allow individuals to flourish" (Fennell & Sheppard, 2021, p. 320). The posthumanist wildlife-human coexistence framework is a coupled multispecies livelihoods and TE conceptual approach that considers the rights, agency, and welfare of three key constituents in wildlife-human relations: wildlife, humans, and ecosystems. Only by equally valuing each constituent at the abstract and individual-levels (utilitarianism *and* virtue ethics), can a pluralistic ethic for wildlife-human coexistence be reified in practice through translational ecology. We apply the conceptual framework to each constituent following Figure 1 below.

Insert Figure 1 here.

4.1.1. Wildlife

Wolves have been poached (a distancing word for an illegal killing signifying murder) with little recourse, as Montana's newly elected state Governor Greg Gianforte "trapped and killed a wolf near Yellowstone National Park without first taking a mandated trapper education course", on 15 February 2021, where "Morgan Warthin, spokeswoman for Yellowstone National Park, said the Wolf, No. 1155, was born in the park, was estimated to be 6 or 7 years old and had been collared by park biologists in 2018. 'Once the wolf left the park, it no longer was considered a Yellowstone wolf"' (Paybarah, 2021, p.1). Wolf No. 1155 (another application of human distancing from wildlife by assigning a number to the wolf in lieu of a name) lost its life for leaving its invisible cage of YNP; Governor Gianforte was merely issued a written citation.

Paybarah continues: “The one-time certification class, which lasts about three hours, teaches trappers about wolf biology, best practices for trapping and related regulations, Mr. Lemon [spokesman for Montana Fish, Wildlife and Parks (MFWP)] said. ‘The class is geared toward the ethical harvest of wolves’” (Paybarah, 2021, p.1.). Montana’s Wolf Management Plan outlines the minimum criteria required to legally ‘take’ or ‘harvest’ a wolf (MFWP, 2020). The words ‘taking’, and ‘harvesting’ are used advantageously to mitigate potential reactions by the public regarding the murder and maiming of wolves. They may even promote the killing of wolves depending upon one’s perspective. Cambridge Dictionary (n.d.) defines the word harvest as a verb: “to pick and collect crops, or to collect plants, animals, or fish to eat” (Cambridge, 2021). Though Merriam-Webster’s (n.d.) definition includes the application of population control in relation to wildlife harvest, we contest the use of the word by MFWP, or any other actor, to justify killing wildlife without the intent of nutritional consumption. The use of harvest to ethically justify the hunting, trapping, and killing of wolves results in nothing more than systematic state-sanctioned murder.

The United States Department of Agriculture’s Wildlife Services (USDAWS) ‘killed or euthanized’ 68,360,467 individual wildlife (all species) in the United States from 1996-2020, including 7,123 (Timber) gray wolves, and 19 Mexican gray wolves (*Canus lupus baileyi*) (USDA, 2021a). The gray wolf population is estimated at ~6,000 gray wolves in the lower-48 U.S. states (USFWS, 2017). Table 1 below displays these figures, which only cover federal data, and do not include nonhuman animals killed or euthanized by individual states not using USDAWS, or unreported data on private lands. If we were speaking of humans, this would be called genocide. Van Sittert

(2016) contends that “by broadening the anthropocentric focus of the emerging genocide literature on colonial settlement frontiers to include other species it becomes possible to track the post-conquest deployment of genocide technologies and practices” (p.2). It is impossible to call 68,360,467 wildlife deaths over the past 25 years anything but genocide.

Insert Table 1 here.

Further human-nonhuman hierarchies include subjective Western scientific principles that justify murder of certain invasive species, such as Nutria (*Myocastor coypus*) in riparian ecosystems and fail to recognize invasives that serve human interests such as domesticated livestock. Oregon defines invasive species as “non-native organisms that cause economic or environmental harm and are capable of spreading to new areas of the state; not including humans, domestic livestock, or non-harmful exotic organisms” (OregonLaws, 2020). This law demonstrates an anthropocentric value-laden policy privileging humans and domestic livestock, suggesting that individual wildlife could be equally protected under human laws. Wildlife Services began capturing data on the amount of invasive nonhuman animal species they killed or euthanized in 2012. Between 2012-2020, 12,369,901 invasive individuals were killed or euthanized (see Table 1), representing 49.3% of the 25,088,634 total nonhuman animal deaths during that time span.

The ‘science’ based justification for their destruction is conceivably dependent on who serves human interests versus who does not - the latter being subject to state prosecution in Oregon.

Human effects on entire ecosystems and individual habitats are treated less seriously than that of nonhuman effects, and blame is passed down through human hierarchies that 'speak' for nonhumans. This often occurs directly and indirectly, where ocean acidification and resulting climate change effects are perpetuated by human populations at the detriment of 'lesser' living ecosystems (Doney et al., 2009; Compton et al., 2011; Radford, 2019). The posthumanist framework already accounts for current practices that favor a species-level approach, and its merits include the recovery of some endangered species who were at the brink of extinction, such as the bald eagle (*Haliaeetus leucocephalus*) (Winder & Watkins, 2020). However, the data presented in Table 1 stress the critical urgency required to protect all nonhuman life, and foreground every species' rights, welfare, and agency at the individual level.

4.1.2 Humans

Few interlocutors could speak about an individual wolf outside of wolf WTAs, and if they did, the wolf typically didn't have a name. Occasional stories of individual wolves have captured the imaginations of biologists, ecotourists, ranchers, and the public, such as the charismatic and complex story of YNP wolf 'O-six', named for her birth year. In *American Wolf*, Blakeslee (2017) robustly describes the vivid life of O-six and her interactions with hunters, cattle ranchers, and competing packs. He unpacks the intricacies of wolf-human conflict in the western U.S., where wolf is often used as synonym for human sociocultural clashes, as Euro-American ruralites fight to maintain their way of life, while environmentalists champion ecological restoration. Indigenous rights and perspectives, including their traditional ecological knowledge (T.E.K.), are rarely considered, if at all, in debates about who has the power to shape contemporary human

life and our relations with other species on shared landscapes (Ferguson & Messier, 1997; Shelley et al., 2011; Cortes-Vasquez & Zedalis, 2013).

From the posthumanist conceptual approach to wildlife-human coexistence, humans should not be disparaged, as we are a part of ecosystems, but we must consider two levels of coexistence. The first is to equitably represent all human perspectives, as CPW is attempting to do in its effort to develop a wolf management plan for Colorado. By embracing diverse stakeholder groups such as indigenous tribes, cattle ranchers, environmentalists, and conservation scientists, power can be dispersed to equitably represent all human groups in wildlife-human relations, at least at the abstract level. Intraspecies battles (i.e., humans) for power will most likely persist, but only by engaging all stakeholders, particularly marginalized groups, and by providing equal platforms for discourse can change occur to improve multispecies welfare. The second key criteria is to consider individuals' agency and their collective power. This is evidenced by the passing of Proposition 114, where Coloradoans had the right to vote, and ushered in a new era of democratic conservation after four failed attempts to gain authorization to reintroduce wolves to the state over the past 40 years (CPW, 2020; Thomsen et al., 2021c). Multispecies livelihoods are not limited to human and nonhuman animals, however, as "we exist in a time of increasing 'plant blindness'… [where] vegetation is experienced as a homogenous 'greenery', rather than an assemblage of particular species (Wandersee & Schussler, 2001)" (Sochacka, 2021, p.5). The ecological crisis demands that we consider wildlife-human relations through a pluralistic ethical lens, within and of ecosystems, especially due to our unprecedented effects on the biosphere (Brook et al., 2008; Ellis, 2018).

4.1.3. Ecosystems

In 2008, wolf dispersed from YNP, Idaho, and British Columbia, Canada to repatriate parts of eastern Washington and Oregon. This dispersal occurred in the greater Columbia Basin Region (CBR) that extends across parts of seven western U.S. states and Canada to the Pacific Ocean (see Figure 2 below).

Insert Figure 2 here.

"Biodiversity fragmentation risk, or conditions that prevent viable unification of natural areas" (referring to the ecological use of the term signifying habitats for nonhuman species), "include limited spatially protected areas (Chapin et al., 2009), urban sprawl (Radeloff et al., 2005), wildlife-human conflict (Hill, 2015"), large-scale industrialization projects (Harte et al., 2010), and human-human conflict (Redpath et al., 2013)" (Thomsen et al., 2021, p.9). Keystone species, often apex-predators such as large carnivores including the gray wolf, have been reintroduced to targeted areas such as YNP in 1995-6 to ameliorate biodiversity fragmentation through a process called rewilding (Navarro & Pereira, 2015). Rewilding has gained popularity in practice worldwide as these keystone species have had a positive effect on ecosystems due to the ecological trophic cascades they are believed to create (Pereira & Navarro 2015). In Yellowstone, wolves have been credited for altering elk behavior to foster the recruitment of aspen (*Populus tremuloides*), willows (*Salix spp*.), and cottonwoods (*Populus spp.*) to the area (Halofsky & Ripple, 2008; Ripple & Beschta, 2012). However, some critics challenge the rewilding model's levels of impact on ecosystems as being overstated (Barber-Meyer 2015), and some perceive large carnivores as a threat to human lives (Butler et al. 2010), as well as

human livelihoods such as cattle ranching (Sommers et al. 2010). Nonetheless, rewilding provides a promising option to consider individual ecosystems welfare and agency in practice.

Human actors' hierarchical interests have problematized similar conservation narratives that prioritize human interests over that of living ecosystems and their individual habitats. These include terrestrial forest biomes, riparian habitat, and their inhabited flora and fauna. The rights of individual riparian habitat within the Columbia River Basin ecosystem can be considered through the federal Clean Water Act (CWA), which requires states to report the quality of its surface waters every two years (USEPA, 2020a). The individual welfare of rivers and streams, lakes, reservoirs, estuaries, watersheds, beaches, and oceans were extended by implementing the 2018/2020 integrated report on November 12, 2020 (see DEQ, 2020):

> Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters… The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs [Total Maximum Daily Loads] for these waters - a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards (DEQ, 2020; interactive story map).

While the rights and welfare of water basins can be considered through environmental laws and management, the agency that represents more natural ecological flows, and processes can be under looked when humans wield unequal power over nonhumans throughout entire ecosystems. Current practices in ecosystem governance often fail to recognize the intrinsic value of nonhumans and are typically assessed for the beneficial use for human populations. The prioritization of certain nonhumans' rights over others (e.g., cattle over trees) has also created immense tensions between human stakeholders as ecosystems are frequently denied welfare, rights, and agency, especially under the Trump Administration. Trees have

demonstrated mycelium networks which contribute to learning and memory (Simard, 2018; Fisher and Glass, 2019; Piñuela et al., 2021). Nimble policy frameworks must account for flora such as trees to be understood as living individuals with extensive movement and communication that extends throughout nearby habitat and greater ecosystems. This perspective, however, is not simply theoretical. In 2014, after more than 70 years of governmental management, New Zealand ushered in what is believed to be the first instance of granting an ecosystem personhood and the legal rights that accompany it. The former national park, Te Urewera, was entrusted to the indigenous Tūhoe, who "are legally responsible for the rainforest's care. They protect the precious site through an ancient Maori practice known as *kaitakitanga*, which can be roughly translated to mean 'guardianship' and is a way of managing the environment based on a Māori worldview" (Gibson, 2020, p.1). From the posthumanist wildlife-human coexistence framework lens, ecosystems must be granted equal rights, welfare, and agency, if individual wildlife and humans are to persist within, and contribute to their welfare.

5. Conclusion

Findings from this study suggest that humans must recognize the grave disparities in power relations between human stakeholders, as well as between species in wildlife-human relations. Power imbalances persist through implicit and explicit biases toward multispecies marginalized groups, are often informed by utilitarian ethics, and reproduced by employing distancing words. Tensions between competing human stakeholder groups will endure, especially when considering the current state of U.S.'s extreme-polarization and 'cultural wars' that transpired in political discourse during this study. The study was limited by focusing primarily on a

charismatic species that may generate different human emotions and conceptions of wildlife than a less-polarizing species such as cottontail rabbits (*Sylvilagus spp.*). It was also limited by the COVID-19 pandemic in some regards, as participant observation was limited, and the study had to be altered to foreground digital ethnographic methods (Hanna, 2012).

Nearly all interlocutors, and corresponding public discourse, shared similarities in that they primarily spoke for and about the wolf, and wildlife in general, in the abstract. This pluralistic ethical TE approach demonstrates that the predominant utilitarian ethics paradigm in conservation management is inadequate on its own, evidenced by the horrific nonhuman genocide that goes unchecked in the U.S. This effort to coalesce utilitarian and virtue ethics complements the compassionate conservation and multispecies justice efforts that champion individual nonhuman rights and welfare in theory and practice (see Santiago-Ávila & Lynn, 2020). The posthumanist wildlife-human coexistence conceptual framework is, nonetheless, a simple attempt to challenge the 'traditional conservation paradigm' (Santiago-Ávila & Lynn, 2020) and foreground marginalized multispecies groups who continue to suffer. However, if this framework can be reified in practice through translational ecology, nonhumans could gain previously unimaginable rights, at least in a U.S. perspective.

Future studies should test this framework in a myriad of settings and cultures as "numerous factors, including biological, geographic, political, economic, social, institutional, financial, cultural, and historical features, make each conflict or coexistence situation unique" (Madden, 2004, p.249). The posthumanist wildlife-human coexistence conceptual framework challenges

us as humans to heuristically consider the rights, welfare, and agency of all humans, nonhumans, and ecosystems – especially marginalized multispecies stakeholders - in every decision that affects them. Perhaps most importantly, this chapter serves as a call to action for conservation scholars and practitioners, as well as any human who has a vested interest in wildlife-human relations, to embrace and attend to the tensions that exist in the assemblage of ethical positions in the posthumanist wildlife-human coexistence framework and reify it in practice through translational ecology. What would the effects be if we equitably considered nonhuman's interests at the abstract and individual level when creating wildlife policies, and enacted them through management and governance?

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