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Research Article

The impact of language in conflicts over urban coyotes

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Abstract

Wildlife managers and others charged with resolving human-coyote conflict in urban and suburban areas cannot focus solely on ecology and coyote behavior. The perceptions of the people living in the affected communities play a significant role in the resolution of human-coyote conflict. In this study, we explore how residents of two communities in suburban Denver, CO, USA, mentally processed, made sense of, and acted upon human–coyote interactions in the face of conflict. By conducting interviews and using qualitative content analysis to explore existing documents, we examined how the use of language reflected and exacerbated the conflict over coyote management. Themes of violence, crime and war ran throughout our data. Anger and accusations of extremism were prevalent. Closely tied to the violent language and imagery used was a discussion of tolerance and intolerance, taking what is generally human-centric language and using it with wildlife. In addition, labeling coyotes as not belonging in an area (although they are a native species) further increased the urge to protect family and pets from the perception of the threat against 'the other', sometimes expressed in inflammatory language. Political and other messaging can either enhance or reduce a sense of threat, and we found that the language used in this debate enhanced the perceived threat of both coyotes and policy opponents. Finding ways to defuse this language could be a step toward a greater understanding of how to live with local wildlife in a way that minimizes harm to people and to the animals.

Key words: coyotes, human–wildlife conflict, human–wildlife coexistence, human dimensions of wildlife, perceptions of wildlife

Introduction

Coyotes (*Canis latrans*) are today a relatively common sight in cities across the continental USA. Once restricted to the Western states, coyotes have successfully exploited habitats and ecological niches vacated as people extirpated larger carnivores such as gray wolves (*Canis lupus*) (Hody and Kays 2018). Although Colorado was part of their historic range (Hody and Kays 2018), coyotes successfully modified their behavior to meet new challenges, especially in urban areas (Gehrt 2006; Tigas et al. 2003). Accordingly, new concerns have emerged with regard to threats to children and pets (Gehrt 2004; Draheim et al. 2019) despite the fact that coyote risk to humans is relatively small (White and Gehrt 2009). This article explores how two suburbs of Denver, CO, established coyote management programs. We focus on how people on opposite sides of the issue (pro-lethal control vs. anti-lethal control) view themselves and others, and the complications these differences bring to conflict resolution.

Human–wildlife conflict is a serious threat to many species and ecosystems, but it is especially deleterious for predator populations (Nyhus et al. 2003; Madden 2004; Inskip and Zimmermann 2009). Although coyotes are not an endangered species, they provide valuable ecosystem services (Sovada, Sargeant, and Grier 1995; Rogers and Caro 1998; Crooks and Soulé 1999; Henke and Bryant 1999; Silverstein 2005; Kays et al. 2015). In urban and suburban communities, they can also play the important role of apex predator. Non-targeted lethal control has historically been the mode of human–coyote conflict management (Robinson 2005); however, studies show that this approach does little or nothing to suppress coyote populations over time or to reduce human–animal conflict (Sterling, Conley, and Conley 1983; Crabtree and Sheldon 1999; Hinton, van Manen, and Chamberlain 2015; Kilgo et al. 2017). On the contrary, it can even boost coyote numbers (Crabtree and Sheldon 1999; Kilgo et al. 2017). Additionally, many members of the public believe that lethal control of coyotes is unethical (Jackman and Ruthberg 2015).

Labeling animals as 'belonging' or 'not belonging' to a specific area can lead to conflict. For example, some native Hawaiians believe that Hawaiian monk seals were introduced from the Northwest Hawaiian Islands by the federal government. Because of this, they are not considered "native" to the Main Hawaiian Islands and thus shouldn't be afforded any protections (Sprague and Draheim 2015). Examples of these attitudes and beliefs apply to a wide variety of native species, including river otters (Goedeke 2005) and wolves (Buller 2008). The best example may be the historical and sometimes contemporary belief of European settlers that extirpating predator populations was necessary to convert North America from a wild place to a properly civilized land (Messmer, Reiter, and West 2001). In general, when an animal is labeled as not belonging in an area, it is labeled a 'pest'.

This phenomenon is often seen in urbanized areas. For some city and suburban residents, nature and wildlife are things that occur 'out there', away from where they live and work (Whatmore and Thorne 1998; Philo and Wilbert 2000; Sabloff 2001; Jerolmack 2008). This binary framing of wildlife means that when wildlife either finds its way into urban areas or urban areas grow up around it, wildlife is often seen as an interloper or trespasser, giving rise to viewing wildlife as deviant or criminal. For some, urban coyotes represent a welcome piece of nature in the city, and even a wrong that has been made right because wildlife has been commonly driven locally extinct due to habitat destruction. For others, however, coyotes represent danger—an unpredictable and unwelcome element that does not belong in their neighborhood and poses a threat to themselves, their children, and their pets. Clashes between these two views of coyotes have resulted in conflicts between people at both local and larger scales.

It is not uncommon for people to attribute human emotions, values, and motives to non-human animals. Best (2018) points out that '[some] species acquire bad reputations: they are constructed as not just dangerous, but often anthropomorphized as having deviant characters, as being aggressive, diseased, sexually promiscuous, or lazy (p. 4)'. This is not a new phenomenon; for example, there are records of animals being put on trial for crimes dating back to the Middle Ages, including a pig in the 1500s that was tried and hanged for murder in Senlis, France (Holsinger 2009). That trend continues today (Goedeke 2005). Both Western-Europeans and European-Americans have consistently assigned symbolic guilt and innocence to predators and livestock, respectively (Coleman 2006).

Although human–wildlife conflict was traditionally defined as conflict between people and wildlife (such as wolves killing sheep and ranchers killing wolves), more modern interpretations account for the conflict that occurs between people over what to do with wildlife (Madden and McQuinn 2014). Therefore, just as people create their own meanings of the wildlife they live around, it is important to understand how people also create images of different groups of people. People on different sides of HWC often create extremely negative images of each other (Harker and Bates 2007), and this can push the conflict into further intractability by elevating it to identity-level conflict (Madden and McQuinn 2014). Conflict over some species of wildlife can also be attributed—at least in part—to concerns over a changing community such as changes in the demographics of an area, loss of a traditional industry, or changes in property values (Capek 2005; Scarce 2005; Buller 2008).

Coyotes connect to all of the above: they are often considered out-of-place or not belonging, they are often labeled pests by both individuals and government agencies, and they are often assigned negative human traits and characteristics. A particularly poetic example comes from Mark Twain in 1861. He describes coyotes as having 'a furtive and evil eye', and a 'general slinking expression'. He continues (also and notably demonstrating his prejudice against Native Americans), 'it is considered that the coyotes, and the obscene bird [vultures], and the Indian of the desert, testify their blood kinship with each other in that they live together in the waste places of the earth on terms of perfect confidence and friendship, while hating all other creatures and yearning to assist at their funerals' (in Laydet 1977, pp. 97–100). In a more recent example, many Americans grew up watching Wile E. Coyote, a popular TV cartoon villain. On the other hand, Native Americans have often assigned more positive or neutral traits to coyotes, such as seeing him as a clever trickster. In fact, in some Native communities, coyotes are an important species symbolically, spiritually, and/or religiously (Meléndez 1982).

Framing animals as pests can have a practical value: the use of the term can serve as a distancing mechanism to make it easier for a person to despise the animal and find value in it only as a dead carcass (Jerolmack 2008). Bandura et al. (1996) demonstrated that people can participate in 'reprehensible' behavior when they dehumanize their targets or otherwise legitimize their actions, whether the target is human or animal. Moral exclusion is a process by which 'individuals or groups are perceived as *outside the boundary in which moral values, rules, and considerations of fairness apply*. Those who are morally excluded are perceived as nonentities, expendable, or underserving, consequently, harming them appears acceptable, appropriate, or just' (emphasis original; Opotow 1990, p. 1). On the other hand, moral inclusion 'refers to relationships in which the parties are approximately equal, the potential for reciprocity exists, and both parties are entitled to fair processes and some share of community resources' (Opotow 1990, p. 2). The concept of moral inclusion and exclusion can be applied to wildlife and nature in general (Opotow 2003).

Who or what is morally included and excluded is in part cultural and is not static over time. For example, whaling was a vital part of the economy in some regions of the USA until the late 1800s. As the industry declined, the country eventually became anti-whaling. Most Americans now include cetaceans as part of their moral sphere. Not all countries have followed suit, however, and our divergence on this issue has sparked international conflict within the International Whaling Commission and with whaling nations such as Japan (Parsons 2015). Because

of how coyotes fit into people's understandings of belonging/not belonging, whether geographically or in terms of moral inclusion and exclusion, it is not uncommon for the mere presence of a coyote to spark conflict, both directed by people at coyotes and at other people who are more inclined to let them be.

People also create meanings of situations and conflicts. The use of metaphor helps people—consciously or not—organize the world (Landau et al. 2010), and metaphorical linkage is the process by which people 'connect an emerging social problem with another well-recognize [sic] problem' (Fine and Christoforides 1991, p. 376). Although the two issues can be closely related, oftentimes they have little to do with each other on the surface. However, this mental shortcut helps people structure how they view a new problem. We see ample evidence of the use of metaphor and metaphorical linkage in instances of human-wildlife conflict. For example, although on the surface there would appear to be a great distance between management plans for the English sparrow (*Passer domesticus*; a non-native species in the USA), immigration policies, and war, much of the same rhetoric has been used for each (Fine and Christoforides 1991). Describing a human–wildlife conflict reduction program (generally utilizing lethal methods) as a 'war' has also been used against sharks (Philpott 2002) and cane toads (Shine and Greene 2018), among many others. As this study shows, this same rhetoric is used regarding human–coyote conflict.

Measures employed to uphold the law are often described and discussed using violent terms or 'combative language' (Boshoff 2013, p. 426). For example, we commonly talk about the war against drugs, or the police's battle against gang violence. This 'law-maintaining violence' is sanctioned by our governments, expected, and even respected in many cases. Thus, utilizing violent rhetoric helps to authorize lethal means of controlling conflict with coyotes. As Boshoff (2013) offers, 'legal terminology is a powerful ideological tool; it is not a way of *describing* the world, but rather, it is a way of *making* it' (italics original, p. 426). In other words, by describing their actions as being part of a legal battle—meant to protect hearth and home—to combat dangerous pests, some people seek, consciously or not, to successfully frame this as a legal issue that requires a legal (and in this case violent) solution.

Navigating human–coyote conflict in urban and suburban areas presents an important wildlife management challenge. Wildlife managers and others charged with resolving human–coyote conflict cannot focus solely on ecology and coyote behavior. The perceptions of the people living in the affected communities play a significant role in the resolution of human–coyote conflict. In this study, we explore how residents of two communities in suburban Denver, CO, USA, mentally processed, made sense of, and acted upon human–coyote interactions in the face of conflict by examining the language that they used. We argue that the realization of comprehensive and long-lasting solutions necessitates understanding the diverse perceptions of the people involved, specifically urban and suburban populations.

Study site

Centennial and Greenwood Village, CO, are two Denver suburbs that share a common border and common greenspace. Although they likely share a coyote population, how they went about dealing with human–coyote interactions in the late 2000s and early 2010s differed significantly (Draheim et al. 2019). While on the surface their management plans looked very similar, there were key differences, which led to the use of lethal control in Greenwood Village. For example, attacks on off-leash pets where humans were not nearby triggered lethal control in Greenwood Village, but not in Centennial (see Draheim 2012, for a complete analysis of the two plans). Centennial had a more robust outreach program, which emphasized hazing and education (White and Delaup 2012). In addition, Greenwood Village residents apparently circumvented the official management plan by asking for—and getting—lethal control without the steps required by the plan. This informal management (Draheim et al. 2019), where lethal control occurred for reasons that could be viewed as arbitrary (e.g. a coyote howling at night and disturbing the sleep of a resident) meant that in effect Greenwood Village was conducting non-targeted lethal control, where animals were indiscriminately killed regardless of whether they were causing conflict with people.

Methodology

Human dimensions research in North America has traditionally focused on quantitative, survey-based approaches (Manfredo 2008). In this larger study, we used a mixed-methods approach to combine qualitative and quantitative data analysis in order to provide a richer understanding of human–coyote conflict at our study sites (Robson 2002; Berg 2007). In this article, we will discuss some of the results of our qualitative work (see Draheim et al. 2019, for the quantitative portion of the study).

We used a grounded theory methodology to inform our research process (Charmaz 2006), which takes an interpretative rather than a positivist approach. Grounded theory prioritizes deductive thinking (Bernard and Ryan 2010), a search for patterns in social processes, followed by 'the development of explanations—theories—for those patterns' (p. 266). Such interpretive methodologies emphasize '*understanding* rather than explanation' (italics original; Charmaz 2006, p. 126). Grounded theory 'gives priority to showing patterns and connections rather than to linear reasoning' (Charmaz 2006, p. 126).

Between the fall of 2010 and summer of 2011, we conducted 22 interviews with residents of Greenwood Village and Centennial. We also interviewed local government officials and volunteers with a non-government-sanctioned coyote coexistence group that hazed coyotes, conducted outreach and at times actively interfered with lethal control efforts in Greenwood Village. Volunteers were solicited to participate by an email request from the volunteer coordinator sent to their membership list. We contacted the residents and government officials through the Greenwood Village or Centennial governments and local homeowner associations. All recruitment materials, interview and reporting procedures, and interview questions were approved by George Mason University's Human Subjects Review Board. To protect their identities, pseudonyms were used throughout the analysis and reporting process. Interviews usually lasted approximately 1 hour, although some were shorter, and others longer. The interviews were recorded and subsequently transcribed.

In all, we interviewed 18 people who could be categorized as non-lethal proponents and four people who could be categorized as lethal control proponents. While we attempted to obtain a balanced sample between those who more heavily favored non-targeted lethal control and those who did not, we were unable to obtain access to a larger number of lethal control proponents who were willing to speak with us. Although the extent to which one population declined an interview is

information in itself, this imbalance did not extend to the existing content analysis described below.

We also analyzed relevant documents, including letters to the editor (LTEs), columns and op-eds published in local Denver media outlets from 2005 to November of 2010. All of these items were found using the database Lexis-Nexus and the search term 'coyote'. We discarded any item not referring to the animal. We then went through the database a second time and discarded articles that were not written from the perspective of an individual. This was done because this study examines how individuals spoke about coyotes and human–coyote conflict rather than how the media portrayed the conflict. We analyzed 34 LTEs, columns and op-eds, all written specifically about coyotes and human–coyote conflict in the Denver metropolitan area. Finally, we obtained recordings and other records of the town meetings in both Centennial and Greenwood Village where their respective coyote management plans were debated.

All existing documents and an initial group of interviews were coded while developing our theoretical categories. We then tested the categories using the public meeting transcripts and the remaining interviews using a targeted, focused coding approach (Bernard and Ryan 2010). As we coded, we compared new codes with previous codes to see how they might relate to each other as broader categories, using the constant comparative method (Charmaz 2006). The themes were grouped into two major categories, one of which ('Narratives of Conflict') formed the basis for this article. We grouped our discussion of the results into four sections: Rhetoric of Violence, Tolerance, Passion on Both Sides and Coexistence in order to emphasize the importance of language on the conflict seen at our study sites. We took quotes that best represented the relevant codes from the dataset for these sections and present those below.

Results

Rhetoric of violence

Throughout our data, we found that people on both sides of the debate used rhetoric of violence, directed toward their policy opponents and toward coyotes themselves. There were nuances to almost everyone's opinions about the use of lethal control. For example, some believed that lethal control was acceptable if people were in imminent danger but otherwise vehemently disagreed with its use. However, for the purposes of this study, it was possible and necessary to split people into two groups: pro-lethal control and anti-lethal control, hereafter referred to as 'pro-lethal' and 'anti-lethal'. Pro-lethal people tended to use 'good violence' imagery when discussing coyote policy, portraying lethal control as an honorable war that was worth fighting in order to protect their land, property and family from coyotes. Anti-lethal control people tended to use 'criminal violence' imagery when discussing proponents of lethal control, such as invoking murder, cruelty and slaughter; in other words, violence that was dishonorable. The difference in descriptive language is analogous to that between a soldier fighting to protect his/her country and a criminal mugging someone on the street. We also found related themes of tolerance and intolerance throughout the data, toward both humans and wildlife.

Many lethal proponents used wartime rhetoric to justify their position. Some members of the community were indeed scared of coyotes and of potential conflict with the species and by supporting lethal control and/or localized eradication efforts they believed they were protecting their families and pets.

In some cases, this wartime rhetoric is boldly stated. For example, the author of a 2009 editorial discussed a letter sent out to members of the Denver Southmoor Park East Homeowners Association. In the letter, the board says that it is 'declaring war on the coyotes and the City of Denver has to decide which side . . . it wants to be on. From what we can tell, up to this point the city has been on the side of the coyotes[1]'. By forcing the city to take sides, the Homeowners Association challenged the ethical stances of those who advocate for coexistence and against lethal control and set up a battle-like environment where stakeholders must choose sides. In other words, to quote President George W. Bush and echo many other wartime politicians over thousands of years, 'you're either with us or against us in the fight against terror' (http://edition.cnn.com/2001/US/11/06/gen.attack.on.terror/).

Other editorials describe human–coyote conflict as the aftermath of an already-fought war: 'The coyotes have to deal with the reality that they lost the battle for habitat and move on—perhaps to eastern Aurora or Douglas County, where there is more open space[2]'. This 'battle' over space also comes up in another letter-to-the-editor: 'Now is our time to fight back and re-establish a boundary between us and the coyotes[3]'.

On the other hand, those who are against lethal control tend to invoke negative or less positive descriptions of violence. They use words evocative of criminal and illegal violence and also portray an out-of-control or lawless environment. A 2009 letter-to-the-editor stated:

> Those enemies are powerful, and include Greenwood Village, the wealthiest community in Colorado. This month the Village—which could well afford to set up better-behavior classes for coyotes—instead passed an ordinance hiring private vigilantes to shoot them on site. . .So parks, greenbelts, watersheds and other public areas will be turned into war zones.[4]

The use of the term vigilante implies illegal, dishonorable violence. Journalists and government officials often use the term 'war zones' to describe suburban and urban neighborhoods which are particularly hit hard by, for example, gang-related violence. Post-9/11, descriptions of cities as places of war have increased, both abroad and domestically, with terms such as, 'protecting the homeland', applied to New York City and Washington, DC (Graham 2006). In keeping with the vigilante, lawlessness imagery evoked in the above quote, a 2009 Denver Post editorial stated that:

> Greenwood Village's shoot-to-kill coyote plan likely will have an ironic twist. Eradication efforts have, time and again, produced coyote populations twice as high as before, research shows. So much for the bang-bang Wild West theory. Hopefully, when representatives from several cities and the Colorado Division of Wildlife meet Wednesday to devise a coyote strategy, they'll move beyond the sniper scenario . . . It's our responsibility to manage that interaction in an intelligent way, and not just go Annie Oakley on interloping coyotes.[5]

The 'Wild West' reference connotes a sense of lawlessness and abandon that is not in keeping with our current society, while 'sniper', although perhaps considered a necessary evil during wartime, is not necessarily to be lauded during peacetime. The term sniper arouses images of domestic terrorism such as the 2002 attacks in Washington, DC, the 2017 Mandalay Bay Hotel attack in Las Vegas, and the 1966 clock tower attack in Austin, Texas. Other people more blatantly asserted that lethal control was criminal behavior. For example, a 2009 LTE that stated: 'Killing coyotes is a cruel and unnecessary crime[6]'.

Some individuals discussed the link between violence toward animals and violence toward people. Alice, an occasional volunteer with the Centennial program, said: 'If you see animal abuse, boy, you immediately got social services involved because chances are good if it's not child abuse at that point it's headed in that direction'.

Many other respondents and LTE authors felt that lethal control was cruel, much like animal abuse in general.

An anti-lethal control advocate, Elizabeth, described her understanding of the volatility of the situation: 'I can see how wars start ... I mean this is about animals. I can imagine what it would be with human rights'.

Tolerance

Closely tied to the violent language and imagery used in this situation is a discussion of tolerance. Tolerance and intolerance in the USA are usually terms used when discussing human diversity, such racial, ethnic, religious or sexual orientation. In this case, residents of the area concerned with decreasing or eliminating lethal control of coyotes use tolerance terminology to include wildlife. For example, an LTE, referencing the aforementioned passage by Mark Twain that portrays coyotes (and Native Americans) as unsympathetic animals, stated: 'Coyotes haunt Western literature... Surely we can move beyond the prejudices of the past and learn to live with brother and sister coyote. After all, this is a new and diplomatic age when we no longer shoot first and ask questions later[4]'. Another LTE equating non-violence to tolerance stated: 'Actual education efforts will do much more to resolve any conflicts than killing will; committing violence in the name of protecting our children is sending the wrong message—a better lesson for our children would be teaching tolerance for native wildlife and personal responsibility[6]'.

Others related themes of tolerance not only to coyotes but also to other Colorado wildlife that have been the focus of controversy and lethal control, such as prairie dogs and bears. Alice asked: 'I think there's very little tolerance for what they call 'problem' coyotes or bears. Who defines that?'

Just as violence toward humans was linked with violence toward animals, tolerance toward coyotes was also presented as a step toward increasing tolerance toward other people. For example, Alice believed that: 'If we can get people to be more accepting and tolerant of everybody else in general, what a difference that'll make. You know, I've always said if we can be accepting with even our wildlife, maybe that'll pass on with each other'.

Passion on both sides

There was a lot of anger expressed in the data, and an acknowledgement on both sides that this is a very polarized, highly politicized issue. Alice, a volunteer, said: 'There seem to be two extremes [with the] coyote issue. It's passion on either side'. People on both sides of the issue at times expressed reservations about whether they should even engage the other side. Deborah, who takes a moderately pro-lethal stance, explained that in her immediate neighborhood there was broad agreement about whether and when lethal control should be used, but that 'There's another neighborhood, Garden Lane, that is not for it, and so we just don't discuss it with them. And avoid that kind of conflict'. Kevin, a coyote coexistence program volunteer, told me, 'I don't think the different sides really talk to each other'.

Margaret, who works for an animal protection organization, told me about the tenseness of the situation when she first learned about it:

> I don't know if it was timing or approach, but for whatever reason, when I entered the scene, it was very, very, very hostile. There was not a lot of calm, cooperative dialogue going on between the two sides on any level. Not between policymakers, not between residents, not between advocates. There was, I want to say like no cooperation, nothing I can think of anyway ....

Later, she told me:

> I think [the situation was so tense] because the most vocal members of each side were working on something that was core to them, to their beliefs, to their principles, and ... you can't change someone's core beliefs and principles. I mean, if it was the nuance of will this solve the problem or will this solve the problem, that's something you can compromise on but it really felt to me like the arguments were 100% principle and nobody was interested in compromise or even listening.

Lindsey, who used to volunteer with the coyote coexistence program, described the Greenwood Village town meetings that she attended, getting visibly emotional as she recalled them:

> You know, we would get emotional at these City Council meetings. We would get a little emotional...it just brings out the worst in people, you know...on another level, you meet these very nice folks, Greenwood Village residents, and then the coyote issue just brings out the worst in some of these people. And I'm like, wow, where does this part of your personality come from? How can you be so cold-blooded and unwilling to really see the big picture? I don't get it. I never will. It's intense. It's very intense for the, I don't know, six months that I was actively involved. I was very, very emotionally charged.

In some cases, the anger is expressed quite forcibly. Elizabeth, an older volunteer with the coexistence program, explained that she would no longer visit Greenwood Village:

> You know, I guess I've developed an attitude, too...I will take the highway around Greenwood Village so as not to drive though Greenwood Village. I won't eat at a restaurant in Greenwood Village because I don't want any taxes that I would spend on food going to these people...I haven't visited my friend who lives about a mile northwest of here because she lives in Greenwood Village... I hate those people over there. Let it be on your record, I don't care.

Hillary, a college student involved with the coyote coexistence program, told me about her feelings about Greenwood Village: 'And my blood just boils. (laughs) I hear about Greenwood Village and I just go, ohhh! Because I've been to some of their...town meetings...it was like I walked out and wanted to take a shower' (laughs).

Sarah, an official with a near-by town which experienced a similar situation as Greenwood Village, told me about a public meeting in her town, where a biologist who works for another local jurisdiction came to give a presentation about coyotes:

> And we had about 80 people show up and more than half of them, it was like a lynching mob. I mean, they were so mean to her and they attacked her...She was just like, 'Look, I'm here to educate'...I think there are people that just came there wanting to vent, wanting to scream and yell that we're not doing anything for them. They didn't listen to what we had to say, they didn't absorb anything that we had to say... There's a few people that said, 'Oh, that was interesting and very educational', but for the most part they didn't want to hear it. They just wanted to come and scream and yell at the city for not doing what Greenwood's doing.

On the other hand, many on the pro-lethal side feel that anti-lethal people do not fully appreciate the fear that they have experienced because of coyotes. Deborah said:

> And we've had meetings, it's terrible, but we call them the 'coyote huggers' or the 'tree huggers', you know. And they're so vocal and they're so emotional. And there's one woman that was describing how her kids got off the bus and these two coyotes were following their small children. And, you know, the tree huggers; that really didn't matter to them. And I think it was very scary for the parents.

She also said that, 'My worst nightmare is to have my little dog taken by a coyote', and argued that the anti-lethal camp does not understand or acknowledge that concern. She also explained (a feeling that is widespread across the pro-lethal side) that the anti-lethal camp is made up of extremists: 'Those other people just [believe that] we should let everything be and that's the way nature is. Kind of the extremists'. She also described emails that she's received from the so-called 'coyote huggers', saying that 'this was their land first and we need to leave them be and let them do whatever they want to do and how terrible we are…' The extremist label was used on both sides of the issue; Joanne, a Centennial resident and volunteer, told me that some of the pro-lethal Greenwood Village residents she heard speak were 'fanatical people'.

Coexistence

Although the loudest voices heard most often were more extreme in their rhetoric, often the two sides were closer than they might first appear, which speaks to possibilities for changing the discourse around the issue. Several of the pro-lethal respondents took a fairly middle-of-the-road approach to their belief about when lethal control should be used, stating that hazing and attractant reduction should be tried first. In addition, while many of the anti-lethal respondents had little tolerance for the fear that many Greenwood Village people expressed, some did sympathize with them. Gary, a sometimes volunteer with the coexistence program, suggested: 'One woman claimed that she was bitten. I know there was a lot of controversy whether that really occurred or not. But apparently, at least, she was frightened by the interaction she had'. Gary later told me that, while he believes that Greenwood Village's policies are not well balanced between the needs of people and those of the environment, he did understand that 'their main concern is about the safety of people in the areas that are developed'. While Gary was very much concerned about what he saw as a lack of care toward the natural world, he did not believe that the Greenwood Village government and residents acted maliciously; rather, in his mind they were simply overcommitted to one side of the issue.

Pam, another volunteer, said that, while she has a hard time believing some of the stories that she's heard about coyotes, she felt that people were either lying 'out of fear, or it's a real misperception of what happened'. Pam did not believe that people were lying maliciously because they wanted to get rid of coyotes completely; rather, they either did not understand the situation, or exaggerated the story so that they could see some action from their local government because they were afraid. Sarah, an animal official in another Denver suburb, told me that that she does understand why some people seemed so focused on obtaining lethal control in their communities:

> I do understand that it's frustrating to understand it, because…-they can pretty much eliminate any species of animal except for the coyote. So I understand people not being able to understand that, but the frustrating part is trying to get people… this is how it is, that's how it is, there's no other way around it. You can't get rid of the coyotes; they're here to stay.

Discussion

Language matters. Invoking wartime and street-violence language when discussing human–coyote conflict and its subsequent social conflict frames the discussion as an either-or argument. By framing the conflict in this way, stakeholders can more easily dismiss the other (human) side, as conventional wisdom would suggest that people who willfully commit illegal and immoral acts of violence should not be negotiated with (Harker and Bates 2007). Likewise, many would agree that people who stand in the way of lawful and moral acts of violence committed in order to protect hearth and home should not be engaged in conversation and debate. Barry Glassner (1999, p. 301), in his seminal work on the construction of fear, wrote: 'I want to suggest that many fears are constructed to protect against other fears, and indeed, against fear itself'. Much of the rhetoric used in this conflict by pro-lethal control supporters refers to thugs, criminals, and the like. It is possible that suburban concerns and fears of 'urban' crime, such as gang 'warfare', come through in this conflict, one that is seen as more manageable as the criminals in question are susceptible to capital or lethal punishment without due process.

Schlesinger and Lau (2000) explored how members of the public can interpret policies through metaphorical thinking, pointing out that by using metaphors an affective measure of a policy, not just a reasoned one, is employed. It is no wonder, then, that we were often met with intense emotional responses during our interviews about this issue. Metaphors also explain why some people had such positive feelings about lethal control, even though the science is clear that attempting to suppress coyote populations through non-targeted lethal control does not work. When political and policy metaphors such as war and crime are introduced to a policy discussion, an effective response can be triggered via metaphorical linkages between lethal coyote control and war and crime, sparking the desire for vengeance seen in some respondents (Lakoff 2001). Another metaphor linked to coyotes was the idea of tolerance and intolerance, as usually discussed by humans about other humans. In this way, attitudes toward coyotes were seen as a proxy for whether or not someone was prejudiced. As calling someone prejudiced generally is not a good opening to a productive conversation, this served to increase the conflict.

Political and other messaging can either enhance or reduce a sense of threat from outside sources (Canetti-Nisim et al. 2009; Kalmoe 2014). This can be extrapolated to coyotes, as coyotes are seen as 'other' by many people, despite the fact that coyotes are indeed native to our study sites. Kalmoe (2014) looked at the role political speech, using violent metaphors, had in spurring aggression, knowing that metaphors 'actively shape how people think about social interactions and make social judgments' (p. 5). In this study, Kalmoe used the terms 'fight, fighting and battle', and it should be noted that much stronger language was used in our case study. Even with this less intense language, Kalmoe found that listening to political speeches that included these terms doubled the support for political violence in people with already aggressive tendencies, regardless of gender or political affiliation. In other words, using violence-filled rhetoric with metaphors of war and crime makes it more likely that at

least some people will respond more aggressively about the issue. Kalmoe et al. (2018) looked at the role of violent metaphors in political discourse. Although their findings were focused primarily on partisan politics, much of what they found is relevant here. They argue that exposure to violent political metaphors, even if somewhat benign (e.g. 'We've recruited an army of volunteers') makes people with aggressive personalities 'feel, think, and act more aggressively, and, furthermore, these metaphors are polarizing (p. 335)'. However, the effects on people with fewer aggressive traits are less clear. While these studies focused on partisan politics, and coyote management was not a partisan issue here (Draheim et al. 2019), clear lessons can be drawn.

Discussing language and metaphors used about terrorism post-9/11, Lakoff (2001) commented that 'security as containment' is a powerful and attractive metaphor. This is true even though it is virtually impossible to keep terrorists out of the country. Similarly, it is virtually impossible to keep coyotes out of a neighborhood that meets their requirements for habitat and food. Yet, this 'security as containment' metaphor emerges from our data: some of the pro-lethal control contingent believed that the only way to win the human–coyote conflict was to exclude coyotes from their community, ignoring both the fact that this was not possible and the fact that coyotes are native to the area. The residents of the area who were heavily in favor of lethal control sought not to undertake this violence themselves, but rather demanded their government to carry out violent measures against the perceived threat for them. As Boshoff (2013) says, 'there is complete overlap between individual/natural ends and legal ends and thus the legal states is seen as our sole protector and is expected to "wage war" against out perceived enemies, however abstract: from AIDS to poverty and from crime to terror' (pp. 428–429). In other words, local governments are seen as the only way to resolve this, and the rhetoric used to encourage culling is directed at the government itself: 'The ultimate goal is framed as the destruction of everything which disrupts the "normal" state and to ensure that 'order will again prevail' (Boshoff 2013, p. 429). This is perhaps an appealing way of viewing this issue because it takes the responsibility to reduce and prevent conflict away from residents and places it on to their government. Moving the onus onto another entity is perhaps seen as being easier than taking actions some are unwilling to take, such as not letting pets outside unattended, not letting their dogs off-leash in unfenced parks during pup-rearing season, and not installing a fence in their backyard.

People who accept responsibility for their actions are more likely to behave with empathy, especially if their opponents are humanized (Bandura et al. 1996). In other words, if a person lets their cat outside at night unattended, and the cat is killed by a coyote, the person who takes responsibility for letting the cat outside at night is less likely to blame the coyote and wish the coyote harm. Messaging that stresses the importance of taking personal actions, perhaps by using subtle peer pressure (McKenzie-Mohr 2011), might be an effective way to increase a sense of personal responsibility and so decrease the calls for lethal control.

Finally, although discussing the much graver situation of terrorism and subsequent hostility to minorities, Canetti-Nisim et al. (2009) show that the experiences of people who have either directly *or* indirectly, through the experiences of friends, family members and neighbors, experienced trauma should be given proper attention. Although certainly terrorism and subsequent aggression is on a different level than coyote–human conflict, because pets are considered as part of the family for many Americans (Sable 2013) it is possible that experiencing the death or injury of a pet by a coyote can feel like their family was hurt by random violence—especially when the incident took place in a trusted safe space such as a backyard or a local public park. If that is the case, then people who experience trauma related to coyotes, such as losing a pet, need to be heard and acknowledged, and consideration should also be given to their neighbors and friends who might share powerful emotions. Otherwise, it seems likely that many will continue to feel that coyotes have no place in their neighborhood.

Conclusion

Certain words and phrases can increase polarization of policy disagreements and even increase aggressive tendencies in some people. Violent rhetoric, both against people on opposing sides of conflict over coyote management and directly against coyotes themselves, impacts the potential coexistence of coyotes and humans and helps to increase community conflict over coyote management. In addition, labeling coyotes as not belonging in an area (ignoring that they are a native species) can further increase the urge to protect family and pets from the perception of the threat against 'the other', sometimes expressed in inflammatory language.

It is clear that toning down the rhetoric used in these discussions is important if conflict is to be mitigated or resolved. Finding ways to defuse this language could be a step toward a greater understanding of how to live with local wildlife in a way that minimizes harm to people and to the animals, and ultimately might lead to better management outcomes. While wildlife advocates likely have little sway over some groups of people in the policy process, they should attempt to tone down the rhetoric which might help promote a policy debate, not a name-calling episode. Encouraging stakeholders to hold personal responsibility (e.g. for their pets) might also deflect some of the negative attitudes not only toward coyotes but also toward coyote and wildlife advocates, which also might help defuse the situation.

Certainly, as in many conflicts, it seemed that the majority of people in both Greenwood Village and Centennial had relatively neutral positions, or leaned only slightly one way or the other. Several of the respondents who volunteered to provide information to people walking in Greenwood Village's parks had good experiences talking with residents. By and large, the people they spoke to were polite and even open and receptive to the information the volunteers were providing. Therefore, the people driving the policy discussions had an outsized voice in the matter and more extreme emotions went into their arguments. Finding ways to facilitate more nuanced discussions and promoting voices that are not as often heard, especially to policy makers, would be useful.

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Data availability

Due to the confidential nature of the interviews, interview recordings and/or transcripts are not publicly available.

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Letters to the editor and open-editorials

[1]Carroll, Vincent. 2009. 'Coyotes strike a little too close to home'. *Rocky Mountain News*, February 25, p. 31 News.
[2]Clark, James F. 2009. 'Letter to the Editor'. *The Denver Post*, February 15, p. D-02.
[3]Saltus, Kim. 2008. 'Letter to the Editor'. *Highlands Ranch Herald*. November 18.
[4]Noel, Tom. 2009. 'Coyotes deserve protection: Predators are a part of Western history'. *The Denver Post*, March 1, p. D-06.
[5]Editorial. 'Targeted plan to manage coyotes: The best way to deal with coyote populations isn't to eradicate all of them—just the ones that are aggressive towards humans'. *The Denver Post*, February 10, p. B-11.
[6]Getsina, Olga. 2009. 'The Open Forum'. *The Denver Post*, March 1, p. D-02.

References

Bandura, A. et al. (1996) 'Mechanisms of Moral Disengagement in the Exercise of Moral Agency', *Journal of Personality and Social Psychology*, **71**: 364–74.

Berg, B. L. 2007. *Qualitative Research Methods for the Social Sciences*, 6th ed. New York, NY: Pearson.

Bernard, H. R., and Ryan, G. W. 2010. *Analyzing Qualitative Data: Systematic Approaches*. Washington, DC: SAGE Publications.

Best, J. (2018) 'Constructing Animals as Social Problems', *Sociology Compass*, **12**: e12630.

Boshoff, A. (2013) 'Law and Its Rhetoric of Violence', *International Journal for the Semiotics of Law - Revue Internationale de Sémiotique Juridique*, **26**: 425–37.

Buller, H. (2008) 'Safe from the Wolf: Biosecurity, Biodiversity, and Competing Philosophies of Nature', *Environment and Planning A: Economy and Space*, **40**: 1583–97.

Capek, S. (2005) 'Of Time, Space, and Birds: Cattle Egrets and the Place of the Wild', in A. Herda-Rapp, and T. L. Goedeke (eds.) *Mad About Wildlife: Looking at Social Conflict Over Wildlife*, pp. 195–222. Boston: Brill.

Canetti-Nisim, D. et al. (2009) 'A New Stress-Based Model of Political Extremism: Personal Exposure to Terrorism, Psychological Distress, and Exclusionist Political Attitudes', *The Journal of Conflict Resolution*, **53**: 363–89.

Charmaz, K. (2006) *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Washington, DC: SAGE Publications.

Coleman, J. T. (2006) *Vicious: Wolves and Men in America*. New Haven, CN: Yale University Press.

Crabtree, R. L., and Sheldon, J. W. (1999) 'Coyotes and Canid Coexistence in Yellowstone', in T. W. Clark, A. P. Curlee, S. C. Minta, and P. M. Kareiva (eds.) *Carnivores in Ecosystems: The Yellowstone Experience*, pp. 127–163. New Haven, CN: Yale University Press.

Crooks, K. R., and Soulé, M. E. (1999) 'Mesopredator Release and Avifaunal Extinctions in a Fragmented System', *Nature*, **400**: 563–6.

Draheim, M. M. (2012) '*Social Conflict and Human-Coyote Interactions in Suburban Denver*', Dissertation, George Mason University, Fairfax, Virginia.

—— et al. (2019) 'Public Perspectives on the Management of Urban Coyotes', *Journal of Urban Ecology*, **5**: 1–13.

Fine, G. A., and Christoforides, L. (1991) 'Dirty Birds, Filthy Immigrants, and the English Sparrow War: Metaphorical Linkage in Constructing Social Problems', *Symbolic Interaction*, **14**: 375–93.

Gehrt, S. (2004) 'Ecology and Management of Striped Skunks, Raccoons, and Coyotes in Urban Landscapes', in N. Fascione, A. Delach, and M. E. Smith (eds.) *People and Predators: From Conflict to Coexistence*. Washington, DC: Island Press.

—— (2006) *Urban Coyote Ecology and Management: The Cook County*, Illinois Coyote Project. Columbus, OH: The Ohio State University.

Glassner, B. (1999) 'The Construction of Fear', *Qualitative Sociology*, **22**: 301–9.

Goedeke, T. L. (2005) 'Devils, Angels or Animals: The Social Construction of Otters in Conflict Over Management', in A. Herda-Rapp, and T. Goedeke (eds.) *Mad About Wildlife: Looking at Social Conflict over Wildlife*, pp. 25–50. Boston: Brill.

Graham, S. (2006) 'Cities and the 'War on Terror'', *International Journal of Urban and Regional Research*, **30**: 255–76.

Harker, D., and Bates, D. C. (2007) 'The Black Bear Hunt in New Jersey: A Constructionist Analysis of an Intractable Conflict', *Society & Animals*, **15**: 329–52.

Henke, S. E., and Bryant, F. C. (1999) 'Effects of Coyote Removal on the Faunal Community in Western Texas', *The Journal of Wildlife Management*, **63**: 1066–81.

Hinton, J. W., van Manen, F. T., and Chamberlain, M. J. (2015) 'Space Use and Habitat Selection by Resident and Transient Coyotes (*Canis Latrans*)', *PLoS One*, **10**: e0132203.

Hody, J. W., and Kays, R. (2018) 'Mapping the Expansion of Coyotes (*Canis Latrans*) across North and Central America', *ZooKeys*, **759**: 81–97.

Holsinger, B. (2009) 'Of Pigs and Parchment: Medieval Studies and the Coming of the Animal', *PMLA/Publications of the Modern Language Association of America*, **124**: 616–23.

Inskip, C., and Zimmermann, A. (2009) 'Human-Felid Conflict: A Review of Patterns and Priorities Worldwide', *Oryx*, **43**: 18–34.

Jackman, J. L., and Ruthberg, A. T. (2015) 'Shifts in Attitudes Towards Coyotes on the Urbanized East Coast: The Cape Cod Experience, 2005-2012', *Human Dimensions of Wildlife*, **17**: 1–3.

Jerolmack, C. (2008) 'How Pigeons Became Rats: The Cultural-Spatial Logic of Problem Animals', *Social Problems*, **55**: 72–94.

Kalmoe, N. P. (2014) '*Fueling the Fire: Violent Metaphors, Trait Aggression, and Support for Political Violence*'. Post-Doctoral Research Paper. George Washington University, Washington, DC.

——, Gubler, J. R., and Wood, D. A. (2018) 'Toward Conflict or Compromise? How Violent Metaphors Polarize Partisan Issue Attitudes', *Political Communication*, **35**: 333–52.

Kays, R. et al. (2015) 'Cats Are Rare Where Coyotes Roam', *Journal of Mammalogy*, **96**: 981–7.

Kilgo, J. C. et al. (2017) 'Reproductive Characteristics of a Coyote Population before and during Exploitation', *The Journal of Wildlife Management*, **81**: 1386–93.

Lakoff, G. (2001) 'Metaphors of Terror'. UC Berkeley Previously Published Works: California Digital Library, University of California. Retrieved from: https://escholarship.org/uc/item/8zb6m59x

Landau, M. J., Keefer, L. A., and Meier, B. P. (2010) 'A Metaphor-Enriched Social Cognition', *Psychological Bulletin*, **136**: 1045–67.

Laydet, F. (1977) *The Coyote: Defiant Songdog of the West*. Norman, OK: University of Oklahoma Press.

Madden, F. (2004) 'Creating Coexistence between Humans and Wildlife: Global Perspectives on Local Efforts to Address Human-Wildlife Conflict', *Human Dimensions of Wildlife*, **9**: 247–57.

Madden, F., and McQuinn, B. (2014) 'Conservation's Blind Spot: The Case for Conflict Transformation in Wildlife Conservation', *Biological Conservation*, **178**: 97–106.

Manfredo, M. J. (2008) *Who Cares About Wildlife? Social Science Concepts for Exploring Human-Wildlife Relationships and Conservation Issues*. Springer: New York, NY.

McKenzie-Mohr, D. (2011) *Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing*. New Society Publishers: British Columbia, Canada.

Meléndez, T. (1982) 'Coyote: Towards a Definition of a Concept', *Aztlan*, **13**: 295–307.

Messmer, T. A., Reiter, D. K., and West, B. C. (2001) 'Enhancing Wildlife Sciences' Linkage to Public Policy: Lessons from the Predator-Control Pendulum', *Wildlife Society Bulletin*, **29**: 1253–9.

Nyhus, P. et al. (2003) 'Taking the Bite out of Wildlife Damage', *Conservation in Practice*, **4**: 37–43.

Opotow, S. (1990) 'Moral Exclusion and Injustice: An Introduction', *Journal of Social Issues*, **46**: 1–20.

—— (2003) 'What Makes People Care? Moral Inclusion and Conservation Psychology', *Human Ecology Review*, **10**: 166–7.

Parsons, E. C. M. (2015) 'Levels of Marine Human-Wildlife Conflict: A Whaling Case Study', in M. M. Draheim, F. Madden, J. B. McCarthy, and E. C. M. Parsons (eds.) *Human-Wildlife Conflict: Complexity in the Marine Environment*, pp. 79–92. Oxford, UK: Oxford University Press.

Philpott, R. (2002) 'Why Sharks May Have Nothing to Fear than Fear Itself: An Analysis of the Effect of Human Attitudes on the Conservation of the White Shark', *Colorado Journal of International Environmental Law and Policy*, **13**: 445–72.

Philo, C., and Wilbert, C. (2000) 'Animal Spaces, Beastly Places: An Introduction', in C. Philo, and C. Wilbert (eds.) *Animal Spaces, Beastly Places: New Geographies of Human-Animal Relations*, pp. 1–14. Routledge: New York, NY.

Shine, , R., and Greene, H. W. (2018) *Cane Toad Wars*. Berkeley, CA: University of California Press.

Robinson, M. J. (2005) *Predatory Bureaucracy: The Extermination of Wolves and the Transformation of the West*. Boulder, CO: University Press of Colorado.

Robson, C. (2002) *Real World Research*, 2nd ed. Blackwell Publishing: Malden, MA.

Rogers, C. M., and Caro, M. J. (1998) 'Song Sparrows, Top Carnivores and Nest Predation: A Test of the Mesopredator Release Hypothesis', *Oecologia*, **116**: 227–33.

Sable, P. (2013) 'The Pet Connection: An Attachment Perspective', *Clinical Social Work Journal*, **41**: 93–9.

Sabloff, A. (2001) *Reordering the Natural World: Humans and Animals in the City*. University of Toronto Press: Toronto, Canada.

Scarce, R. (2005) 'More Than Mere Wolves at the Door: Reconstructing Community Amidst a Wildlife Controversy, in A. Herda-Rapp, and T. Goedeke (eds.) *Mad About Wildlife: Looking at Social Conflict over Wildlife*, pp. 123–146. Boston: Brill.

Schlesinger, M., and Lau, R. (2000) 'The Meaning and Measure of Policy Metaphors', *American Political Science Review*, **94**: 611–26.

Silverstein, R. P. (2005) 'Germination of Native and Exotic Plant Seeds Dispersed by Coyotes (*Canis latrans*) in Southern California', *Southwestern Naturalist*, **50**: 472–8.

Sovada, M. A., Sargeant, A. B., and Grier, J. W. (1995) 'Differential Effects of Coyotes and Red Foxes on Duck Nest Success', *The Journal of Wildlife Management*, **59**: 1–9.

Sprague, R. R., and Draheim, M. M. (2015) 'Hawaiian Monk seals: labels, names, and stories in conflict', in M. M. Draheim, F. Madden, J. B. McCarthy, and E. C. M. Parsons (eds.) *Human Wildlife Conflict: Complexity in the Marine Environment*, pp. 117–133. Oxford, UK: Oxford University Press.

Sterling, B., Conley, W., and Conley, M. R. (1983) 'Simulations of Demographic Compensation in Coyote Populations', *The Journal of Wildlife Management*, **47**: 1177–81.

Tigas, L. A., Van Vuren, D. H., and Sauvajot, R. M. (2003) 'Carnivore Persistence in Fragmented Habitats in Urban Southern California', *Pacific Conservation Biology*, **9**: 144–51.

Whatmore, S., and Thorne, L. (1998) 'Wild(er)Ness: Reconfiguring the Geographies of Wildlife', *Transactions of the Institute of British Geographers*, **23**: 435–54.

White, L., and., and Delaup, A. (2012) 'A New Technique in Coyote Conflict Management: Changing Coyote Behavior through Hazing in Denver, Colorado', in S. N. Frey (ed.) *Proceedings of the 14th Wildlife Damage Management*, pp. 133–137. Lincoln, NE: University of Nebraska.

——, and Gehrt, S. (2009) 'Coyote Attacks on Humans in the United States and Canada', *Human Dimensions of Wildlife*, **14**: 419–32.