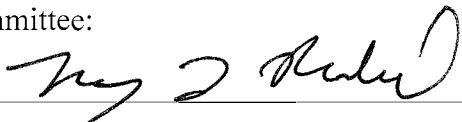


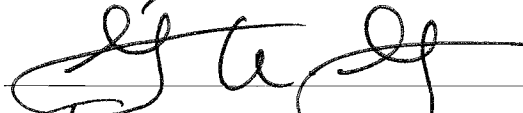
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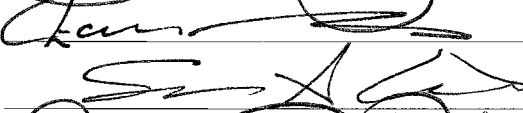
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A Dissertation  
Submitted to the  
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of  
George Mason University  
in Partial Fulfillment of  
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of  
Doctor of Philosophy  
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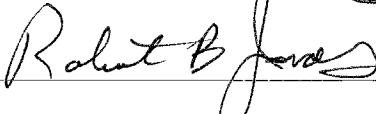
  
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## **DEDICATION**

To my amazingly supportive (and patient!) husband, David A. Harris. I could not have done this without you.

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## **ABSTRACT**

### **SOCIAL CONFLICT AND HUMAN-COYOTE INTERACTIONS IN SUBURBAN DENVER**

Megan M. Draheim, PhD

George Mason University, 2012

Dissertation Director: Dr. Larry L. Rockwood

In 2009, Greenwood Village and Centennial, Colorado (two bordering suburban towns south of Denver), passed coyote management plans in response to community concerns over human-coyote interactions. Although both plans are similar in many respects, they differ in some key ways, including over definitions of what constitutes aggressive coyote behavior and under what circumstances lethal control can be used. Greenwood Village's use of lethal control created controversy in the Denver metropolitan area and caused animal and wildlife advocates to get involved, while some wildlife groups have held up Centennial's management plan as a model. Using a mixed methodology, grounded-theory approach, this study looks at the root causes of the differing approaches of the two towns through social, political, and geographical lenses. It also explores the ways the social conflict has been sustained by means of differing constructions of people, coyotes, and coyote-human interactions by the stakeholders involved in the conflict, as well as

examining the variables that help predict whether a person is likely to support lethal control or not.

## **CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW**

### ***Introduction***

In this dissertation, I examined the different ways that two bordering suburban towns went about dealing with human-coyote conflict, and the subsequent social conflict that was a result of their differing strategies. Using a grounded theory approach and both quantitative and qualitative tools, I explored why the conflict occurred and how it is maintained, as well as the larger social issues that underpin the dispute. This exercise is useful not only to explicate this situation, but also to demonstrate how similar undertakings can be useful when conservation practitioners need to tackle other cases of human-wildlife conflict.

### ***Human-Wildlife Conflict***

Human-wildlife conflict (HWC) has been recognized as a growing threat to conservation goals (HWCC, 2006; Nyhus, Fischer, Madden, & Osofsky, 2003; Madden, 2004). HWC can be defined as involving:

. . . a direct and intense competition for resources resulting in real or perceived individualized harm to wildlife, humans, or their property. Human-wildlife conflict may be characterized by instances of crop raiding, livestock depredation, destruction of property by wildlife, disease transmission, or killing of wildlife by

people who experience or perceive actual or potential threats to themselves, their family or their property (HWCC, 2006).

Such conflicts are complex and multi-faceted, and are likely to increase over time as wildlife and humans continue to compete for access to the same scarce resources (Madden, 2004). In addition to the human costs (in income, food, and in the worst cases, life), HWC undermines conservation efforts (HWCC, 2006; IUCN, 2004) and often develops into human-human conflict.

HWC is not limited to any particular type of animal (Manfredo & Dayer, 2004), although examples of charismatic megafauna species come to mind, such as elephants and wolves. It should be noted, in fact, that often the actual damage from animals such as birds and insects is worse than that caused by charismatic megafauna, but the community involved in the conflict often focuses on the larger, charismatic species. Because of this, perception of conflict is as, or even more, important than actual damage, and so it is important to examine the social drivers behind HWC (Madden, 2004).

Although HWC might be most commonly thought of in the context of rural areas, HWC also occurs in urban areas. One study found that urban homeowners spent considerable time and expense in attempting to resolve HWC with various urban wildlife species. In addition, they also spent considerable time and money trying to attract species that they viewed positively. Urban residents seem to have a strong interest in wildlife, either for pleasure (such as feeding and watching birds) or as an inconvenience (such as repairing damage caused by wildlife) (Conover, 1997). In the Chicago metropolitan area, coyotes are perceived by residents as being the greatest local wildlife threat to human

health and safety (Gehrt, 2004c). Because of this, seeing or hearing a coyote, regardless of actual damage, can be enough to cause residents to want a coyote control program.

### ***The Importance of Urban Wildlife***

The world is increasingly becoming urbanized; over 50% of the world's human population now lives in cities (United Nations, 2007). Because of this, a larger percentage of land in the United States is more likely to contain generalist species such as coyotes, which are adaptable to habitat fragmentation (Tigas, Van Vuren, & Sauvajot, 2003). In fact, coyotes appear to do remarkably well in urban and suburban areas that have fairly dense human populations (Gehrt, 2006).

While protecting endangered and threatened species is undoubtedly an important role for conservation biologists, it is important to keep in mind that species that are not endangered or threatened can still play a valuable role in the ecosystems in which they inhabit. For example, although coyotes are listed as a species of Least Concern in the IUCN's Red List, they have been found to indirectly boost local biodiversity in a variety of ecosystems. Through the process of mesopredator release, they have been shown to increase the number and diversity of indigenous birds in patchy habitats in California (Crooks & Soulé, 1999), rodent diversity in Texas (Henke & Bryant, 1999), ground-nesting song sparrows in Michigan (Rogers & Caro, 1998), plants in California (although in this case both native and non-invasive exotics) (Silverstein, 2005), and ducks in the Prairie Pothole regions (Sovada, Sargeant, & Grier, 1995).

When people urbanize an area, wildlife is rarely taken into account—space is not made for them (Capek, 2005). This results in an impoverished environment, both for animals and humans (Clayton & Myers, 2009). For example, Curtin (2009) explores the meaning of wildlife-viewing for dedicated wildlife tourists. Significantly, her research participants often felt that their favorite and most important interactions and wildlife-viewing experiences happened in their own backyards, or near their houses, rather on trips to faraway locations. They described the relationships they felt they had with many of these animals, and the satisfaction they had knowing that humans were sharing their environment with wildlife. The positive psychological benefits the participants gained through wildlife-viewing (including spiritual fulfillment, feelings of well-being, time to contemplate, and an awakening of the senses) were similar whether the animals were viewed on a tour on the other side of the world or in their own neighborhood.

In fact, urban parks and wildlife can be seen as an antidote to the traditional Western dualistic conceptions of humans and nature as being separate. For example, Clayton and Myers (2009) describe the importance of urban parks:

When nature is found in human areas, it may discourage the relegation of “human” and “natural” to separate spheres and encourage a perception that a typical human lifestyle should include exposure to nature. As environmental historian Roderick Nash put it, “A meaningful relationship with nature does not necessarily depend on a rejection of the urban context” (2005, p. viii).

In addition, experiences with so-called “managed nature” such as urban parks and zoos “have the potential to feed back into . . . attitudes, strengthening people’s perceived connections to the natural world and possibly their support for conservation” (Clayton & Meyers 2009, p. 120). It is likely that the animals found in such areas, including native

urban wildlife, are a part of this mechanism. In fact, the psychological benefits of being in urban parks actually increase as biodiversity increases (Fuller, Irvine, Devine-Wright, Warren, & Gaston, 2007).

Dearborn and Kark (2009) cite seven motivations for protecting urban biodiversity, ranging from the biocentric to the anthropocentric: 1) Preserving local biodiversity and protecting important populations and rare species; 2) Creating stepping stones or corridors for wild populations; 3) Understanding and facilitating responses to environmental changes; 4) Connecting people with nature and providing environmental education; 5) Providing ecosystem services; 6) Fulfilling ethical responsibilities; and 7) Improving human well-being (p. 434). As the *de facto* apex predator in many urban systems, coyotes can be important drivers for all of these motivations. In addition, as humans are more likely to see value in what they experience directly, experiencing local wildlife by urban residents might garner support for wider conservation efforts (Dunne, Gavin, Sanchez, & Soloman, 2006).

### ***Coyote Ecology***

Although, as this dissertation will show, humans construct different realities to explain coyotes and their behavior, ecological studies can tell us much about their behavior that will help place these social and psychological constructs in context. Coyotes are an especially intelligent and adaptable species, which enables them to live close to humans and survive attempts to eradicate them (Bekoff, 1995; Gehrt, 2006). In fact, since European colonization of North America, the natural coyote range has



expanded tremendously, from a relatively narrow portion of central west to the entire continent (Figure 1) (Parker, 1995). Coyotes are generalists in their diet, and will eat anything from small prey items (such as rabbits and rodents) to fruits and other vegetation; they will also make use of other available food sources, such as unsecured garbage, pet food left outside, and compost piles (Bekoff, 1995; Fox & Papouchis, 2005; Gehrt, 2006; McClure, 1996).

Coyotes often tend to avoid humans, either through spatial or temporal separation (Andelt & Mahan, 1980; Crooks, 2002; Odell & Knight, 2001; Riley et al., 2003; Tigas, Van Vuren, & Sauvajot, 2002), and so are most often active during the night and at dawn and dusk in highly populated areas. However, coyotes are physiologically adapted to daytime hunting and foraging, and when they are not experiencing human persecution will revert to diurnal behaviors (Kitchen, Gese & Shauster, 2000); thus it is not unusual to see a coyote during the daytime (Fox & Papouchis, 2005). Most urban coyotes, however, are rarely, if ever, seen by humans. In his on-going study of coyotes in the Chicago metropolitan area, Gehrt has found radio-collared coyotes lying under cover (beneath, for example, a large bush) only steps away from areas where humans are walking by in large numbers (Gehrt, 2004a; Gehrt, 2004b).

Coyotes that have become habituated to humans through food sources (humans either intentionally or unintentionally providing food for them) are often at the heart of human-coyote conflict. When coyotes start to associate humans with food sources, their behavior can become bolder, leading to coyotes that can become aggressive towards humans (Bounds & Shaw, 1994). In fact, the only recorded fatal attack by a coyote in the

United States involved a food-habituated coyote<sup>1</sup> (Fox & Papouchis, 2005), when in 1981 a three-year old child, left unattended in a backyard, was killed by a coyote that had been purposefully fed by humans in the neighborhood and the yard where the girl was killed.

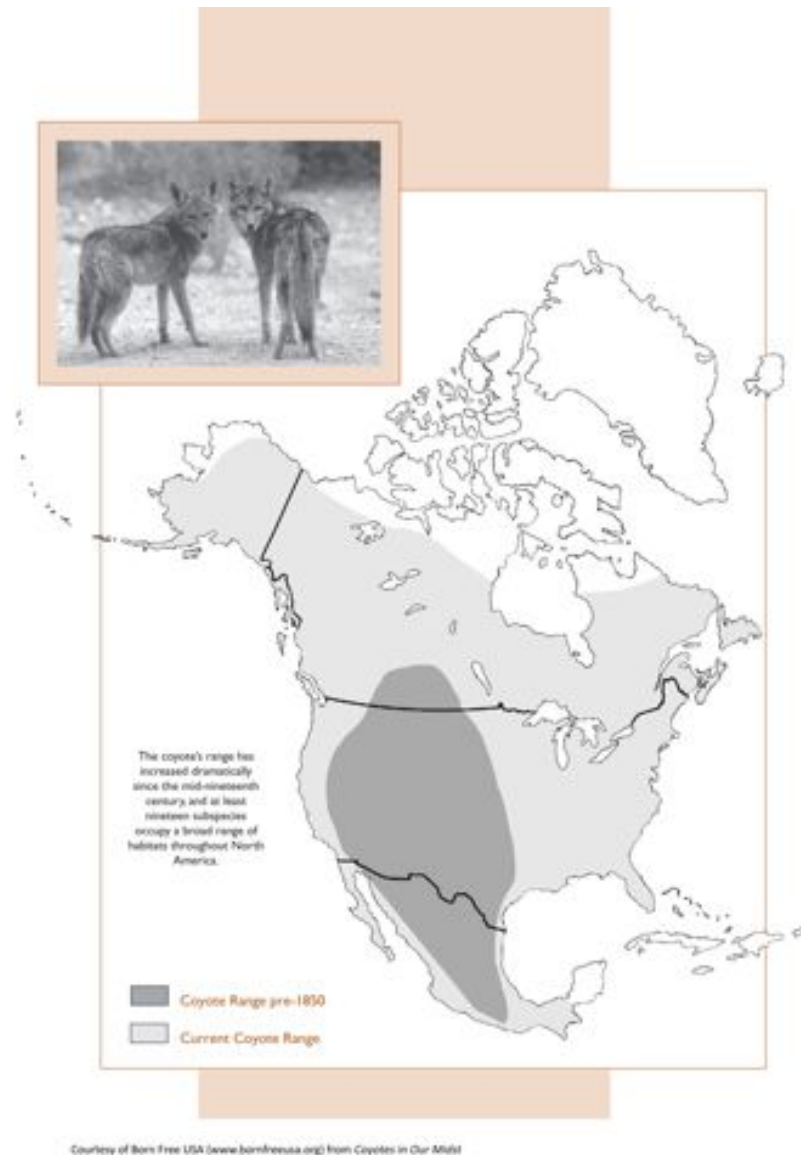
When lethal control is not desirable, either because of ethical, ecological, or human safety concerns, non-lethal methods that potentially mimic the persecution effects of some methods of lethal control (including shooting coyotes) can be implemented. Dubbed hazing, this management strategy includes a wide-variety of activities designed to scare coyotes (and so modifying their behavior so that they do not want to be close to humans) without injuring or killing them. Hazing can include actions as simple as yelling and waving your arms at a coyote, or throwing objects (such as “coyote rattler,” a can with pebbles taped inside of it) near the coyote. Trained management officials also sometimes employ non-lethal projectiles such as paintballs. One of the benefits of hazing is that most of the tools and techniques are easily used by members of the public, enabling them to “train” their local coyotes and so directly reduce the potential for conflict. However, although there is ample anecdotal evidence that hazing works, it is as yet unclear under what circumstances hazing is most effective.

For most of post-European contact American history, humans have utilized a variety of lethal means to try to eradicate and/or control coyote populations (Robinson, 2005), however these results have largely been ineffective in the long-term (perhaps best captured by the expansion of coyotes’ range since large-scale lethal control was started, see Figure 1). This is true for a variety of reasons, including the flexibility that coyotes

---

<sup>1</sup> The more recent death of a woman in Canada is not yet understood.

display in their behavioral ecology (Bekoff, 1995; Fox & Papouchis, 2005). Coyotes can live individually, in pairs, or in packs with multiple family members. In pack situations, only one female tends to breed, similar to wolves. However, when coyotes are under lethal pressure, the pack bonds will dissolve and multiple females from the same group might breed, which over time can cause an increase in population numbers (Connolly & Longhurst, 1975; Sterling *et al.*, 1983). Temporarily decreased competition for food in areas where lethal control has been implemented means that more coyote pups are likely to survive until breeding age (Crabtree & Sheldon, 1999). In addition, in areas where a temporary vacuum is created by killing local coyotes, transient coyotes who have not yet found a home range will likely take over the territory, filling the vacuum (Crabtree & Sheldon, 1999).



**Figure 1. Current and historical coyote ranges. Courtesy of Born Free USA.**

***Policy and Attitudes***

A full description of the history of predator control policy in the United States is beyond the scope of this project, but a brief discussion of coyote control is warranted.

Although all large predators in the United States have been under lethal pressure since the

arrival of European settlers, coyotes have been killed in very large numbers. In 1934, the USDA (the government agency charged with federal predator control) stated that their goal was the “total extermination of the coyote in the United States” (in Fox & Papouchis 2005, p. 11). Between 1916 and 1999, almost six million coyotes were killed by the federal government, not including those killed by private citizens and state/local jurisdictions (Fox & Papouchis, 2005). In FY 2004, the federal government killed at least 75,674 coyotes (USDA-APHIS, 2004); again, this number does not represent the coyotes killed by individuals and state/local governments.

In many places, the emphasis on rural predator control (mostly related to livestock depredation) is shifting from widespread, non-targeted lethal control to an increase in the use of methods that are primarily non-lethal to both prevent conflict and target only the individuals who have participated in predation of livestock (Sillero-Zubiri & Switzer, 2004). These non-lethal methods also focus on changing human behavior and increasing tolerance for the presence of predatory species (Sillero-Zubiri & Switzer, 2004), and in most cases are preferred by the general public. For example, in Minnesota, while most respondents supported wolf control to decrease livestock predation, most also preferred more humane techniques and targeted approaches, with the exception of farmers (Kellert, 1985). Non-farmers seem to be more likely than farmers to prefer non-lethal methods of animal damage control for all species, while farmers are more likely to prefer whichever methods work best, whether they are lethal or non-lethal. However, with coyote control, farmers tend to prefer lethal methods regardless of efficacy, despite the fact that farmers believe that coyotes are responsible for less livestock predation than non-farmers (McIvor

& Conover, 1994). Livestock producers more commonly use lethal control than non-lethal control, in part because of the belief that these methods are less expensive, take less man-power, and are more practical for large areas of land (Mitchell et al. 2004). These methods tend to target as many coyotes as possible instead of targeting specific animals that have preyed upon livestock. However, the public as a whole disapproves of “techniques that kill large numbers of innocent animals” (Mitchell, Jaeger, & Barrett, 2004, p. 1214).<sup>2</sup>

People who grew up in urban areas have less support for predator control than those from rural areas (Martínez-Espiñeira, 2006; Reiter, Brunson, & Schmidt, 1999). Throughout all of the regions that the Reiter et al. study surveyed, there was support for predator control, but respondents had concerns about specific methods, with non-lethal and targeted methods seen as more humane and preferred in all cases except for rodent control (Reiter et al., 1999). Men were more likely to support the use of lethal coyote control than women (Martínez-Espiñeira, 2006), which has often been the case (Koval & Mertig, 2004).

Personal experience can be very important in forming attitudes (and therefore management preferences) towards a species, and there is evidence to suggest that

---

<sup>2</sup> The use of the word “innocent” here implies that coyotes have knowledge of right and wrong in terms of what species coyotes can legally, so to speak, target. Western culture has a history of declaring certain animals guilty or innocent of crimes, even to the point of holding trials for accused animals during certain periods (Lopez 1978). Both Western Europeans and Euro-Americans have consistently placed symbolic guilt and innocence on predators and livestock, respectively (Coleman 2004). The pervasiveness of this use of language is clear even today, when even peer-reviewed journal articles continue to use words such as innocent in the context of predators preying on domestic animals, as seen in the aforementioned Mitchell et al. article.

attitudes towards a species are directly related to whether or not that species causes an individual harm or inconvenience (Bjerke & Ostdahl, 2004). One study found that those who had experienced problems with coyotes were more likely to approve of lethal control (while those who had recently seen a coyote were less likely to support lethal methods) (Martínez-Espiñeira, 2006), and another study found that having a negative experience with a species commonly found in urban areas increased negative feelings towards other species that are known to come into conflict with humans in urban areas (in this study, the list included cats, dogs, rats, mice, gulls, crows, magpies and pigeons) (Bjerke, Ostdahl, & Kleiven, 2003).

Traditionally American urban residents held fairly positive attitudes towards predators, but the situation might be changing as more urban and suburban residents are seeing and interacting with a medium-sized predator in their own backyards and parks. Studies in other countries have shown that people often support the existence of predators, as long as they are not living close to urban areas (e.g. Bjerke & Ostedahl's 2004 study in Norway). A Swedish study showed that people who were multigenerational city residents actually held more negative views of wolves (and wildlife in general) than those who lived in rural areas, or urban residents who had regular experience in rural areas (Heberlein & Ericsson, 2005). Another Norwegian study showed evidence that negative attitudes towards large carnivores peaked as they arrived near a heavily human populated area, and then decreased over time (as people presumably adjust to their presence) (Zimmermann, Wabakken & Dotterer, 2001). While many studies have shown that urban residents tend to hold more favorable attitudes towards predators than rural

residents (Hook & Robinson, 1982; Kellert, 1985; Williams, Ericsson, & Heberlein, 2002), the above studies demonstrate that the situation is more complex, especially when the species in question starts to become prevalent in urban and suburban areas. Although attitudes towards predator management tools (various forms of lethal and non-lethal control) have been studied in a variety of settings, both urban and rural, few studies have looked at other policy issues that might cause people to support a particular management strategy. For example, Clark, Curlee, and Reading (1996) discuss the importance of private property rights for some who hold negative attitudes towards predators in rural areas, but less is known about similar issues in urban areas. In general, few studies have examined variables that might cause people to support lethal control other than demographic characteristics; for example, gender can be an important influence on people's attitudes towards wildlife and wildlife management policies (Bjerke & Ostdahl, 2004; Bjerke et al., 2003; Casey, Krausman, Shaw, & Shaw, 2005; Czech, Devers, & Krausman, 2001; Lauber, Anthony, & Knuth, 2001). However, it is likely that, given the complex nature of urban and suburban residents' relationship with wildlife, there are other important variables that help account for management preferences and whether or not residents think that they can coexist (or want to try to coexist) with species such as coyotes. This study aims to expand our understanding of what some of these variables might be.



### ***Constructing the Coyote and Each Other***

Researchers who adopt a constructivist point of view attempt to describe and understand how people “construct meanings and actions in specific situations” (Charmaz, 2006, p. 130). Using this reasoning, different people can construct different meanings for the objects, people, and animals around them, as well as meanings attached to the actions that people and animals might take. These meanings are not static, but can change over time and in different contexts (Charmaz, 2006). This project explores many of the different (and at times competing) meanings that people have attached to the stakeholders (both human and animal) in the conflict over coyotes in suburban Denver.

Animals play an important role in human culture. Harold Herzog, an expert on human-animal relations, stated: “It would be difficult to overestimate the significance of animals in the social and psychological life of our species. Images of animals are everywhere: in our language, religion, dreams, television programs, and folklore. The feelings we exhibit toward our fellow creatures are intense, complex, and paradoxical” (Herzog & Burghardt, 1988, p. 75). Some have claimed that we best understand animal species as human-constructs, with mythology, experiences, and folklore playing at least as important a role as the biology and ecology of the species in question (Kellert, Black, Rush, & Bath, 1996; Lopez 1978). Canids and other large predators have been particularly important to human cultures, both positively and negatively (Lopez, 1978).

Coyotes carry many different meaning in modern Chicano and North American indigenous cultures (Meléndez, 1982). Often playing the role of the trickster, the social

meaning of the coyote shifts from story to story and place to place, sometimes surprisingly quickly:

The coyote in Mexican folk narratives is one of the most elusive characters because his role is constantly shifting and the sympathies of the audience along with it. One moment is the predatory beast who received the justice due him for his sly and avaricious ways, and in another moment he is the underdog who is mercilessly beaten down (Meléndez, 1982, p. 295).

This shifting of roles from an animal to despise to an animal that should elicit sympathy is also played out in the modern European-American tradition towards the species, as will be seen in chapter 2 of this dissertation.

The coyote often played an important role in pre-Columbian North American indigenous cultures, whether as the creator of the world or an animal closely associated with the deities of song, dance, games, and abundance. In later folklore, the coyote often played the role of the trickster, fool, or mediator, and was commonly seen as an important figure to learn from. When Europeans arrived in the New World, the meaning of the word coyote shifted into something more negative. In Colonial Latin America, “coyote” became a derogatory term that described people of mixed European and indigenous descent, describing them as in-between one world and the other. In contemporary times, “coyote” has been used as a term to describe people who illegally smuggle human beings into the United States from Mexico, again perhaps stressing the “in-betweenness” that coyotes can symbolize (Meléndez, 1982).

European settlers to North America brought with them European attitudes towards large carnivores—that carnivores were competitors and threats to human interests—as well as the belief that lethal predator control was a necessary component of converting

the continent from a wild place to a properly civilized land (Messmer, Reiter, & West, 2001). In 1861, Mark Twain saw a coyote on a train trip to the American West, and described them in this passage using language and feelings about the species that were common among European-Americans at the time, and remain today (note that he used similar terms to describe American Indians).

The coyote is a long, slim, sick and sorry-looking skeleton, with a gray wolfskin stretched over it, a tolerably bushy tail that forever sags down with a despairing expression of forsakenness and misery, a furtive and evil eye, and a long sharp face, with slightly lifted lip and exposed teeth. He has a general slinking expression all over. The coyote is a living, breathing allegory of Want. He is always hungry. He is always poor, out of luck, and friendless. The meanest creatures despise him, and even the fleas would desert him for a velocipede. He is so spiritless and cowardly that even while his exposed teeth are pretending a threat, the rest of his face is apologizing for it. And he is so homely!—so scrawny, and ribby, and coarse-haired, and pitiful.

Twain continues:

He will eat anything in the world that his first cousins, the desert-frequenting tribes of Indians, will, and they will eat anything they can bite. . . . It is considered that the coyote, and the obscene bird [vulture], 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 Leydet, 1977, p. 97-100).

Although all large predators in the United States have been persecuted since the arrival of European settlers, an exceptionally large number of coyotes have been killed; perhaps because coyotes are well adapted to surviving under severe persecution (unlike many other large predators) they have been available for longer and in greater numbers for people to kill. Today, predators often elicit strong emotions, either negative or positive. To some, predators are killers and to be feared; for others, predators are

symbolic of the beauty and power of nature and are even used as totems in modern culture (sports teams and cars, for example) (Fascione, Delach, & Smith, 2004). These two attitudes are often at odds with each other and often make predator conservation and coexistence programs controversial. Humans sometimes admire predators until they interfere with human aspirations. For example, in 2005 a bear entered Germany for the first time since 1835. He was welcomed and nicknamed Bruno—until he killed a few sheep, at which point he was killed (Stolzenburg, 2006). However, there are cultures that have learned to coexist and admire—even learn from—predators (Lopez, 1978). Therefore, an attitudinal shift towards coexistence is possible (Stolzenburg, 2006).

The problems that arise over how we construct the meaning of animals and human interactions with these animals is not limited to coyotes, of course, or even necessarily to living animals—nature as a whole also is constructed in multiple ways. Whatmore and Thorne (1998) argue that modern conservation biology places wildlife in a realm outside of the human world, in a binary system where humans and society make up one part of the equation and animals and nature the other. Research suggests, however, that this belief has always been a fallacy. For example, there is now greater understanding that the “wilderness” found by the first European settlers to North America was in fact a dynamic landscape extensively modified by American Indians (Mann, 2006).

Just as traditionally wildlife professionals have viewed the world in this binary system, much of the American public still sees nature and culture as separate. In fact, this dualism has been called “the most notorious feature of the Western nature-habitus” (Sabloff, 2001, p. 27). In urban areas, where wildlife is increasingly mingling with large

human population centers, the clash between the nature/culture dualistic perception and the reality of living amidst wildlife causes serious conflict, both between wildlife and people, and between groups of people who disagree about what to do with this turn of events (Philo & Whilbert, 2000; Whatmore & Thorne, 1998). A change is perhaps in order, from thinking in the binary “us versus them” categories currently common in North America, to a more fluid approach that “configures ‘human’ and ‘animal’ categories and lives in intimate, if not necessarily proximate, ways” (Whatmore & Thorne, 1998, p. 450).

Taking a constructionist approach to understanding humans’ conceptions of nature and environmental issues has proven useful (Evernden, 1992; Goedeke & Herda-Rapp, 2005) to understanding human-nature relations. This approach specifies that people, as both individuals and as members of larger communities and cultures, create cultural meanings of nature above and beyond the physical reality of the material world. These constructions of nature are important when attempting to resolve environmental problems such as human-wildlife conflict, as conservation scientists must understand the motivations of the human communities with which they work, and because much conflict over environmental issues stems from different (sometimes profoundly so) constructions of nature existing in the same time and at the same place (Goedeke & Herda-Rapp, 2005). In fact, even what is considered an environmental issue depends on the construction of nature (Goedeke, 2005; Goedeke & Herda-Rapp, 2005); why one urban resident feels that the presence of a coyote near her house is not a problem, or even something to be happy about, while another feels that this is a serious problem, stems

from their differing ideas of what human's relationship to nature should be. For example, in Campion-Vincent's work on the recovery of wolves in the French Alps (2005), she points out that both the sheep farmers and the nature protection organizations in conflict with each other both claimed to be proponents of "maintain[ing] and enrich[ing] natural territories and milieus" (p. 106); the conflict arose because each defined this act and belief in different ways.

Just as different people can construct different meanings of coyotes, so they also can construct different images of other people. Harker and Bates (2007) analyzed ten years worth of editorials and letters to the editor about the black bear hunt in New Jersey. Using constructionist theory, the authors analyzed the social construction of the conflict between those who opposed the hunt and those in favor. In New Jersey, each side created mutually exclusive constructions and attempted to de-legitimize the other. The study offers insight into the discourse of the conflict (those who are pro-hunt are seen by the anti-hunt faction as "bloodthirsty," "antiquated," and "savage," while the pro-hunt camp views the anti-hunt supporters as "irrational, wackos of the PETA-Qaeda cult," and "idiotic romantics") (Harker & Bates, 2007). Although the authors came to the conclusion that the situation was intractable as it currently stands, the discourses at play in the conflict demonstrate that the only way to resolve such situations is to find a common language as a means of overcoming the polarization that so often characterizes conflict over natural resources and wildlife. To do this, of course, the constructions formed during the conflict must be understood. Some research has demonstrated that much of the American public fundamentally shares similar views of the importance of

environmental issues (Kempton, Boster & Hartley, 1995); if this is true, then shedding light on the constructions involved in the conflict might enable conservation practitioners to develop strategies to tap into these shared values.

At the root of many cases of HWC are concerns over other societal issues—for example, concerns over wider changes in a community (Capek, 2005; Scarce, 2005). Scarce cautions those who seek to resolve human-wildlife conflict to understand both the constructions of nature and the constructions of the community in conflict situations; when dealing with communities on the urban-rural interface, this might especially come into play. Understanding the social constructions not only of coyotes and nature in urban areas, but also of the identities of residents of the area, is important when attempting to fully explain how a conflict is captured in discourse. Issues of identity become increasingly important in conservation issues when conditions are changing, as Wieczorek Hudenko, Decker, and Siemer (2008) found, when many residents of Westchester County, NY, felt that newcomers (people who had recently moved from the more urban parts of the area) were more likely to have a negative reaction to coyotes than those who were used to the more suburban/exurban Westchester County. One respondent said: “I think they’re more anti-coyote, they’re scared. They don’t want them in their neighborhood. They think they don’t belong. They moved here from the city for the rural experience, but it’s like ‘wait a minute, there are coyotes?’” (9). Another said: “People in town [ex-urbanites] aren’t familiar with the wildlife and they think it’s so unusual, they don’t like it” (p. 11).

In another case, when wolves began to naturally migrate back into the French Alps after an extended absence, the reaction of livestock farmers went beyond their potential losses to the wolves. Instead, farmers took the return of wolves as a threat to their very way of life, and felt a sense of abandonment as much of the rest of the country celebrated the return of these large carnivores. The farmers' very identities as pastoralists who maintained an important status in society (even as protectors of the open spaces of the Alps) were threatened (Buller, 2008), especially as the world has become more urbanized over time.

### *Pests*

People or institutions who are able to define and frame problems are then able to also define the preferred solution to the problem; therefore, it is understandable that claims-makers (such as politicians, community leaders, NGOs and the media) make efforts to be able to first delineate the parameters of issues (Goedeke, 2005; Goedeke & Herda-Rapp, 2005). In Goedeke's study of river otter reintroduction in Missouri (2005), she found that those who defined otters as a problem used discourse that portrayed fish as more important than otters, and otters as being out-of-place in modern-day Missouri. In addition, those who sought to frame otters as problematic inscribed the animals with negative values: they were competitors, criminals, murderers, thieves, and vermin. Otters were granted agency (it was believed that they had control over what they did and at least to some extent made their own decisions—they did not act on instinct alone, or behave like machines), and so stole fish from fishponds with full knowledge of what they were



doing. Those who sought to frame otters as an asset to Missouri waterways, on the other hand, portrayed otters as ecologically valuable, playful animals, that held great recreational value (other studies have shown similar divisions between the pro and con descriptions of animals; for example, cattle egrets in Arkansas were described as beautiful, remarkable, innocent and in need of protection, useful, and valuable; or ugly, disease-ridden, unremarkable, competitors for space, and standing in the way of progress, respectively (Capek, 2005)). Goedeke points out that wildlife agencies are often overlooked when discussing attitudes towards wildlife, but their attempts to define the problem are vital. In this case, the agency took a middle of the road approach: otters were important ecologically, but when there were too many, they could become pests. This definition of otters as pests, promoted both by the Missouri DOC and the Missouri residents who were proponents of lethal control for the otter population, eventually gained currency; therefore, the solution of a trapping season for otters was seen as the appropriate solution. In effect, those who defined the problem were able to come up with the solution.

Jerolmack (2008) traces the rise of the negative discourse about urban feral pigeons through readings of newspaper articles over almost a century. Pigeons were not always depicted as “rats with wings” in America; this description became the dominant discourse only in the 1930s, when they were linked through language with human social “problems” of the day, such as homosexuals, drunks, and the homeless. Derogatory language was used towards all of these groups, pigeons included. As Jerolmack says: “There are issues of interests, authority, and power that go a long way in determining

which animals become elevated to the status of a public problem” (p. 75). Framing animals as pests or vermin can serve as a distancing mechanism to make it easier for a person to dismiss the agency of that animal, despise it, and perhaps even kill it (Jerolmack, 2008). Coyotes, of course, are commonly categorized as a pest or vermin species in state and local wildlife regulations.

These distancing mechanisms can work in two ways: either the species in question is not granted agency (it is not believed that they are sentient animals with their own lives), or negative human characteristics are attributed to the species—they are criminals, murderers, and so on, aware of and responsible for actions which of humans do not approve. Even those who seek to frame predatory species in a more positive way can fall into this trap. For example, Campion-Vincent (2005) reports that some nature protection organizations, seeking to promote the idea that wolves are not a major threat to sheep in the French Alps, blamed feral and stray dogs for many of the attacks attributed to wolves by calling the dogs “murderers.”

This way of thinking has enabled management strategies to be created that have been detrimental to predator populations both historically and in the present. European settlers embarked on a journey of lethal predator control that continues to this day (Coleman, 2006; Robinson, 2005), even as science has demonstrated the ecological downsides to lethal control, and, in cases like the coyote, its ineffectiveness (Fox & Papouchis, 2005). Wildlife managers and (perhaps more importantly) those who oversee them and determine their budgets are able to look at coyotes as a homogenous group and so determine a course of action that does not take their status as independent agents into

account. They are objectified, instead of recognized as subjects (Whatmore & Thorne, 1998); therefore, killing them becomes acceptable.

The pest label is consistently applied to many species, including coyotes, which can have a profound impact on ecosystems (Crooks & Soulé 1999; Henke & Bryant, 1999; Rogers & Caro 1998; Silverstein, 2005; Sovada et al., 1995). In addition, these species can be important for promotion of conservation ethics amongst an urban audience (Berger, 2006; Dunn et al., 2006). Species labeled pests are often given little consideration beyond how to control their numbers and behavior so as to not interfere with humans. At times, they are even excluded from research into human-wildlife conflict—for example, a recent review of human-felid conflict defined human-wildlife conflict as “the situation that arises when behavior of a *non-pest*, wild animal species poses a direct and recurring threat to the livelihood or safety of a person or a community and, in response, persecution of the species ensues” (Inskip & Zimmermann, 2009, p. 18; emphasis added). This definition is problematic for several reasons: first, as discussed above it potentially excludes a large number of important species from consideration; second, this definition leaves unanswered the process by which a species becomes defined as a pest. Certainly many ranchers in the American southwest would consider the Mexican wolf to be a pest, and yet in the conservation biology and wildlife management communities the species is considered a valuable and highly endangered species. This project will show how differing meanings of coyotes—from native wildlife that deserves to live near people to pest—has steered much of the conversation around and actions

towards human-coyote conflict. “Pest” is a powerful label, able to demote the importance of the existence of an entire species, or even to make it desirable to eradicate the species.

Many argue that the tendency towards a dualistic view of the “natural” separation of human culture and nature has solidified in geography as well (Jerolmack, 2008; Philo & Wilbert, 2000). Animals that are seen as “out of place” by transgressing human-imposed boundaries are likely to be labeled pests, which in turn justifies attempts to eradicate them—they are “pollutants” of a sort (and in fact Jerolmack states that “separating and removing impurity is one of the hallmarks of modernity” (p. 88)). He theorizes that if this is correct,

. . . we would expect that the animals most likely to be deemed problem species are those that most flout our imaginative geographies. There appears to be evidence of this, such as the wolves . . . foxes . . . bears, and cougars . . . that become open season the moment they cross property lines in rural or suburban areas. In the city, most any public place is out of bounds for animals unless they are controlled or civilized. Invasive species takes on new meanings (p. 89).

When wolves migrated naturally back to the French Alps, those opposed to their reappearance sought to classify them as an “invasive” or “alien” species (which would then remove the protections that conservationists hoped to maintain), even though wolves had inhabited the area before they were eradicated by humans (Buller, 2008). Coyotes then pose an interesting question as they migrate into urban areas: do they belong, or do they not belong? Although biologically the coyotes of Centennial and Greenwood Village in Colorado are a native species (Parker, 1995), as this study will show some residents of the two towns feel that they do not now belong in an area so heavily developed with human building and activity, which could lead them to adopt a “pest” label for the local

coyote populations. Other residents feel that coyotes do in fact belong; that they were here before humans (or at least before modern human development), and so have earned a place to exist alongside us.

Moral exclusion is a process where “individuals or groups are perceived as *outside the boundary in which moral values, rules, and considerations of fairness apply* [emphasis original]. Those who are morally excluded are perceived as nonentities, expendable, or undeserving; consequently, harming them appears acceptable, appropriate, or just” (Opatow, 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” (Opatow, 1990, p. 2). These definitions could be used to explore whether an individual’s moral community includes local wildlife, and whether or not that results in him/her supporting lethal control or coexistence. While traditionally in Western cultures one had to be human to be included in a moral community, this assumption has been challenged. For example, Singer (1975) was an early proponent that cognitive awareness was more important than species when assigning membership to a moral community—most animals deserve fair treatment and the ability to live, he argued. Earlier yet, Leopold (1949) proposed that entire ecosystems—both the biotic and abiotic components—deserved inclusion in moral communities.

Opatow (2003) describes the importance of moral inclusion when dealing with conservation issues. Based on previous research, she found that feelings of disconnect with nature, threats, denial of harm, and denial of the rights of others (human and non-

human) to resources, amongst others, result in moral exclusion of nature and wildlife. Moral inclusion and exclusion are defined at least in part by culture. Opatow (1990) cites the relevant example of whaling to make this point. Currently, North Americans are by and large adamantly anti-whaling, and there are many campaigns devoted to decrying Japan's continued whaling programs. However, whaling was, until relatively recently, a vital part of the economy of some regions of the United States. Culture changed over time, and today many North Americans include cetaceans in their moral communities. Also relevant to conservation issues (and certainly to any discussion of humans and predators), conflict tends to reinforce group boundaries and decrease concern for those outside the community (Opatow, 1990). It would follow that, if coyotes are typically defined as being outside the moral community, as human-coyote conflict (both real and perceived) increases in a community, individuals and the community at large will be less likely to consider the fairness of their actions towards coyotes. Likewise, perceived similarity can shape moral inclusion and exclusion (Opatow, 1990).

Although some researchers have looked at how and why certain species in certain contexts are labeled pests, there is little research that explores why some people in urban areas label a species a pest and others do not. This study aims to help expand our knowledge of the mechanisms behind this phenomenon.

Coyotes and humans have a long and varied history, from being seen as a valued cultural figure to a pest that needs to be exterminated. In a rapidly urbanizing world, coyotes' ecology and behavioral flexibility enable them to live comfortably in human-dense neighborhoods. Proximity to wildlife often results in human-wildlife conflict, and

this is increasingly true with humans and coyotes. As conflict increases, communities will need to develop effective ways of preventing and mitigating negative interactions between humans and coyotes. This dissertation examines the responses that two towns had to an increasing awareness of both existing and potential human-coyote conflict and the social results of their different approaches. In the next chapter, I will compare the two towns and their management plans. In the third chapter, I will explore how different stakeholders construct images of each other and of coyotes, and also how they perceive potential threats and the effectiveness of various management plans. In the fourth chapter I will examine why human-coyote conflict happens in these two towns and why they reacted differently. In the fifth chapter, I will discuss the results of a survey undertaken to more closely examine some of the differences between the towns in respect to coyotes, as well as create a model that will help predict how much a person would support or not support lethal control. In the final chapter, I will summarize my findings and discuss future research needs.

**CHAPTER 2:**  
**GREENWOOD VILLAGE AND CENTENNIAL, COLORADO**

*Community Characteristics*

This study is based in two towns, Greenwood Village and Centennial, Colorado, which are adjacent suburbs south of Denver in Arapahoe County. Greenwood Village was incorporated in 1950, while the land that is now Centennial was unincorporated Arapahoe County land until 2000. Located in the eastern plains region of Colorado, the towns share a semi-arid climate with short grasses being the predominant natural vegetation (Colorado State University Extension, 2010) (Figures 2 through 4). Centennial (28.2 square miles) has an extensive parks and open space network, with over 500 acres of parks, 800 acres of open lands and 40 miles of trails (City of Centennial, n.d.); it also borders on Cherry Hills State Park. Greenwood Village (8.3 square miles) also has abundant open space system with similar access to Cherry Hills State Park. Greenwood Village contains about 40 miles of trails and almost 160 acres of open space, including the 59-acre Marjorie Perry Nature Preserve (Greenwood Village, n.d).

Centennial is larger than Greenwood Village in both land and population, with 100,377 residents compared to Greenwood Village's 13,925. Racially, both of the towns' populations are a little under 90% white (Table 1), and their median age is likewise



similar, at 41.1 in Centennial and 42.1 in Greenwood Village (U. S. Census Bureau, 2011).



**Figure 2. Cherry Hills State Park.**



**Figure 3. Cherry Hills State Park, with housing development in background.**



**Figure 4. Cherry Hills State Park.**

**Table 1. Race in Greenwood Village and Centennial, Colorado.**

| Category                                   | Town              |            |
|--|-------------------|------------|
|  | Greenwood Village | Centennial |
| White                                      | 87.7%             | 87.3%      |
| Black or African American                  | 1.6%              | 3.3%       |
| American Indian or Alaskan Native          | 0.4%              | 0.4%       |
| Asian                                      | 7.2%              | 4.4%       |
| Native Hawaiian and Other Pacific Islander | 0.0%              | 0.1%       |
| Other                                      | 1.0%              | 1.6%       |
| Two or More Races                          | 2.1%              | 3.0%       |
| Hispanic                                   | 4.5%              | 7.4%       |

Note. US Census data tabulates Hispanic data separately, which accounts for the total being more than 100%. 2010 data.

Educational attainment in both towns is somewhat similar, with the majority of residents in both places having received a bachelor’s degree or higher; however, Greenwood Village does have a significantly higher percentage of college graduates (Table 2).

**Table 2. Educational attainment. Percentage of population over 25 years old.**

| Educational attainment         | Town              |            |
|--------------------------------|-------------------|------------|
|                                | Greenwood Village | Centennial |
| High school graduate or higher | 98.0%             | 96.9%      |
| Bachelor’s degree or higher    | 70.6%             | 54.2%      |

Note. From U. S. Census Bureau 2006-2010 American Community Survey Five-Year Estimates.

The similarities between the two towns do not extend to economic characteristics. On average, Greenwood Village residents tend to be wealthier than their Centennial counterparts; for example, the per capita income in Centennial is \$39, 872, while that in Greenwood Village is \$79,757, a difference of nearly \$40,000. Property values were also significantly higher in Greenwood Village; the median home value in Centennial is \$289,300, while in Greenwood Village it is \$757,600. Other economic characteristics point to a similar pattern (see Table 3). Both towns have similar poverty rates, well below the 2010 national rate of 15.1% (U.S. Census Bureau 2011), with Greenwood Village at 3.8% and Centennial at 4.7%.

**Table 3. Income data.**

| Income           | Town              |            |
|------------------|-------------------|------------|
|                  | Greenwood Village | Centennial |
| Median household | \$112,009         | \$79,690   |
| Mean household   | \$197,319         | \$102,119  |
| Median family    | \$147,468         | \$92,852   |
| Mean family      | \$241,655         | \$116,762  |
| Per capita       | \$79,757          | \$39,872   |

Note. From U.S. Census Bureau 2006-2010 American Community Survey Five-Year Estimates.

### ***Human-Coyote Conflict in Centennial and Greenwood Village***

Human-coyote conflict has periodically cropped up in the Denver Metro area, although this particular outbreak got its start in 2008. The description of the events that were the basis of the conflict in the two towns presented below comes from various interviews I conducted with officials, experts, and community leaders<sup>3</sup>.

#### *Greenwood Village*

For the last 15-16 years, Greenwood Village has been conducting lethal control on their coyote population, although for many years this program was little known in the larger community. In 2007, the town placed leghold traps in a popular recreational area, and subsequently two domestic dogs were caught. The dogs proceeded to bite their owner

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<sup>3</sup> Interviews were conducted from the fall of 2010 through the summer of 2011.

when he tried to free them. This and some related incidents led to a considerable amount of publicity about both the events and Greenwood Village's programs. A local humane society then sued Greenwood Village over their trapping program, and their trapping license was rescinded. As there is a state-wide ban on traps, with exceptions for livestock protection and public health and safety, Tri-County Health (TCH) had been issuing special permits to Greenwood Village for the trapping program; however, in the aftermath of the publicity, TCH stated that they could not find justification for the permits as they found no evidence that the coyotes were a public health or safety risk.

On the afternoon of New Year's Eve in 2008, the only direct human-related incident recorded in Greenwood Village occurred.<sup>4</sup> An adolescent boy claimed that a coyote charged him while he was walking home from a park. His mother reported it a week later, but did not stay at the police station to file a report. The local police department did follow up with her at a later date, and she gave a statement at that time. Some coyote experts and advocates felt that the situation was not fully explained or understood, based in part on the timing of the reports, and expressed skepticism to me that the events took place as told by the teenager and his parents. In early 2009, Greenwood Village applied again for a trapping permit, but TCH turned them down on the basis that they couldn't describe the offending coyote(s) in sufficient detail to ensure that they would actually be getting the coyote(s) involved in the case.

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<sup>4</sup> See Appendix One for a transcript of Matthew Scheper's (the teenager in question) testimony to the Greenwood Village town council.

After TCH turned down their permit request, on February 5, 2009, Greenwood Village's town council amended an ordinance to allow for a private contractor to shoot coyotes on sight in public areas and parks, and to accept private contracts to do the same on private lands. In addition, the ordinance gave the town's police force the ability to shoot coyotes on sight in public areas and parks. Several local and national organizations approached Greenwood Village to initiate education and hazing programs (programs where coyotes are "trained" to be scared of and avoid people through non-lethal means, for example by throwing loud objects towards them), their overtures were turned down. However, Greenwood Village did continue their own resident education program, including website and newsletter content and signage in parks (for more on Greenwood Village's educational efforts, see the "Management Plans" section below).

Between efforts made by the Humane Society of the United States and WildEarth Guardians, up to 100 volunteers were enlisted to monitor the parks in Greenwood Village to try and haze local coyotes before the town-hired shooter found them; not surprisingly, this led to a fair amount of human-human conflict, as the hazing groups did make it difficult for the shooter to find coyotes (or to shoot them safely when he did see them, because of the presence of the volunteers). After he failed to produce and some public criticism of the finances of his contract, the town turned lethal control over to their police force.

A 2009 survey of Greenwood Village residents demonstrated that there was concern over the presence of coyotes in the town. For example, when asked for suggestions regarding public safety, respondents mentioned "coyote mitigation" with

high frequency (452 respondents offered suggestions overall). When asked what one issue residents would most like addressed by the Council, wildlife issues (with coyotes and rabbits named in particular) was brought up 6% of the time (the fourth most frequently cited issue). Finally, when asked about environmental and natural resource quality in Greenwood Village, while no comments other than those related to trash and recycling services were given at a high rate, the “coyote problem” was mentioned more frequently than others (199 residents gave comments in total) (Howell Research Group, 2008).

### *Centennial*

In the fall of 2008, awareness about coyotes became more widespread in Centennial. Unlike Greenwood Village, and perhaps because of its recent establishment, Centennial did not have a history of using lethal control. When the potential for coyote-human conflict became more widely recognized in Centennial, representatives of local and national organizations approached the City Council and offered their help in developing a coyote management plan. The Council accepted their help in drafting a plan, which was passed on February 2, 2009. Centennial’s plan allows for lethal control within narrow parameters, but emphasizes education (for more on Centennial’s management plan, see “Management Plans” section below).

Since the passing of the management plan, Centennial has not killed any coyotes, and a successful volunteer program (henceforth known as the coyote coexistence project) that includes education and outreach, filing reports of incidents, passing out whistles, and

hazing has proven to be quite popular and successful. Anecdotally, the city has noted that they have received fewer reports of and complaints about coyotes since the new coyote management plan and volunteer efforts were initiated (Smith, 2010). The city has promoted their coyote management plan both on their website and in the “Quality of Life” section in their annual report, stating that: “The plan seeks to identify and achieve a balance between the importance of human safety and the importance of native wildlife as part of the ecology of the region” (City of Centennial, 2009, p. 4).

### ***Coyote Management Plans***

The Centennial and Greenwood Village coyote management plans at first glance seem to be very similar, but on closer examination there are some important differences that, at least in part, seem to account for the differing outcomes seen in the two towns.

Both plans start with statements that reflect a belief that it is important to balance public health and safety concerns with the ecological importance of coyotes in the region.

Greenwood Village’s policy states:

*There can be enjoyment in coexisting with coyotes and also opportunities for conflict if the relationship is not managed carefully and appropriately. There is an environmental benefit to maintaining and encouraging coyote populations to exist in the Village.*

And Centennial states: *“The plan also seeks to identify and achieve a balance between the importance of human safety and the native ecology of the region.”*

The strategic plan outlines are also similar, but do contain some key differences (Table 4). For example, Greenwood Village includes a section on enforcement of existing



laws regarding the feeding of wildlife and keeping domestic animals on-leash, while Centennial does not mention this. Furthermore, Centennial also includes sections on the rights and responsibilities of property owners in regards to human-coyote conflict, as well as a coyote activity-monitoring program, while Greenwood Village does not include either of these measures.

**Table 4. Strategic coyote management plans for Centennial and Greenwood Village.**

| City of Greenwood Village Comprehensive Coyote Management Policy<br>March, 2009  | City of Centennial, CO,<br>Coyote Management Plan<br>February, 2009   |
|--|---|
| <p>Strategic Policy:</p> <ul style="list-style-type: none"> <li>• Conduct public education efforts on how to safely co-exist with coyotes and how to avoid human-coyote conflicts</li> <li>• Enforcement of laws that prohibit the feeding of wildlife and requiring domestic animals to be leashed</li> <li>• Active “hazing” of coyotes to instill or re-instill a healthy fear of humans</li> <li>• Lethal control measures to eliminate Dangerous or Menacing coyotes</li> </ul> | <p>Strategic Plan:</p> <ul style="list-style-type: none"> <li>• An education program that is ongoing and seasonally appropriate</li> <li>• Information about the rights and responsibilities of private property owners</li> <li>• Monitoring coyote activity</li> <li>• Implementing hazing programs appropriate for residents, volunteers and staff to implement as a method to instill natural wildlife wariness</li> <li>• Lethal control on private and public property as determined to be necessary for the public safety</li> </ul> |

The next section in both of the plans includes definitions of coyote interactions with people, in order of “contact between humans and coyotes.” Again, most of the definitions are similar or even identical (the two towns both pulled from Colorado

Division of Wildlife definitions (CDOW)), but here with two major differences (Table 5). Greenwood Village defines an “incident” as “*an unsafe situation where a coyote displayed abnormal behavior,*” while Centennial defines an “incident” as “*a conflict between a human and a coyote where a coyote exhibits behavior creating an unsafe situation for the human. Most attacks on pets fall within this definition*” [underlining original]. As conflict with pets is a major contributing factor to human-coyote conflict in the area, by excluding the mention of pets in this or any other category, Greenwood Village opens the door for differing interpretations of when attacks on or aggression towards pets fits into the scheme.

The highest level of contact, an “attack,” is also defined differently by the two plans. In Centennial, an attack occurs when “*a human is injured or killed by a coyote,*” while in Greenwood Village an attack occurs when there is “*an aggressive action initiated by the coyote that involves physical contact with a human.*” By calling for evidence of injury, Centennial requires that attacks involve more than physical contact, which could include a coyote “bumping” a person, for example, without actually biting him or her. Some reports of contact between humans and coyotes (especially involving domestic animals) falls into this contact without injury category, which could be reported and categorized differently in Greenwood Village and Centennial.

**Table 5. Definitions of human-coyote interactions in Centennial and Greenwood Village.**

| City of Greenwood Village Comprehensive Coyote Management Policy   | City of Centennial, CO, Coyote Management Plan   |
|--|--|
| <p>Definitions</p> <ul style="list-style-type: none"> <li>• <i>Observation</i>: The act of noticing or taking note, specifically the observation of tracks, scat and vocalizations</li> <li>• <i>Sighting</i>: Visual observation of a coyote</li> <li>• <i>Encounter</i>: An unexpected direct meeting between humans and coyotes that is without Incident</li> <li>• <i>Incident</i>: An unsafe situation where a coyote displayed abnormal behavior</li> <li>• <i>Attack</i>: An aggressive action initiated by the coyote that involves physical contact with a human</li> </ul> | <p>Definitions</p> <ul style="list-style-type: none"> <li>• <i>Observation</i>: The act of noticing or taking note, specifically an observation of tracks, scat, and vocalizations, or other evidence of their presence</li> <li>• <i>Sighting</i>: Visual observation of a coyote</li> <li>• <i>Encounter</i>: An unexpected “direct meeting” between human and coyote that is <u>without incident</u></li> <li>• <i>Incident</i>: A conflict between a human and a coyote where a coyote exhibits behavior creating an unsafe situation for the human. <u>Most attacks on pets fall within this definition</u></li> <li>• <i>Attack</i>: A human is injured or killed by a coyote</li> </ul> |

The two plans also differ in how they define coyote behavior (Table 6). Although again most of the definitions are similar or identical, there is a key difference in how they define a “menacing coyote.” In Centennial, coyotes are labeled menacing when “*a coyote . . . exhibits aggravated abnormal behavior that does not qualify it as a dangerous coyote. This may include coyote incidents and/or encounters that were serious in nature or a coyote or group of coyotes that could potentially endanger public safety.*” In Greenwood Village, a menacing coyote or coyotes is one where “*a coyote or pack of*

*coyotes . . . exhibit(s) abnormal behavior including, but not limited to, stalking or chasing people or domestic animals, but does not qualify it as a Dangerous Coyote. This may involve a coyote or pack of coyotes involved in an Unprovoked Incident or a coyote or group of coyotes, including Habituated Coyotes, which could potentially endanger public safety.”*

**Table 6. Coyote behavior definitions in Centennial and Greenwood Village.**

| City of Greenwood Village Comprehensive Coyote Management Policy  | City of Centennial, CO, Coyote Management Plan  |
|---|---|
| <p>Coyote Behavior</p> <ul style="list-style-type: none"> <li>• <i>Habituated</i>: A coyote that exhibits little or no wariness of the presence of people</li> <li>• <i>Depredating</i>: A coyote that is preying on pets or livestock</li> <li>• <i>Menacing</i>: A coyote or pack of coyotes that exhibit(s) abnormal behavior including, but not limited to, stalking or chasing people or domestic animals, but does not qualify it as a Dangerous Coyote. This may involve a coyote or pack of coyotes involved in an Unprovoked Incident or a coyote or group of coyotes, including Habituated Coyotes, which could potentially endanger public safety</li> <li>• <i>Dangerous</i>: A coyote that has Attacked a person, exhibits Unprovoked aggressive behavior towards a human and/or poses a significant threat to human safety</li> </ul> | <p>Coyote Behavior</p> <ul style="list-style-type: none"> <li>• <i>Habituated</i>: A coyote that appears to frequently associate with humans or human related food sources, and exhibits little wariness of the presence of people</li> <li>• <i>Depredating</i>: A coyote that is preying on pets or livestock</li> <li>• <i>Menacing</i>: A coyote that exhibits aggravated abnormal behavior that does not qualify it as a dangerous coyote. This may include coyote incidents and/or encounters that were serious in nature or a coyote or group of coyotes that could potentially endanger public safety</li> <li>• <i>Dangerous</i>: A coyote that has attacked a person, exhibits unprovoked aggressive behavior towards a human(s) and/or poses a significant threat to human safety</li> </ul> |

Coyotes are naturally curious, and it is not uncommon to find them watching people without it escalating into anything more serious. In fact, some experts would consider coyotes watching (and therefore following, which could be misunderstood as “stalking”) people to be natural behavior, so by including this portion of the definition, Greenwood Village paves the way for lethal control to be used for coyotes exhibiting natural behavior, as I will discuss below. In addition, by explicitly stating that coyotes chasing pets could be included in this category, they are again putting what many coyote experts feel is a natural behavior (chasing animals that appear to be prey items, such as unattended or unleashed cats and small dogs) into an abnormal behavior category, and therefore allowing for lethal control.

Both of the towns state that lethal control can and should be used in cases where public safety is in jeopardy, but again there are important differences between the two.

Centennial’s policy on lethal control states that:

*The City may implement a program of lethal control when the interactions between humans and coyotes change from encounters and incidents to attacks or the coyote behavior changes from nuisance to dangerous. Information on the behavior of the coyotes will be obtained through the reports received by the City and in conjunction with the Colorado Division of Wildlife. Lethal control may be utilized when education and hazing have been employed and are not effective in changing the behavior of a habituated coyote and that coyote has become dangerous, or if a coyote poses an immediate danger to a human. The City recognizes that it may be difficult to identify the specific coyote that has become problematic and will take all reasonable measures to obtain information that is as accurate as possible so that any lethal control measures employed are aimed at the offending coyote and not used indiscriminately.*

Greenwood Village’s policy states that:

*The Village will implement lethal controls only when coyote behavior is identified as Menacing or Dangerous. Information on coyote behavior will be recorded,*

*analyzed and reported by the Police Department. Lethal controls may only be implemented lawfully and only on Village property unless a private property owner has given prior written permission to use lethal controls on their property. Lethal control may also be utilized immediately by Police Officers when or if a coyote(s) poses an immediate danger to a human. Lethal control measures will not be used indiscriminately against the coyote population. A geographic specific public notification/communications plan should be part of this strategy.*

A major difference between these two plans is the threshold for when lethal control can be implemented. In Greenwood Village, lethal control can be used on coyotes exhibiting “menacing” behavior, while in Centennial, coyotes must be exhibiting “dangerous” behavior (their “nuisance” category includes habituated, depredating, and menacing coyotes; dangerous coyotes are in a separate category). As discussed above, in Centennial most coyote-pet conflict is considered an incident and not an attack, and so would not be eligible for lethal control (unless under exceptional circumstances). In Greenwood Village, stalking and chasing domestic animals is considered a menacing behavior, and so would qualify for lethal control. This alone contributes to much of the disagreement over the two plans.

In addition, Centennial requires that education and hazing efforts be used before lethal control is considered; it is only when hazing and modifying human behavior has failed to change a coyote or coyotes’ behavior that it can be used (unless there is an immediate threat to human safety). Although Greenwood Village’s plan also calls for extensive education and hazing efforts, and in fact was presented as a step-wise progression, from education to hazing to lethal control, it is not specifically stated in the policy that all other efforts must be exhausted before lethal control is implemented. Instead, it states that lethal control will be used when menacing or dangerous behavior

occurs, opening the door for lethal control to be used every time a coyote chases an off-leash dog or an outdoor cat, for example, without attempts at changing the coyote's behavior. Although this was not necessarily the intent of the authors of the plan, as I will discuss later in this dissertation it is clear that many believe that this is the way the plan is often implemented.

The plans also differ in how information on coyote-human interactions is gathered and utilized when making decisions about lethal control. In Centennial, although the ultimate decision is in the hands of the city, they would "request and consider direction" from the CDOW; in addition, they utilize a wide-range of information sources when trying to decide whether or not coyote behavior justifies lethal control ("CDOW, Arapahoe County Sheriff's Office, citizen reports, school district officials, or other authorities that can identify and document that a coyote's behavior is 'dangerous'"). In Greenwood Village, the decision lays in the hands of the Greenwood Village Police Department, which leaves many local experts out of the picture.<sup>5</sup>

Finally (in terms of lethal control), in Centennial any lethal control that is conducted must be followed-up by an extensive education and awareness program in the neighborhoods involved, in recognition that it was likely human behavior which ultimately caused the coyote behavior change. In addition, follow-up with local agencies and residents in the area would occur for several months following the lethal control, "to make sure that education and hazing techniques are being utilized." Greenwood Village

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<sup>5</sup> Sources I interviewed indicated that the Greenwood Village police did not undergo serious wildlife management and behavior training prior to this policy being implemented.

does not require such efforts, although clearly their plan does place importance on such efforts as their first strategy.

Another human resource issue that is handled differently in the two jurisdictions is volunteers. The Centennial plan makes using trained volunteers a central part of both their education and awareness and hazing programs, while Greenwood Village has no specific plan for volunteers (although one person I interviewed said that she did offer her volunteer services to the town; although the town agreed that she could be used to do educational programs at schools and Home Owner's Associations (HOA's), there was no interest from the public or school system in her efforts). The use of volunteers lowers the cost of the program in both staff time and other resources to Centennial, provides a measure of transparency, and enables the town to make use of local experts.

In general, the Centennial plan is more specific than the Greenwood Village plan, in that each of the major components of the plan (education and awareness, hazing, and lethal control) contains action items and steps that must be carried out to be in compliance with the management plan (eight steps for their education and awareness efforts, nine for their hazing program, and twelve for their lethal control program). The Greenwood Village plan gives outlines of each of their major strategies, but does not provide specific steps that should be taken, and so leaves room for different interpretations of how the policies should be implemented. This, in addition to the differences outlined above, shows that the policies are substantially different from each other, which raises the possibility for conflict over their implementation.



**CHAPTER 3:**  
**NARRATIVES OF HUMAN-COYOTE CONFLICT IN SUBURBAN DENVER**

This chapter will explore how conflict is portrayed, thought about, and acted upon by different stakeholders involved in the social conflict over coyotes in suburban Denver. The first section, (*What is a Real Coyote?*) will describe how stakeholders construct not only images of each other, but also of the coyotes themselves and how this adds to disagreements over how to handle human-coyote conflict. The second section (*Rhetoric of Violence and Intolerance*) will explore how stakeholders use language invoking violence and intolerance to describe the situation in Greenwood Village and Centennial, and how that further separates the two sides. The third section (*Visions of Each Other*) will discuss how the two sides (those who are in favor of lethal control under many circumstances, and those who oppose it in all but the most extreme cases, such as rabies) construct images of each other that serve to further entrench the conflict. The fourth section (*Is There a Threat?*) looks at how stakeholders differ in defining risk as it is related to coyotes, and the final section of the chapter (*How Should We Manage Them?*) addresses the specific disagreements over the management plans employed by Greenwood Village and Centennial.

## ***Methodology***

While human dimensions research in North America has traditionally focused on quantitative, survey-based approaches (as opposed to conservation-related research in developing countries, which has focused more on qualitative methods from the anthropological and related fields) (Manfredo, 2008), I use a mixed method approach, combining qualitative and quantitative data gathering and analysis, to provide a richer understanding of human-coyote conflict in Centennial and Greenwood Village. The qualitative part involved analysis of interviews and existing documents, and is discussed in the third and fourth chapters. Based upon those data, I developed a survey instrument, and administered it by telephone to residents of Greenwood Village and Centennial (Berg, 2007; Robson, 2002).

I used a grounded theory methodology to inform my research process (Charmaz, 2006), which takes an interpretive rather than positivist approach to social science research. Grounded theory prioritizes inductive thinking (Bernard & Ryan, 2010), a search for patterns in social processes, followed by “the development of explanations—theories—for those patterns” (p. 266). Positivist traditions emphasize explanation and prediction of phenomenon; for example, statistical tests might be done with the goal of creating models that will predict the behavior of a group of people in a given situation. As such, they also emphasize generality, and so seek commonality between many situations (Charmaz, 2006). However, this view can lead to a narrow-vision of what is happening in the empirical world, as it can emphasize “simplistic models of action” (Charmaz, 2006, p. 126). On the other hand, interpretive traditions emphasize

“*understanding* rather than explanation [italics original]” (Charmaz, 2006, p. 126). In other words, “the very understanding gained from the theory rests on the theorist’s interpretation of the studied phenomenon. Interpretive theories allow for indeterminacy rather than seek causality and give priority to showing patterns and connections rather than to linear reasoning” (Charmaz, 2006, p. 126).

Between the fall of 2010 and the summer of 2011, I conducted 22 interviews with residents of Greenwood Village and Centennial; volunteers with the coyote coexistence program (some of whom did not live in the two towns in question but in neighboring areas); and local government officials. The volunteers who I interviewed responded to an email the volunteer coordinator sent out to their membership list. The other interviewees were contacted through the Greenwood Village or Centennial governments and local Homeowner Associations. All recruitment materials, interview procedures, and interview questions were approved by George Mason University’s Human Subjects Review Board, and I used pseudonyms for my respondents throughout this document to protect their identity. While initially I only targeted volunteers in my study sample, those interviews generated research ideas and questions that made it necessary to interview non-volunteers, including those who supported lethal control. This is an accepted practice in grounded theory, where researchers let their data and initial analysis steer subsequent data collection (Bernard & Ryan, 2010; Charmaz, 2006). While I attempted to obtain a balanced sample between those who favored lethal control and those who did not, I was unable to find enough lethal control proponents who were willing to speak with me to do so. As such, I have more interview-based data from anti-lethal control advocates (the

existing texts and documents data does not share this problem). This is something that I hope to address in future research. The interviews lasted approximately one hour (although some were a bit shorter and others considerably longer). The interviews were recorded, and subsequently transcribed, resulting in 825 pages of text.

I 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 through the database Lexis-Nexus using the search term “coyote.” I disregarded any item that was not referring to the animal, but to other uses of the word (for example, sports teams and people who the human smugglers often referred to as ‘coyotes’). While initially I collected all articles relating to coyotes, I went through the dataset a second time and dropped articles that were not written from the perspective of an individual, as I was more interested for the purposes of this study in how individuals spoke about coyotes and human-coyote conflict than in how the media portrayed the conflict. I ended up with 34 LTEs, columns, and op-eds, all writing specifically about coyotes and human-coyote conflict in the Denver metropolitan area. Finally, I obtained recordings and other records of the town meetings in both Centennial and Greenwood Village where their respective coyote management plans were debated.

All articles and an initial group of interviews were coded while developing my theoretical categories. I then tested my categories using the remaining data (the rest of the interviews and the public meeting transcripts) using a targeted, focused coding approach (Bernard & Ryan, 2010). As I coded, I compared my new codes to previous codes to see how they might relate to each other as broader categories, using the constant comparative

method (Charmaz, 2006). As themes became apparent to me through the data, I coded additional interviews with them in mind. Finally, I grouped the themes into two major categories, “Narratives of Conflict,” and “Roots of Conflict;” these form the basis for the third and fourth chapters in this dissertation.

### ***What Is a Real Coyote?***

Clearly coyotes play a central (although certainly not a solo) role in the conflict in Centennial and Greenwood Village. However, based upon my research, I would argue that the social construction<sup>6</sup> of the animal, and not their biology and ecology<sup>7</sup> plays a larger role in determining why there is conflict and how it manifests itself. Likewise, the social construction of the two human sides of the conflict helps to determine how the conflict takes shape.

First of all, at the heart of much of the conflict, there is disagreement over what is natural or normal coyote behavior is at the heart of much of the conflict. Danielle, a volunteer, said:

*Well, I've known about the problems that Greenwood Village has had with coyotes, or at least their perceived problems. I mean, I guess they're real in the sense that coyotes do eat small pets that are left unattended. Of course . . . I have this feeling that if you move next to wildlife you have to expect that wildlife are going to act according to their instincts so, you know, them eating your pet is what they do naturally.*

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<sup>6</sup> Social construction is the process whereby people attach meaning to objects, living or alive. For more information, see chapter 1.

<sup>7</sup> See chapter 1 for more information on coyote ecology and biology.

Likewise, a 2009 letter to the editor (LTE) said:

*Many suburban areas have literally wiped out native prairie dog populations to appease their constituents. Prairie dogs are native to the Front Range and serve their appropriate ecological function, which includes being food for coyotes. So—you get rid of the prairie dogs—you now have coyotes looking further in to more populated areas for food.*

A 2008 LTE attempted to look at the situation from the point of view of the coyotes:

*Of course the coyotes will eat the dogs. Why wouldn't they? If I lived in a field and a bunch of scary creatures built huge tall things all around me and all of the sudden there were fewer rabbits for me to eat, I would do what I could to find more things my size or rabbit-sized to eat so I could live.*

Nancy, a Greenwood Village resident and anti-lethal control advocate, told me: “. . . *an animal, especially a predator, was just doing what is completely natural and normal for them. And if your pet happens to look like one of their pieces of prey . . . these animals shouldn't be penalized for doing what is normal, their normal behavior.*” An animal control officer who works in suburban Denver told me about the way they define human-coyote interactions, in relation to pets: “*And we don't even like to use the word 'pet attack,' because it's not really an attack, but we don't know how else to word it. Going after a pet is just predatory/prey instinct. It's not really an attack, but that's how we categorize it.*” A column in a local newspaper quotes a DOW official:

*“We're definitely seeing a lot more activity, of coyotes going after pets,” Jennifer Churchill said. “But these are animals who were born in these neighborhoods. They're not as fearful as those you see out on the plains.” Urban coyotes, including Centennial's, are used to seeing humans, she said. “They are very, very adaptable,” Jennifer Churchill said.*

This suggests that the Colorado Division of Wildlife (DOW) believes that urban coyote behavior, while different in some respects from rural coyote behavior, is still natural.

On the other hand, pro-lethal control people tended to cast behavior seen as natural by anti-lethal proponents as unnatural. For example, a 2009 LTE stated that, “*While you certainly are correct that wildlife is a beautiful thing, coyotes preying on our domestic pets is not a beautiful thing, and cannot be considered ‘the natural course of events.’*”

A column in a local news outlet stated:

*A friend of hers had seen a coyote too. I phoned that woman, and she told me that when she walks her dogs -- big dogs, a Great Dane and an Australian shepherd -- before sunrise, she’ll frequently come across a coyote slinking toward her. It’s an eerie pre-dawn sight, particularly since the coyote is so brazen it will come within a few feet of her pups, almost as if it wants to get to know them.*<sup>8</sup>

While coyotes are curious by nature, and will often watch humans and dogs without approaching them or becoming threatening, this description might be depicting behavior that many coyote experts would consider unnatural—coyotes should not want to approach humans so closely. In an LTE, a local veterinarian said that “*the coyotes are losing their fear of humans, and we need to re-establish the boundaries.*” Another 2008 LTE said that, “. . . *the coyotes seem to be losing their fear of humans and thus are becoming more brazen.*” What is likely happening in suburban Denver is a mixture of natural behaviors (coyotes acting on their curiosity and hunting prey that seems natural to them) and unnatural behaviors (coyotes behaving too boldly around humans). There is a thin line between what many biologists would consider natural and unnatural behavior,

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<sup>8</sup> It is interesting to note that this paragraph starts out talking about her “big dogs,” but ends up discussing her “pups,” animals who sound like they could in fact be hurt by a coyote.

and so it is not unexpected that there would be considerable disagreement between stakeholders. While most people involved in this situation would agree that bold coyote behavior should be changed, there is disagreement over what tactics should be employed. In addition, there is disagreement, as we have seen above, about what constitutes natural behavior (in which case, humans should not interfere with nature and should leave coyotes alone) versus unnatural behavior (in which case, humans need to modify their behavior or remove them from the area). I will more fully explore the idea of how the perception of whether or not coyotes belong in suburban Denver plays in developing the conflict in chapter 4.

Determining in what category of animals coyotes belong is another source of disagreement over the social construction of coyotes. Many pro-lethal control people consider coyotes to be pests (this is closely related to whether or not coyotes belong in the area, which again will be discussed more fully in chapter 4), while anti-lethal people consider them native wildlife that is worth admiring, and so deserving of protection and tolerance. Danielle, a volunteer, said:

*People in the pro-coyote camp, pro-prairie dog camp, we see them for the amazing beings that they are. Their characteristics, their intelligence, their survivability, it's amazing to us. Yeah, we appreciate that and that's such a foreign concept to the ones who want to kill them.*

Many stressed the traits that they found attractive and worth emulating, for example, their adaptability and intelligence; Alice, another volunteer, suggested that we should learn from them, as did Carol, *"They're so adaptable and so smart, they will find a way."* A 2008 LTE also described coyotes as beings we should learn from, and also called them



cute: “Surely those lovable, furry coyotes deserve a better date than being shot to death. In these leaner, meaner times, the coyote should be an inspiration.”

Several people talked about coyotes’ intelligence, and told me stories that they felt showed this trait. Kevin, a volunteer and avid jogger who often saw coyotes on local trails, told me:

*I saw one incident on the trail down here . . . there must have been one of those buried fences for dogs, and so the two coyotes would come up to the buried fence and then the dogs would come up to the buried fence and get zapped because they’re wearing the collar and back off. Then the coyotes would back off, so obviously they must have figured it out, and they were teasing these poor dogs, but they weren’t coming across the fence . . . they would just come up maybe a few feet from that fence . . . The dogs would come up and get zapped, and back off. The dogs were stupid because they kept doing it over and over and over again. And the coyotes were just playing with them. It went on for I don’t know how long.*

Humans on both sides of the issue layer human values and characteristics over the biological species. Many in the pro-lethal control side assigned negative traits to coyotes, considering them to be criminals and untrustworthy. For example, a 2006 op-ed was narrated by a woman who owned a farm about her experiences with a coyote that she decided to trust, against the advice of her friends, because she saw him as a working partner as he helped to keep her property clear of rodents. She first described the way that she formed this partnership:

*While coyotes are known to be cunning pests, this coyote has always assisted me in protecting my investments. I have rewarded the coyote for keeping such enemies at bay by dumping a dead animal in the back pasture from time to time. The health department frowns on burying animals so close to septic systems and trash men refuse to dispose of them. So it is only natural to provide the coyote and his friends with a yip-yip-yowl feast from time to time.*

Later, she describes her continuing relationship with him, putting a human-value—loyalty—on the coyote:

*It was the faithful coyote that came to mind. It seemed only logical that if I gave the coyote free range of my property, he could keep my enemies in line for me.*

At some point, the coyote shows his “true colors” to her:

*I kept the dog behind me as I opened the side door of the garage, yelling and waving my arms to let the coyote know his services were no longer needed. The coyote turned his head in my direction, bared his teeth and let his ears fall back in warning. I retreated to the inside of the garage, fearful my business partner might turn and attack me.*

*People warned me it was a bad idea to trust a tricky, ruthless coyote. I, on the other hand, do not believe it is right to group all coyotes into one species-specific pot. Surely there are good and bad coyotes just like there are good and bad roosters, good and bad people. The problem with my reasoning was I misjudged this individual coyote. He has now taken over my entire investment and holds me hostage on my own land.*

By using words such as “tricky” and “ruthless,” she ascribes human values to the coyote, granting him personhood of a sort so that he is able to form an alliance with her and then break it. The author of this article ignores the ecological facts of the case (coyotes who are fed either directly or indirectly by people start to associate people with food, which can lead to bold or aggressive behavior; this is the most common cause of human-coyote conflict) and instead takes the coyote’s apparent turn on her personally. She then chooses not to judge the entire species, but rather the individual, just as she would a person, stating that she had misjudged this particular coyote, that he was a “bad” coyote.

A 2009 editorial described an encounter between a woman, her dog, and some coyotes: “[She] was walking her Labrador when the coyotes swarmed in on them; she

*got scratched and bitten while defending her pet. And the nasty culprits? Still at large.”*

Even people who were not necessarily pro-lethal control made use of similar language. For example, in a 2008 editorial, a Centennial spokesperson said, “*Greenwood Village for years hired people to trap the bad ones and euthanize them . . .*” Some of the coyote coexistence volunteers I spoke expressed their belief that those who tend to favor lethal control use negative human-related characteristics: For example, Lindsey said, “. . . *if anything, they perceive or view coyotes as evil, just evil, just no good, just worthless, just troublemakers, vermin, not contributing to society, dangerous, harmful, threatening . . .*”

Many of the anti-lethal advocates that I spoke with believed that people on the other side of the issue didn’t assign any value to coyotes—rather than a valued wildlife species, they saw them as pests or varmints. Barbara, a volunteer, related this to Colorado’s past:

*Well, I think historically . . . given Colorado’s ranching history [some see them as pests]. I mean, the ranchers used to get a bounty for coyotes. A long time ago . . . is you shot a coyote, you’d hang the carcass on the fence thinking it would scare away the other coyotes . . . But given the ranching history in Colorado, I think it’s kind of built into people’s way of thinking.*

Alice told me that she thinks those in support of lethal control don’t see coyotes as “*a valuable part of the ecosystem,*” and Carol said that she thinks some see coyotes “*kind of like gutter rat.*”

Anti-lethal control, pro-coyote people also ascribe human-valued traits and characteristics to coyotes, although in a positive way. A 2009 LTE said, “*This singing is to attract a lover, not Greenwood Village vigilantes. These virtuous animals are largely monogamous and devoted to their families. They are tolerant of other species; some have*

*mated with domestic dogs.*” Coyotes’ family tendencies (i.e., monogamy and taking care of other members of the pack) are traits embraced by many pro-coyote people, as humans generally see these behaviors as positive. Others pointed out that coyotes are not willfully ignoring human rules, such as one 2009 LTE: “*Coyotes deserve to live. They are unaware they are breaking any laws or endangering our loved pets. All they try to do is survive just as any other wild animal.*” Kate, another volunteer, told me that she doesn’t think that coyotes are “*bad.*”

Ecological facts do come into play in arguments intended to persuade people that lethal control is at least not effective and at worst something that damages the environment. Many of the LTEs and all of the volunteers I interviewed described studies that have shown how coyote populations under stress from lethal control actually tend to grow over time, rather than being suppressed, as one 2009 LTE stated: “*Killing coyotes actually creates more coyotes, as more pairs will breed and they’ll have larger litters.*” Hillary, a volunteer, told me:

*. . . the way nature works is if the carrying capacity could handle it, then they will breed enough to . . . handle that particular area that they live in . . . Well, they’ll normally have maybe three to five pups. They may have as many as ten if they can handle it, [if] there’s good food . . . if there’s food there . . . they’re going to bring up their numbers. If it’s not, their numbers will go down, they won’t breed. You know, this is stuff I’ve learned over the years.*

In addition, almost all described some variation on why coyotes are important to an ecosystem. Many cited the role that coyotes can play in regulating rodent and rabbit populations (favorite prey items) as evidence that people should value the presence of

coyotes in the area, wild rats being a type of animal that people rarely want around, and rabbits being a source of frustration for gardeners in the area. Carol, a volunteer, told me:

*I feel like they have as much right to be anywhere as we do, and as a matter of fact, they probably have more, and they're more beneficial for the ecosystem than we are. They have their place in the chain, and . . . it just needs to be left alone. You know, if everyone would just leave the natural system alone, it would work fine, but certain people can't quite seem to do that.*

Alice, a volunteer, told me:

*I know we have rats in this neighborhood. Lot of people don't believe we have rats. I know we have rats, I've seen rats. We also have a lot of mice and we have bunnies, and without the coyotes I know there would be an absolute overpopulation of all of those. Interestingly enough, in Greenwood Village when . . . they were killing a lot of the coyotes . . . you couldn't drive your car down a street without two or three bunnies sitting in the street. It was more bunnies than I've ever seen in my entire life. And that spoke volumes to me. And I'm sure the people call and complain now about the bunnies, eating their flowers.*

Bob, a Greenwood Village resident who takes a moderate stance towards lethal control, told me about his experience with the food chain:

*They're part of the natural food chain process, and since we don't have many . . . coyotes over here, and until I saw the fox yesterday morning, as I said I hadn't seen it in three years, guess what? I could start a bunny rabbit farm. So there's nobody in that food chain to keep the bunny population down. I have garter snakes around my two waterfalls. I hate snakes. I'm with Indiana Jones. I'm petrified; I don't even like to look at pictures of them. But then, we also have these little thing called voles; they're like little mice and they love rocks and . . . the low-lying juniper-like things, evergreens. Well, no snakes; you got voles coming out making all the little pathways everywhere. So it's all part of the food chain.*

There are ecological and biological facts about coyotes that play a role in the conflict over their management (or even whether or not we should manage them at all), but the social constructions of coyotes that give them meaning to human society are probably more important in determining what shape the conflict takes. Although there are

people who do not think about coyotes much at all, those who do think about them seem to have either extremely positive or negative feelings with little or no ground in between. This “black and white” polarization, in turn, influences how these two groups interpret coyotes and their behaviors. This, in turn, creates conflict between those who layer different meanings onto coyotes and coyote behavior.

### ***Rhetoric of Violence and Intolerance***

Throughout my data, I found that people on both sides of the coyote conflict used rhetorics of violence. Pro-lethal people tended to use “good war” imagery, portraying an honorable war that was worth fighting (protecting their land, property, and family from the enemy, and so on), while anti-lethal people tended to use “criminal violence” imagery (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 thug mugging someone on the street. In addition, I found related themes of tolerance and intolerance throughout the data, not only towards wildlife, but also towards humans.

Many of those who support lethal control to some degree or another invoked wartime rhetoric when justifying or arguing for their position. This is aligned with the idea that some members of the community are indeed scared of coyotes and of potential conflict with the species, and so feel that by supporting lethal control and/or localized eradication efforts they are protecting their families, both human and non-human. While we might argue in this country about “good” or justified wars over “bad” or unjustified

wars, there is a general understanding that violence in wartime is different from violence in peacetime, or violence committed at home. In addition, with the exception of veterans returning from Vietnam, we tend to separate our dissatisfaction or disagreement over a war from our respect for those who serve in the military, and this is true today with our conflicts in Afghanistan and Iraq. Protecting our homeland—whether that is defined broadly as the United States or more narrowly as our property—is seen an honorable endeavor, and therefore the violence committed over these goals is different than common street violence<sup>9</sup>.

Many pro-wildlife advocates believe that dealing with conflict with coyotes is about learning how to coexist with a species that is entitled to live among us. A 2009 editorial, however, sets up a different structure for thinking about the conflict. The author discussed a letter sent out to members from 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.*” By forcing the city to take sides, the Homeowners Association has challenged the understanding of those who advocate for coexistence, and instead sets up a battle-like structure where stakeholders must choose sides, and where (it is implied) there will be a winner and a loser.

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<sup>9</sup> This romantic view of protecting one’s home and neighborhood has perhaps taken on bleaker overtones since the late February, 2012 shooting of Trayvon Martin by George Zimmerman.

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.*” 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.*”

On the other hand, those who are against lethal control tend to invoke negative descriptions of violence. Instead of wars, they use criminal and illegal violence descriptions, as well as portraying 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. Those guys get paid \$60 an hour whether they hit any coyotes or not. So parks, greenbelts, watersheds and other public areas will be turned into war zones.*

The use of the term vigilante implies illegal, dishonorable violence, while even the use of “war zones,” while outwardly reflecting war-time imagery, in fact is often used by journalists and government officials to describe suburban and urban neighborhoods which are particularly hit hard by, for example, gang-related violence. 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.*

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, has the feeling of sneakiness in it—again, a low part of a war—perhaps not entirely honorable. Others more blatantly discussed their perception that lethal control was criminal behavior; for example, a 2009 LTE that stated: “*Killing coyotes is a cruel and unnecessary crime.*”

Others discussed the link between violence towards animals and violence towards people. Alice, a sometimes 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. And I think they've just started even, you know, the Jeffrey Dahmers of the world, they've just started to really connect the dots that people that do that with animals, it stays on with people, there's no question . . . oh, it's a wild world we're living in and not getting any simpler.*

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 for . . . I mean this is about animals. I can imagine what it would be with human rights. I can see how people's ire gets up, or how their temper is pushed into wanting to do or not do something more . . .*”

Perhaps closely tied to rhetoric of violence is a discussion about tolerance. Tolerance and intolerance in this country are usually terms used when discussing diversity, whether that be 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 stated:

*Coyotes haunt Western literature. Mark Twain's "Roughing It" describes the coyote as "a long, slim, sick and sorry looking skeleton, with a gray wolf-skin stretched over it, a tolerably bushy tail that forever sags down with a despairing expression of forsakenness and misery, a furtive and evil eye, and a long, sharp face, with slightly lifted lip and exposed teeth. The coyote is a living, breathing allegory of want. He is always hungry. He is always poor, out of luck and friendless." 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.*

Another LTE related non-violence to tolerance:

*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.*

Others related themes of tolerance not only to coyotes, but to other Colorado wildlife that has 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 towards humans was linked with violence towards animals, tolerance towards coyotes was also presented as a step towards increasing tolerance towards 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.*

Language matters. Invoking war-time and street-violence language when discussing human-coyote conflict and the subsequent social conflict helps to frame the

discussion in black-and-white arguments. By framing the conflict in this way, stakeholders can more easily dismiss the other side as conventional wisdom would suggest that people who willfully commit illegal and immoral acts of violence should not be negotiated with, and people who stand in the way of lawful and moral acts of violence committed in order to protect hearth and home (and therefore themselves are a threat) likewise should not be sought out to engage in conversation. As the following sections in this chapter will show, this dismissal of the other side extends beyond their acts to their status in the human community.

### *Visions of Each Other*

On both sides of the issue there seemed to be anger and negative feelings towards, and distrust of, the other side.<sup>10</sup> In some cases of human-wildlife conflict, this leads to intractable conflict, where the two sides are so far apart that there is little hope of resolution if the status quo does not change. For example, Harker and Bates (2007) described the intractable conflict over the New Jersey black bear hunt, with both parties (pro- and anti-hunt) resorting to name-calling and stereotyping of the other side. At times in Centennial and Greenwood Village, though, there is a sense of sympathy towards the other side, offering glimpses of how the conflict might ultimately be resolved. Kempton, Boster and Hatley (1995) have shown that the general American public tends to express the same amount of concern about the environment and in the same ways (their sample

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<sup>10</sup> Again, it is important to keep in mind that I was able to collect more interview data for the anti-lethal advocates than for those who wanted lethal control in their community; therefore, more quotes from the anti-lethal side are presented here.

included a broad swath of the country, from Sierra Club members to laid-off sawmill employees, and many in between); tapping into this sentiment might be one way forward towards a solution to these seemingly intractable conflicts.

A common complaint from the anti-lethal control side was that pro-lethal residents of Greenwood Village were “spoiled” and “entitled.” For example, Carol, a coyote coexistence program volunteer who is interested in pursuing a Masters degree in Wildlife Management, said:

*But, of course, there's the other group, you know. "I can't lock Fluffy," or "I can't let my cat out at night," or "I can't . . ." you know. Well, deal with it. Work with it, do something else, figure it out. You're smart. Are you going to be spoiled, or are you going to work with the bigger picture, you know? Are you going to be small I-centric or are you going to be community-minded?*

Danielle, a middle-aged volunteer with the coyote coexistence program who regularly acts as an advocate on a wide variety of animal rights issues, said:

*I have some very strong opinions about that. I believe that Greenwood Village, which is extremely rich . . . Those are the type of people who don't want anything to mess with their lifestyle. And they will do anything, go to any lengths, to make sure that they do not have to change their lifestyle just because they live with wildlife.*

In 2009, when the controversy over Greenwood Village's management plan really erupted, Danielle wrote the following letter to the editor (LTE) to a local news outlet:

*It seems that many Greenwood Village citizens would prefer to live in a barren world in which nothing lives but their companion animals. They moved close to open spaces and they were shocked and surprised when wild animals attacked their pets. Either they are ignorant or they are selfish and feel they are entitled to live as though nobody and no other species existed. I can forgive ignorance, as that is a state that can be cured through education, but selfishness and entitlement is what causes death, destruction, and war in our world. Killing coyotes is evil when people can learn to coexist with them. Coyotes are intelligent, family-*

*oriented beings who are true survivors. They keep our ecosystem in balance, or we'd be overrun with rabbits, rats, mice, and other rodents. I admire . . . Greenwood Village residents who are standing up for coyotes.*

Elizabeth, a volunteer, told me:

*To me, "entitled" was their attitude, and "I'll just do what I want and my neighborhood will hire whoever we want, and we have the mayor and the police department, our own mayor, our own police department, our own attorneys, and we'll make our own rules for this, and we don't necessarily have to pay any attention to the DRW, and we've hired this guy and he's going to take care of the problem."*

An official with a near-by jurisdiction told me:

*I mean, the biggest thing we have here is well . . ."do you know how much money I pay in taxes every year? I should be able to let my dog enjoy my backyard all day long without being bothered by any wildlife. Because I pay so much money in taxes, and that's what I get." Honestly it's so hard for me to not laugh when they do that, you know. And at one time when I was in a sarcastic mood I said, "Well maybe put up signs around your property that say I pay so much money in taxes, you need to stay away from my property," you know. You know it's . . . sometimes the mentality you're going hmmm, you know, just kind of scratching your head. But that's honestly how they feel. We have this very, very beautiful piece of property and we should be able to enjoy it however we want.*

Bob, a Greenwood Village resident who takes a relatively moderate approach to lethal control, told me that he feels like new, younger residents of Greenwood Village do not share his attitude:

*My son's friends and people a little older, they feel they're entitled to a great life and all this other stuff. . . . And I saw a lot of people with that sense of entitlement, new people newly moved into the neighborhoods that feel they're entitled to this. They don't want coyotes mucking up their life; they don't want anything mucking up their life.*

Many I spoke with felt that the difference between Centennial and Greenwood Village came down to money, as Greenwood Village is a wealthier community. Rebecca, a resident of Greenwood Village and an animal advocate, told me her feeling:

*These people have a lot of money. They can make things happen, and they can make it logical, and they can say I'm taking this primitive instinct that was a fear reaction that makes no sense but I didn't like it, it was uncomfortable, so I'm going to take my money and make sure that I don't have to feel that way again. That's what divorces are all about. (laughs) Make it go away and here's some money (laughs) . . . or I won't vote for you. You don't respond to my needs, I'll vote somebody else in who will. It's arrogance, it's human arrogance, which is born of, we're a hierarchical animal just like any coyote or dog or even wolf, we're hierarchical, so in our society those who have money are at the top of the totem pole. So it's a power play, it's ego feeder. OK I was afraid, I felt like a child, it was a knee-jerk reaction, I don't want to feel like that again so I'm going to take my money and be strong and dominant and make somebody make it go away. That's my read.*

A related, commonly cited theme was the view by many anti-lethal proponents that pro-lethal people were unethical or lacked of moral values. Many LTE's and anti-lethal respondents spoke of their belief that Greenwood Village's actions were inhumane and cruel. When Greenwood Village was still trapping coyotes, a 2007 LTE described the practice, saying in part that:

*To use leg-hold traps is inhumane and they are banned in many areas because of the suffering they cause. The animal struggles in a frenzy of pain and confusion, often mutilating itself, dislocating joints, breaking teeth, chewing a leg or paw—all in an attempt to break free.*

Others spoke of the broader picture related to environmental issues and conservation:

*We human beings aren't the be-all, end-all that some people seem to think we should be. We're a part of a whole. This poor planet and the creatures in it are in the shape they're in because of that be-all, end-all way of thinking, and we need to change that while there's still something left to save. And no, I'm not some*

*fanatical member of PETA. Just someone who believes we should treat the world we live in with a little more reverence for all forms of life.*

And of coyotes' inherent right to exist:

*I was appalled to read of Greenwood Village's plan to shoot "problem" coyotes in city limits. Coyotes are a native species throughout the West and we are obligated to live in concert with nature. There will undoubtedly be conflicts with a variety of species; how are we to choose which to kill and which will live? Beyond the liability of live gunfire in an urban area, what is our moral obligation to wild animals?*

*God made all creatures, and a coyote has as much right to survive as we do.*

Gary, a coexistence program volunteer, told me his feelings about Greenwood Village's management decisions:

*I have sort of an animal rights perspective on things to start with. And then it seemed to me that that was pretty . . . just sort of morally a bad choice of things to do. . . . like I read the other day where the police in Greenwood Village had just shot and killed three coyotes, and just injured another one. So there's a coyote running around, you know, suffering from being shot.*

Many of the volunteers and anti-lethal advocates I spoke with felt that those who were pushing for lethal control in Greenwood Village lacked empathy. Danielle, a volunteer, told me, "*I just feel like if you . . . present yourself as a compassionate human being, well, talk is cheap so act. Prove it.*" Later, she told me about why she started to work with the coyote coexistence program: "*It's just one of those things where when you see something that's wrong you can't turn away from it.*"

Several of the volunteers I interviewed mentioned religion when discussing their ethical stance on lethal control. Pam told me:

*There have been many people who have said to me, because they're so upset with the way I think about honoring life in general, that they'll say, "Have you ever read the Bible, and that man has dominion over the rest of life? What do you have to say about that? It's in the Bible." And I said, well I think when the scribes were translating, I think they probably used a word that we should have, the word dominion, maybe was put in there and it should have been stewardship. So I said I think we have a stewardship over the earth, over animals, over anything that wants our mercy. Anything that we have dominion over I think deserve the utmost of care because we're the ones making decisions about that critter, that creature, and I think either we're going to shine as an example, a high example of humanity, or we're not.*

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 or not they should 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:

*It brings back . . . I haven't thought of it for a long time, it's just brings back all the . . . you know, we would get emotional at these City Council meetings. We would get a little emotional. There was an attorney that was part of [our] group, and I remember she became quite emotional on various occasions . . . 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 me, 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 have been invited to dinner or to people's homes in Greenwood Village. I will take the highway around Greenwood Village so as not to drive through 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 mean, I have developed such a horrible attitude toward people who live in Greenwood Village because of this issue. I haven't visited my friend who lives about a mile northwest of here because she lives in Greenwood Village. I said, "I'll talk to you over the phone," or "I'll meet you at a restaurant outside of 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 interesting. Yeah, 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 and I was, you know, hoping that she would have more support from our city. But she had to handle herself. She was just like, “Look, I’m here to educate.” And, you know, what they were yelling and screaming about had nothing to do with her. It had to do with our city. And so . . . our deputy chief had to stand up and say at one point, “If you can’t keep this under control, then we’ll escort you out.” . . . 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. Um, she talked a lot about the biology of coyotes and nobody cared, you know. 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.*”

Sometimes skepticism is expressed about the other side. For example, the New Years Day incident (where a boy claimed that he was attacked by a coyote, but managed to escape unharmed) consistently came up as a point of disbelief on the anti-lethal side, as people felt that the story did not hold up under scrutiny. Alice explained:

*Nothing makes sense, and if you look at the report there is nothing that makes sense at all. Yeah, yeah, it, it is complete . . . the parents didn’t even call for 10 days. I mean the whole thing is bogus, I think, in my opinion. Yeah, but it freaked everybody out on the kid so that’s another reason [to want lethal control], not only their pets, but their children.*

Lindsey, a wildlife advocate who was involved with the coyote coexistence program when it started, expressed her skepticism about some Greenwood Village residents:

*Some of the insane remarks from Greenwood Village residents have been there was a child that was accosted by a coyote on the trail . . . and it came up to a child and was aggressive and threatening. You know, I highly doubt that. I have real issues . . . I can’t imagine . . . coyotes want nothing to do with us. I mean, they flee.*

Pam, another volunteer, told me, “*I mean, there are so many people who have . . . said . . . ‘The coyotes came and when I was trying to get out of the car they surrounded the car,’ and . . . it’s so foreign to anything I’ve ever experienced that I don’t believe . . .*” Sarah, an official with another nearby town who works with coyotes, said:

*So, it’s hard for those of us who have never seen that. Not to say that it would never happen and it’s not true, but we get calls weekly, “This coyote wouldn’t run off, it just stood its ground and I was swinging a bat at it,” and . . . It’s hard for me to believe that, I’m not calling them liars, but it’s hard for me to believe that when I’m 5-foot-3 and I can chase these things off, and you get a guy who’s 6 foot, 210 pounds and he can’t chase a coyote off, you know.*

She also shared with me a story about a resident in her town who admitted that he lied when making a report to the town’s animal control agency, by saying that three coyotes had aggressively cornered his wife and their dog in their backyard.

Nancy, a resident of Greenwood Village and an anti-lethal advocate, expressed her doubt about some of the reports in her town:

*Some reports will say, ‘Oh, we got pots and pans out, like you told us to do, and banged them and the coyotes wouldn’t leave.’ And Animal Control would even admit it to us, ‘Well, we think they’re lying.’ All . . . you have to do is look at these animals and they will run . . . there’s a lot of this disingenuous behavior that goes on with . . . the residents, I think. There’s a lot of fibbing that goes on so that they can get their way.*

Aaron, an official with the Greenwood Village government, told me the decision they made when some anti-lethal advocates expressed disbelief over some of the events that were described at the town meetings and in other forums:

*There is among some people kind of this sense of, ‘well, I’ve never had that happen.’ So there’s almost a disbelief that it did happen to that person when they called in and [complained about an encounter with a coyote]. ‘I’ve never had that happen! So I don’t know if I believe her.’ And I don’t think we were in a position*

*to say to some of our residents, we don't believe that this happened to you. We had to take it at face value. What's their motivation to call and say, 'hey, I got chased for two blocks with my dogs jogging, by a coyote baring his teeth,' or whatever? What's their motivation to do that, other than to say, 'hey, I was frightened, and I want you guys to know'?*

At the same time, many on the pro-lethal side claim that those on the anti-lethal side are not in a position to fully understand their stance, as Deborah explains:

*I wonder if any of the people that don't want lethal control had their child or their animal attacked. Or threatened. I mean, people have said they found [coyotes] on their back patios. You know, [the coyotes are] very brazen, so maybe they just don't have . . . any negative experience."*

In a 2009 LTE, a resident said, in response to an earlier LTE written by an anti-lethal advocate:

*Mr. Hrinkevich believes strongly that coyotes are not a threat to our community. Perhaps Mr. Hrinkevich has been fortunate enough to not see friends or family lose their dogs or cats to these predators, which can and do enter our neighborhoods and yards, mauling and then killing our pets.*

Some of the anti-lethal advocates I spoke with would disagree with the author's opinion. Kate, a volunteer with the coexistence program, told me that, "*probably, if a coyote was in my yard and was attacking my dog, I still don't know if I'd shoot it, I'd probably throw things at it, scream at it, do anything I could, but I don't think I'd take a gun and shoot it . . .*" Alice, another volunteer, told me her feelings about lethal control: "*So no, I do not believe [in lethal control], and I could probably lose a cat or a dog to a coyote, I still do not believe that we should go out and kill, because they are what they are. I mean, we have created this problem.*"

However, in some cases the two sides are closer than they might first appear. Several of the pro-lethal people I spoke with 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 people I spoke with had little tolerance for the fear that many Greenwood Village people expressed, some did sympathize with them, as 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 towards 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 the wolves, they're practically extinct, you know, mountain lions at one time, bears . . . I mean 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.*

Most of the volunteers I spoke with who participated in walking the Greenwood Village parks (both to monitor the sharpshooter's activities and to haze any nearby coyotes) had few bad experiences with the residents that they encountered.<sup>11</sup> By and large, the respondents said that people walking in the parks seemed polite, and even open and receptive to the information the volunteers were providing. This suggests that there might be common ground from which to build, if representatives from the two sides could approach each other while keeping open minds and being willing to listen.

### ***Is There a Threat?***

Many expressed the opinion that conflict in the area is escalating. One LTE stated: *“Not only have the number of attacks increased, but the boldness of the attacks has increased as well. Many of these small dogs and cats have been snatched in their own yards, on their own porches, and some in the presence of their owners”*; and in another a veterinarian said that she has noticed an increase in coyote attacks on pets in

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<sup>11</sup> However, some volunteers never engaged the public, and others did experience negative encounters, especially when the volunteers reminded people of the town's leash laws.

Littleton, a nearby town. Aaron, an official with Greenwood Village, told me about the public meetings held before their management plan was approved:

*And basically what happened at that point is, we had dozens of residents . . . I don't know the exact number, but I would say, you know, 30, 40, 50 residents who came to two meetings in a row, back-to-back in February, saying, you know, hey, we really need to do something. The coyotes are more habituated, less afraid of us. We've always done the hazing thing for years . . . because we'd been preaching that through our newsletter and other things for a long time. And so they knew the drill, but kind of the message, I think, that we got was, maybe things have changed a little bit. They've become a little more habituated. They're not running away. We're seeing more of them. And then kind of the straw, so to speak, there was a boy in a park that you probably read about in some of the media reports. . . . you know, he had said he was lunged at. And you know, there were some . . . quite a bit of dialogue about that. So then the whole neighborhood became . . . that kind of really galvanized everyone to say, something has to be done.*

In general, many in Greenwood Village (and the surrounding area) felt that conflict was increasing and that coyotes were behaving differently than they had in the past.

Not surprisingly, however, there is wide disagreement over what constitutes valid concerns and fears about coyotes. Some felt that it was not necessary to be afraid of coyotes (for example, a 2007 LTE said: *"It is widely known that coyotes would rather attack a rabbit than a person, and following someone and snarling—while frightening—should not be a death sentence."*); some felt that coyotes were a threat and did not belong in their suburban communities; and others felt that, while it was important for humans and coyotes to coexist, it was also important for people to feel safe. A 2009 column in a local paper said: *"Coyotes and humans do need to co-exist," Foster [a local resident] said, "but if they're affecting my ability to feel safe, something more needs to be done than just education."* That same column continued:



*Lee Terry, president of the association, followed up Tuesday with an email to the mayor's office revealing that a pack of 10 to 12 coyotes was spotted recently on Oneida Street, "frightening a young couple returning from a night out, who hid in their car until the huge pack had left." With reports like that, it's little wonder some people have begun to raise the alarm. I certainly won't be taking late-night walks in my neighborhood any time soon.*

The Greenwood Village official, Aaron, said:

*The message I think we heard was . . . "I've lived here for a long time . . . And it feels different now. I see them more frequently. They're more bold and less afraid." . . . that kind of thing. So that translated into, "I don't feel comfortable maybe in my backyard." "I don't feel comfortable taking my walk or jog in the morning, with my pet or without." You know, we had an instance or two that I can think of off-hand where a woman went for a jog with her dogs . . . and I'm pretty sure they were on a leash . . . and they kind of just followed her for a couple of blocks, for whatever reason. Whether or not they were stalking her or her dogs, or they were chasing her out of their territory . . . whatever they were trying to do, the end result was that she felt very uncomfortable. I mean, they pursued her for several blocks, I remember, pretty closely. So she was very uncomfortable. And so our thought was that we needed to respond to that. And we certainly don't want people from a safety standpoint to feel uncomfortable in their backyard and feel like they can't utilize their back yard, or they can't go for a walk.*

It is not only the perceived physical threat that people were reacting to, but also the feeling that coyotes contribute to an unsafe feeling about a place—specifically, a person's neighborhood, where he or she should feel the most safe—and so constitute a threat to mental well-being, the ability to feel safe and secure in your own neighborhood and on your own property. This is an important point—whether or not the threat in question is real, imagined, or perceived, if something makes people feel unsafe in their environment, they will try to change the situation.

Alice, a volunteer with the coexistence program, described a scene that she witnessed in her neighborhood:

*We had one lady in our neighborhood, way back when the coyotes first started to show up, she went running up the street screaming, literally, "There's a coyote in the back! In the ravine, there's a coyote! Get your kid!" I mean, it was . . . unbelievable (laughs).*

Barbara, a volunteer not only with the coexistence program but also at several local and state parks, related another story:

*I was talking to a lady a couple of weeks ago when it was getting really cold, and she said that she was afraid to go in her back yard to disconnect the hose because her daughter had looked out the window and seen some animal tracks back there. And she was afraid it was a coyote, and if she went out and disconnected her hose, she would be attacked by a wild animal. And I told her to go out in the daytime, and there wouldn't be a problem. You know, don't go out after dark . . . you might see a raccoon or whatever it was. But if it's a coyote, go out in the daytime, and it'll be okay. I mean, she was risking freezing pipes because of this fear of a wild animal.*

There are many such instances in the data that demonstrate that there is a real fear by many in the area about coyotes, generally for pets and children, but also for adults. Bob, who has lived in Greenwood Village or nearby Cherry Hills for his entire life, related a story to me that happened years ago. Although he does not generally fear coyotes (and, in fact, believes that they have a right to live in the area as long as they are not aggressive towards humans), this incident left him shaken:

*I was in the kitchen, and then I ran out because [my dogs] wouldn't come in. And I was standing right at the back of the 17th tee, and I could see a coyote there. These were big; these were like the size of a large German shepherd. And I looked around; there were two . . . and as my eyes focused, I saw two more, and then there was one more a little further away. And then I saw one that circled around, and it was coming behind me. There were a total of six. And they were big. And I kept screaming for my wife, and she heard me and came out. And she got one dog, and I got one, and we went in. But the dogs, the coyotes, were as close as from me to the stairs. I was scared; I mean I was genuinely . . . I'm not afraid of animals at all, but I was genuinely scared.*

Bill Walsh, in testimony to the Centennial City Council before their management plan was enacted, described the situation in his neighborhood:

*People are afraid to go out for a run; I'm a runner. My wife is afraid to go out and run in the community. Now she was out on Saturday running. She met another neighbor who had been stalked by a coyote. [This neighbor] went to a house randomly, knock[ed] to get in, [to find a] safe haven. People are afraid to go out or look around when they go out in the morning to pick up their newspaper. They're afraid to take walks to the greenbelts. So something has to be done. Now, I'm not sure what the solution is, but coyotes are predators. If they have to kill to eat, they eat. And I think that sooner or later, we're going to have a problem and we're going to have human safety and that's about the only thing that will bring the DOW in.*

In general, there was broad concern for pets for people who were more tolerant of or who wanted lethal control in their communities. Deborah, a Greenwood Village resident who requested lethal control in her neighborhood, told me that “. . . my worst nightmare is to have my little dog taken by a coyote.” In the public meetings in Centennial, Bill Walsh, a resident, complained to the Council that the Colorado Division of Wildlife was not responsive to their concerns about their pets:<sup>12</sup>

*They have essentially said domestic pets are part of the food supply for coyotes and boy, if you've come into my neighborhood, people find that totally unacceptable. Totally unacceptable that they can't have their pets in their yards and go off to work because they're two-income earners and know that they can come back and they're not going to have to worry about some coyote. My next-door neighbor on Saturday at about 11:00, January 3, I heard him screaming and yelling. He's chasing a coyote out of his backyard with a broom. He's escalated his defense system up with pellet gun because there was two neighborhood dogs and another neighbor's that this coyote was trying to get at it. . . . I started asking cohorts at work. Gentleman from Lakewood said a pack of coyotes have been luring dogs that have taken down a German shepherd and a golden Lab. These aren't little dogs. Coyote lures them over and they attack in packs.*

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<sup>12</sup> See the section on Greenwood Village and Centennial's management plans in chapter 1 for an explanation of different approaches to pet depredation.

Sarah, an animal control official in another town, told me of her experiences with people, pets, and coyotes:

*It's a high emotion thing . . . even when I pick up a dog that's running at large, oh my gosh, they would never leave their dog in a kennel overnight, but they'd leave their kid in jail, you know. I mean the emotion for their animals, which I understand because I'm an animal lover, but it's much higher than it is for their own kids sometimes. And so, it's a very emotional issue. And [if a] coyote attacks their dog, they want revenge, and it's not necessarily an aggressive thing. It's just 'We don't want them here because they attacked Fifi.'*

The spread of urban myths about coyotes has added to the general level of fear.

One resident of Greenwood Village said:

*And there was rumors that . . . they found in one den, 32 dog and cat leashes . . . it was a rumor so I don't know if it's true or not, but it was in Greenwood Village. And I walked . . . they're doing a lot of work on the little dry creek area, but I walked way out there before they started doing any work a couple years ago. And I found like a little head of a schipperke.*

This is a mix of a first-hand experience (finding the dog head) and an urban myth (there is no literature that describes coyotes keeping trophies). She continued:

*Years ago we had neighbors that had the little pigmy goats and they had one in the front yard and a coyote just came and killed him in the front yard during the daylight, and then it was scared away. I mean, it's my understanding that coyotes will kill just to kill, one of the few predators that will kill just for the sport of killing. I don't know if that's true or not.*

The specter of an animal that kills just for the sport of killing is indeed frightening, although coyotes are not known to engage in such “overkills.”

Fear for the safety of children was often expressed in Greenwood Village. In addition, some seemed concerned about the level of fear children were experiencing related to coyotes, whether or not they felt the children were being physically threatened.

For example, Carlos told me that he was worried about one of his grandchildren, who was afraid of coyotes: “[My] granddaughter, now she doesn’t want to go out at dusk or something. She mentions it, not constantly, but every once in a while, you know something triggers her.”

Some people felt that their children were being directly threatened by coyotes. Debbie Scheper, a resident of Greenwood Village who was vocal about her support for lethal control, told the Greenwood Village council about an experience that her teenage son, Matthew, had when a coyote lunged at his throat (it should be noted that many anti-lethal advocates are skeptical about whether or not this event happened; see the “Visions of Each Other” section in this chapter).

*Thankfully Matthew was strong enough and quick enough to defend himself. Had it been my 13-year-old daughter, we would be discussing a whole other matter tonight. What’s important here to note, is that he was not walking a small dog, he was not carrying food, and he was not being aggressive to the animal’s territory. Matthew was walking home from Westlands Park at 4:30 in the afternoon. I want this to go on record that this over-populated and aggressive coyote situation has escalated into an attack on a 5’2” boy. Make no mistake this coyote was going for my son’s throat.<sup>13</sup>*

On the other hand, there are also instances where it seems that some are not afraid of coyotes as much as inconvenienced by them. Perhaps the best examples of this involve residents of both Greenwood Village and Centennial stating at public meetings and to coyote coexistence volunteers that during the summer they often have to wake up in the middle of the night to close their windows, as the neighborhood coyotes are making too

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<sup>13</sup> See Appendix A for Matthew Scheper’s testimony to the Greenwood Village city council.

much noise howling. Alice, a volunteer with the coyote coexistence program, described her experiences at one of the public meetings when the Centennial City Council was listening to public comments about their proposed management plan:

*So [the situation in Centennial] is more positive, although there were people in Centennial at the city council meetings, one lady said she had to close her windows at night because of the howling of the coyotes. You know, personally I think what a beautiful noise rather than the streets . . . I mean, that was her complaint.*

Elizabeth, a long-time animal rights advocate, described some interactions she had with Greenwood Village residents, who did not want the Village to hire the sharpshooter (and supported the coyote coexistence program's efforts), but who did express concern:

*But they said "In the summertime these coyotes are out here in the park making a lot of noise, and I always have to get up and close my windows in the middle of the night and that's kind of inconvenient. And I can't let my dog out at night by itself because I don't trust them," so they thought that it was an inconvenience that the coyotes were in the park.<sup>14</sup>*

Carlos, a Greenwood Village resident, expressed his concern over damage to his lawn and landscaping: *"I'm kind of concerned, because if you look at the grass, we've got these yellow spots . . . and I don't know if they've urinated there or they've been lying there or something . . ."*

This feeling of being inconvenienced by the presence of coyotes has led some anti-lethal advocates to believe that the attitude of many pro-lethal control people is one of entitlement. A 2008 LTE explained:

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<sup>14</sup> I was also told by a wildlife official in a nearby jurisdiction with a demographic profile similar to Greenwood Village that hearing coyotes at night was one of most common complaints she received.

*But, because humans are bullies, they are only deciding to come up with an easy answer. No, not that they will watch their dogs and cats and keep them inside or get a taller fence. No, they will simply kill the wildlife that they moved there to get an opportunity to see. Because wildlife has now become an inconvenience to them.*

Others, generally those who argue against lethal control feel that coyotes add to their quality of life instead of diminishing it. Carol, a volunteer, said:

*And I think they're fun to watch. I think they have a great personality. They're so um . . . they're so playful and full of joy and, you know, they're just incredible little beings. . . . and I love their call at night . . . When we first moved to Castle Rock, we used to hear a whole symphony in the middle of the night . . . I used to just call it the "coyote barbeque." . . . I like hearing it, and I know not everyone shares that.*

The same thing—their call—that caused negative feelings from some residents' perspective caused nothing but delight from others. Many of these same people felt that concerns over coyotes were being exaggerated, as Danielle explained:

*I guess, people just . . . they exaggerate also . . . it's like wolves too. I think that that's why they were exterminated or extirpated anyway, I mean it's like people blew it up in their minds into, you know, the big bad wolf. It's kind of that way with the coyotes, you know. Even though a coyote, coyotes attacking human is very rare.*

Sarah described a public meeting she attended in Greenwood Village, where a young girl apparently gave false testimony in support of lethal control:

*One of those meetings I went to too, there was a young girl of like 13-14 years old . . . that stood up crying saying how she went out in her backyard and she picked up her little dog because this coyote was coming after it. She picked it up and the coyote came after her, and it was so scary. He was going to attack her and all this stuff, blah blah blah. And she was just crying hysterically and her parents are sitting there, it's okay, and everything . . . and anyway found out within 24 hours that the whole story was made up. Her parents put her up to it. She cried and everything, real tears. I'm like, "Oh, give her an A for acting." Yeah. Teach your kid to lie to the government to get things done, that's great.*

Rebecca, a Greenwood Village resident who works with animal protection organizations, said that she believes that a lack of understanding of coyote behavior explains some of the perceived threat that Greenwood Village residents and officials' experience:

*They do have their protocols, they do have their criteria for coyote management. Lethal control is step number four, the last resort, saved only for aggressive coyotes, but the problem is the police don't really know what an aggressive coyote is . . . and they misread body language, they misread presence, they misread everything . . . .*

Rebecca said that she believed that at least some people were responding out of genuine fear, “. . . I think it's a basic primitive instinct in the human brain to be afraid of aggression, particularly aggression in wild animals, any wild animal.”

Others felt that any potential threat coyotes posed to the community was insignificant compared to other dangers. Many LTEs compared the few number of incidents of coyotes biting people to the many annual incidents of domestic dog bites and attacks, for example: “Your chance of being attacked or bitten by a dog are 100,000-plus more likely than being attacked by a coyote,” while a 2009 LTE said that there are about 10 reported coyote bites nationwide every year, compared to about 4.7 million pet bites (data that was obtained from the Denver Parks and Recreation's wildlife ecologist). A 2007 LTE compared the potential threat a coyote might pose to unsupervised children: “Truth is, I consider the unsupervised children playing in the streets more hazardous than the coyotes. I just drive more carefully rather than complain about it.” Alice, a volunteer, told me, “I personally think pedophiles are more of a threat than coyotes . . . or domestic dogs getting out, you know?”



Sarah, an official with another jurisdiction who often deals with coyote issues, described a story that a friend who does wildlife outreach told her:

*There's a pond in one of the parks up in Aurora, and this woman called and said that this coyote was stalking her three-year old child. Well, come to find out they're walking around the pond and the woman's kid runs way up ahead of her—three-years old—clear on the other side of the pond from her, and she sees the coyote wandering around. I don't know if it was necessarily stalking her, but [her friend] says, 'Well, come on people . . . everybody knows that all children smell like syrup.' But . . . seriously . . . how embarrassing to be that parent—'well, yeah, I wasn't watching my kid; she's on the other side [of the pond]. What if she would have fallen in the water and drowned? That's a worse thing that could happen.*

Many people compared the potential threat of a coyote attack to the potential threat from guns used to kill coyotes, whether by the sharpshooter hired by Greenwood Village in 2009, Greenwood Village police officers, or Village residents.<sup>15</sup>

Joanne, a volunteer and resident of Centennial, told me about an experience she had encountering the sharpshooter in a Greenwood Village Park:

*And then we got kind of more incensed because of his presence next to a playground and . . . whatever kind of rifle he was holding, we were just amazed that Greenwood Village would allow that kind of behavior when there's homes all around that park. There's a major playground there. I mean, no matter how careful a shot you are, you could ricochet off a rock, or go through . . . a dirt mound, and go right through and hit somebody, hit a dog, hit a kid, hit a person. I mean, we were just amazed that that could go on in a city . . . so that got me a little more involved.*

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<sup>15</sup> Legally, residents in Greenwood Village are allowed to discharge firearms on their property, as long as the projectile does not leave their property. So, theoretically, someone could shoot a coyote in his or her backyard; however, given the relatively small properties common in the Village today, some expressed concern about this law.

Later, she told me that, as a parent, she was especially concerned about children's safety around guns:

*. . . as a parent, I was very concerned about kids getting hurt, especially knowing how our kids play. I mean, you don't see kids when they play. They hide and they . . . can be quiet and . . . you never know when they're going to jump out of the bushes or hide in the bushes, or whatever.*

Kevin, Joanne's husband, is an avid jogger, and often uses the trails that run through Greenwood Village (and are connected to a regional system).

*You know, the big thing [for me] was the safety issue with that guy because I'm the one on the trail . . . I used to hunt. I mean, when I was a kid I had a .22. We used to hunt groundhogs and things, and I remember all of the safety lessons I was given, you know? The bullet's dangerous up to a mile, and all this other sort of stuff. Here he is in this park, you know? I mean, it was just absurd . . . you going to hit a jogger? I mean, there are people that are walking, jogging, bike riding. The trails here are really packed with people.*

Aaron, the Greenwood Village official, explained the safety concerns they took into account when they enabled their police officers to kill coyotes:

*. . . that's a valid concern. . . like many or most police officers, but ours even more so than normal, [they go through] an immense amount of firearm safety training and training in general. And that's why we utilize the sworn officers and not Animal Control, for instance, who don't have that training. And so they've been told, "hey, you know, it's only when it's absolutely a safe situation for you and you feel it poses an absolute minimum—I guess you can never say no threat but certainly as pretty darn close to possible as you can get—should you engage in this activity.*

Aaron acknowledged that gun safety was an issue that should be addressed; however, he felt that many who discussed gun safety were already against using lethal control:

*. . . those that were concerned with that were the ones that were already concerned with lethal control in general. So they were already kind of starting off on that page, and this kind of escalated it further for them. It was kind of salt on*

*the wounds, I guess maybe and it made it even worse that that's what we were doing. But if you were okay with lethal control, it was kind of less of a concern. Which is interesting, because really in a way, they're kind of separate issues. You know, do you fear . . . are you concerned about discharging a firearm in public? You know, it can be kind of a separate issue, but it did go hand in hand, I think, a lot, were you OK in the first place with lethal control. It was just kind of something else for them to worry about. And certainly, obviously safety is a concern. And we got that and knew that. But right, it was, not only are they doing lethal control, which they shouldn't be doing, but they're now discharging a firearm in city limits and that concerns me too, kind of thing.*

However, that appears to not always be the case. Based on my interview with them, Joanne and Kevin got more involved with the issue because of the use of guns in Greenwood Village, and perhaps less so because of the coyotes.

Most of the anti-lethal advocates and others who were not in favor of lethal control that I spoke with believed that coyotes did not pose a significant threat to human safety. Sarah told me:

*You know, I've been here a really long time and I deal real closely with the Division of Wildlife, and it is rare to get an actual aggressive situation with a coyote towards a human with no pet involved. Usually, there's a pet involved. Whoever is trying to take the pet away from the coyote who thinks it's his food, coming up on a den, you know, something like that, but it's really rare. I don't think people understand how rare it is. I mean, I've been chasing coyotes for years, and they've never turned on me . . . I get out of the truck every time I see a coyote and I just chase after it. I don't even yell or scream or wave my arms or act crazy or anything, I just chase it. And sometimes, I'll just walk towards it and not even run, and they freak out. They don't know what to think about that. So I have a hard time understanding why it's so difficult sometimes for people to haze them. I don't know if it's a fear-based thing and they just think that they're, you know, stalking them or something but . . . I've never had one turn on me.*

Pam, a resident of Cherry Hills, told me about her experiences watching coyotes play on the Highline Canal when her children were younger:

*A lot of times we would take a break and just sit . . . I didn't see a lot of pups very often, but when we did it was so much fun because they would play, and they were like puppies. And so we'd stop and just sit and enjoy watching them, and there was no incident like from the mother, that we were going to get hurt it . . . it was just very peaceful . . . .*

She also related stories from her mother who grew up in rural Minnesota in the 1920s; she had to walk several miles to school each day through fields, and she never worried about them. An elderly neighbor of Pam's also recollected that when he was growing up on the outskirts of Denver, he never had a negative incident with a coyote. Pam used these stories to bolster support for her belief that many in her area were exaggerating the threat of coyotes.

### ***How to Manage Them?***

Managing coyote-human conflict can be split into two broad approaches, although there is often—if not always—overlap between the two. The first is lethal control of coyotes, where wildlife managers or other authorized officials (in Greenwood Village's case, the police or the hired sharpshooter) kill coyotes to prevent conflict. It should be noted that in more rural areas, private property owners also at times play a role in lethal control. Lethal control can be approached with two separate goals: eradication or the diminishing of the coyote population.

The other major management strategy is better described as a suite of tools, including educating residents about how to prevent conflict (for example, by not feeding coyotes, making property unattractive to the animals, and taking steps to protect pets) and “hazing” coyotes, a process where humans attempt to re-educate coyotes who have

become too bold around people. The goal of hazing is to make coyotes afraid of people so that they will seek to avoid them in the future. This is accomplished through non-lethal, non-harmful means, including methods as simple as throwing a can with pennies inside of it near a coyote (so that the noise scares them off), yelling at a coyote, or even chasing it away.

The two towns' management plans call for both of these strategies at different times (see chapter 2), although the implementation of the plans is different. Centennial relies very heavily on education and hazing, while Greenwood Village chooses to use more lethal control. Much of the conflict over the plans is rooted in disagreement over when lethal control should be used. For example, volunteers of the coyote coexistence project generally agreed that lethal control should only be used in the case of sick animals (i.e., a rabid coyote). For example, Carol said:

*I think probably the only place for that is if the animal is rabid or if it's really altered mentally, or . . . if it's really, really hurt and it's just suffering . . . I mean, if it's got a leg that's been half-ripped off or whatever. . . . I think it would be a very extreme case. It would be a one-off, definitely.*

Danielle, another volunteer, said, *"I am so against killing animals. I mean unless they're rabid, that's quite different then. I don't believe in killing healthy animals."*

Some stated that it was OK to use lethal control when a particular coyote has become aggressive (so-called targeted lethal control), although hazing should be exhausted as a possibility before that point is reached. Gary, a volunteer, said:

*I'm sure [I'd agree with lethal control] where particular coyotes could be identified as being the vicious kind. Like Jaws, or something! There may be some circumstances. I would think they would be few and far between, but there could be. But I think they would have to be on an individualized basis. And I think as a*

*policy, as a way to generally handle the interaction, I don't think [lethal control] is appropriate, or a good policy.*

Iris, another volunteer, said:

*I remember reading about a bear up in Montana, and we actually did a trip up there, and one of the rangers as we were doing a hike with was telling the story about this bear that had killed a human they think, and then basically had taught it's kids or it's cubs to kill humans and then the cubs became really aggressive. I mean, I guess if it got to a point where we thought that coyotes were just aggressively going after and, trying to kill kids and trying to kill humans . . . That would be a natural reaction to say, OK, we need to look at [lethal control].*

Margaret, who works for an animal-protection organization, stressed her belief (reflected in many other respondents) that coyotes should not be killed for natural behaviors<sup>16</sup>:

*For coyotes to eat animals is really quite natural for them, so I . . . I don't think that there's, for me, anyway, any need to implement lethal control on a coyote that, um, kills animals. It's really more about the inability to be hazed by humans or shooed away by humans and . . . or, you know, overt aggression to humans.*

Many of the anti-lethal advocates I interviewed felt that Greenwood Village residents wanted to eradicate the local coyote population. For example, Gary, a volunteer, stated that, “*I think the intention of the Greenwood folks is to really . . . eliminate the coyotes from the area.*” Most stated that such efforts were futile, even if they could be justified ethically, as it is impossible to permanently eradicate coyotes. In fact, this has been shown to be true in many studies; coyotes tend to reproduce more when a population is under lethal control for complex behavioral and ecological reasons (see chapter 1). A wildlife official with another Denver metro area municipality explained:

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<sup>16</sup> However, what is and is not a natural coyote behavior is a point of debate amongst some stakeholders.

*And the thing is the biology as you know, of coyotes, if you kill a few of them it doesn't solve the problem, and it just makes it worse. And we've actually experienced that here in [her town]. About three years ago, we had a guy claiming that coyotes were being aggressive to his nanny or whatever and Tri-County Health issued him a trapping permit at that time, and they won't do it anymore. They're done. But it was probably one of the last trapping permits that they issued. And Division of Wildlife, we're all in a meeting together while I told this guy this is a temporary solution, this is not going to solve your problem. It's a temporary solution, he's like 'I don't care.' It lasted I don't even think a full two years. They trapped five or six coyotes, so they killed five or six coyotes in that area which would be pretty much a whole family unit. Within two years I was getting massive complaints of coyotes again. We have 10 to 12 now up in that area that are seen together. So it's kind of like it didn't really help you, did it? And now you have a much bigger problem than you did before .*

She continued:

*And so, we have all these studies that say that that's what happens, that they mass produce, that they start breeding with each other and all this stuff [when lethal control is conducted]. And everybody's like, "How do you know that's true? That's just a study, because it's actually happened here in [her town]. We've actually had it happen. So I can say it's true; it happens. If you kill a whole bunch of them it doesn't work, you know. And that's what everybody wants and they don't understand. Well, I do understand that it's frustrating to understand it, because the wolves, they're practically extinct, you know, mountain lions at one time, bears . . . I mean 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 [understand] 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.*

She also offered what she considers to be the best proof that Greenwood Village's plan is not working:

*The thing is, Greenwood, they're randomly just shooting coyotes. Um, they're not even following their own coyote management plan. And is it working? No, they're still getting coyote calls every day. So it's not working, you know.*

Alice, another volunteer, agreed:

*I suppose we could annihilate 'em but they'll come back in time . . . Well, and they say that you get rid of any kind of a pack, of course more are going to move in; they manage to reproduce, they make up for the numbers. They're amazing. We should learn from them.*

While the eradication sentiment was certainly present in some Greenwood Village residents, some of the people I spoke with took what they considered to be a more middle-of-the-road approach. While the literature demonstrates that suppression of coyote populations does not work in the long-term, some Greenwood Village residents expressed a desire for suppression efforts. For example, Deborah, a long-time resident of the more rural part of Greenwood Village, said: *I'm fine with lethal control. I know you can't get rid of all of them, but I think that . . . we were getting too many. I mean, we used to have fox; we don't have fox anymore because the coyotes are there.*” She went on to express her concerns over her dogs and her neighbors’ children; as a result of this concern, she called the Greenwood Village police and asked for help:

*And the neighbors on both sides of our piece of property have dogs. The one has . . . she had like five goldens; now she's down to two. But they could see them from back at their house, see the coyotes. And the other neighbors had horses and small dogs and small children. And they would come home and see them just sitting there staring at their horses. So I think a lot of us called and complained and a detective came out and shot several of them. The one house has a playhouse on stilts in the corner of their property, well just off of it, so I think he would use that. And so, I think he got rid of two or three of them, and it's been better since then.*

However, Deborah also felt that using lethal control was not the first step one should take:

*Well first of all, I think that lethal control is the last resort. I'm very much for the education and not leaving out food. Now I don't believe that bird food, dry birdseed, is going to get the coyotes. But . . . we feed our dogs outside and I*



*always bring the bowls in and our trash is always sealed and shut, and I take food trash and freeze it and put it out Monday morning. I think that's very important, I think some people will feed them, which is just ridiculous.*

Here, we can see that the threshold for lethal control is different for the two sides. In Deborah's case, the perceived threat of coyotes triggered her desire for lethal control (although not eradication), while the volunteers I interviewed disagreed that this is a justifiable use of lethal control.

Although some Greenwood Village residents had a more moderate approach to lethal control, it is equally clear that other residents did believe that eradication should be the ultimate goal. Carlos, a long-time resident of Greenwood Village, stated that in his "ideal world," coyotes would not exist in Greenwood Village, as they simply do not belong in developed areas (for more on this attitude, see chapter 4, "The Geographies of Human-Coyote Conflict").

The other side of the management equation is education, outreach, and hazing. The volunteers by and large felt that these tools were the most effective means of reducing human-coyote conflict over the long-term, and felt especially that individual, face-to-face discussions could help alleviate the fears of those who were concerned about the presence of coyotes in their neighborhood. Alice explained: "*People basically, when they're afraid, if you send someone to the door to talk to them they're going to feel better; it's one on one. They're going to feel better; talk to them, educate, keep your cats in, stuff like that.*" Rebecca, a humane educator, told me that she believes that Greenwood Village should hire a wildlife expert, someone who can meet with residents face-to-face (much like the Centennial position, which no longer exists):

*So that's the problem is that there's just no consistent, repetitive exposure and protocol that's being followed. You know, education is their number one criteria on the control. They have done everything they can do, but people want real people, right, they want to know where they are, they want to know how to get a hold of them when they want them. That's why having a coyote expert or a wildlife expert on the city payroll, and they could start them off part-time just to see how much draw there is, how much demand, but to have that person be the contact person for coyote and wildlife compliance, or education.*

Many respondents told me of their belief that children should be taught about the importance of predators in a healthy ecosystem, as well as what to do when you see a coyote. Elizabeth described an experience she had with a child:

*I don't know what else or how else to get that to people except maybe start in kindergarten with people maybe . . . educating from a very early age what part a spider plays in the whole web of our life. There was a little girl that I play with across the alley from me, and her dad was always out working in the garage. And she always comes over and we're always talking. And one day she was over there and we were playing; I was teaching her how to sweep out my garage. She's two years old, I could barely understand what she was saying, but there a spider there and she took her stick and she was banging. I said, "No." I said, "That's a spider and that has little babies at home, that has little baby kids, little baby kids at home waiting for her to come home to bring her food. And you can't kill her; otherwise her little babies will be hungry." And I think that's at the stage you have to start teaching about predators.*

Danielle, a volunteer who put together an educational display for a local library, told me that she thinks education is the most important component of a coyote management plan: *"I think that education is more important. You know, so that not only the adults but even the next generations coming up can get an appreciation for coyotes, and how to properly interact with them."* Later she said: *"I do believe strongly in education. If all people hear from the time they're little children is mythology rather than fact, then that's what will shape them. And so . . . we need to be disabused of all of the mythology around [predators]."* Some anti-lethal advocates felt that *"Residents of Greenwood Village need*

*to be educated,*” in the words of one LTE, while others stressed that education alone was not enough—the willingness to learn and modify their own behavior was necessary for education programs to work.

Several respondents told me about educational successes they have witnessed or been a part of. Nancy, an anti-lethal control advocate and long-time resident of Greenwood Village, told me that in her neighborhood:

*I’ve educated everybody. We did have a coyote petition . . . to stop lethal control in Greenwood Village. And I went around and got signatures, and at the same time, I educated everyone. So everyone in my area is pro-coyote. We have no issues, no police, no calling the police, no nothing, and that’s . . . another perfect example of how education works.*

Nicole Rosmarino (whose real name I am using here because her comments are on the public record) works for WildEarth Guardians, the group that started the coyote coexistence program. In a public meeting testifying in favor of Centennial’s coyote management plan, she described an interaction she had about coyotes:

*I do want to share with you just a little anecdote if you’ll indulge me. It took about five minutes after I walked into a neighborhood vet clinic and I overheard the young woman speaking there about yet another coyote attack, as they put it, and they remarked that one of their clients had lost her dog to a coyote. And before I entered into the conversation, one of them said, “Those coyotes need to be killed.” It took five minutes of talking with them respectfully, honoring their feelings because I have a dog of my own. I have a cat. But it took five minutes of reasoned conversation before . . . through talking to them about how coyotes will actually breed more if you kill them, how some of the tools being looked at certainly in our region include traps which are both expensive, indiscriminate, and also cruel. It took five minutes talking to these young ladies before they said, “How do we sign up? How do we get involved and do what you’re doing? We’d love to do coexistence education. Sure, you can put your educational materials down here at the clinic.” So it’s very doable what has been proposed that we do regarding coyotes in the city.*

Most of the respondents I spoke with said that hazing was an important component of the Centennial management plan. Hillary, a volunteer and biology student, discussed her belief that hazing was effective, but you must first educate people to not feed coyotes, directly or indirectly, because feeding can habituate a coyote, *“And once they’re habituated, they can be aggressive. And I don’t think people understand that. So, if you keep them afraid of us, then they won’t come near us.* Later, she described her philosophy on hazing: *“I think you can train an animal, even a wild one, to stay away from people . . . It’s just retraining them. And I think with coyotes, that’s possible.”*

Some saw hazing as an important alternative to lethal control, but still expressed some reservations about its efficacy or impact on coyotes. For example, Danielle thought that it was probably not that effective in reducing conflict), or about its impact on coyotes, while Lindsey, a woman who volunteered with the program until she parted ways over a policy disagreement said:

*Oh, I would take hazing over lethal control any day. I think hazing is a little too severe, because you can seriously injure an animal. But . . . coyotes are pretty smart, and if . . . one has been hazed, they’ll probably be less apt to get close to a house or a neighborhood.<sup>17</sup>*

Although she was somewhat ambivalent about hazing, Lindsey did see it as an effective alternative to lethal control.

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<sup>17</sup> It should be noted that hazing, as defined in chapter 1, only uses non-lethal tools designed to not cause injury to the animal being hazed.

By and large, anti-lethal advocates felt that humans had an obligation to coexist with coyotes, which involved changing human behavior through educational efforts and, when necessary, hazing bold coyotes. Iris, a volunteer, told me:

*I know that there's been instances . . . where people have said that [coyotes] are very aggressive and I still think, the last thing I would want to do is try to kill them. I would try to figure out . . . a way that we could . . . scare them off, but for the most part, my experience has been that they just don't bother us, right? Like they don't outright harm us. That's not their intention. So, I just believe that we should coexist. I believe there's enough room to coexist. Why can't we coexist? I feel like we, as humans, take up far more space and far more area and do more damage to the environment than a lot of other animals . . . So anyways, that's just kind of my basic philosophy and approach to things in general.*

Kate, a volunteer, shared with me her belief that:

*We have a huge rodent population; we have a huge rabbit population; and, you know, from the smallest insect or spider, everything is there for a reason, and if you start taking things out, you're really messing with nature and the way things were meant to be intended, and you're depriving society of those joys of being able to coexist with another species.*

Generally, anti-lethal advocates believed that, if done correctly, education (by modifying human behavior) and hazing would eliminate the need for lethal control. In her statement to the Centennial City Council, Nicole Rosmarino from WildEarth Guardians said:

*We are, as an organization, willing to support the city's plan as it has been drafted with its component for lethal control, and that in a sense is to raise a challenge to ourselves, that if we do the education and hazing pieces of this plan right, there will never be a need for lethal control, and that's very important to recognize.*

Overall, opinions about lethal control ranged from completely unacceptable except in extreme welfare or disease-related cases to a belief that eradication of the local

coyote population is a desirable outcome. Opinions about modifying human behavior and hazing were also wide-ranging, from the belief that this was the only effective way to reduce and prevent conflict, to a belief that these steps are important, but that lethal control is also an important piece of the puzzle, to a belief that humans should not have to modify their own behavior in developed areas like suburban Denver. Much of the controversy over management methods stems from disagreements about what conditions need to be reached before lethal control should be seen as an option (for example, whether or not a coyote that preys on a small dog or a cat should be killed). This dispute over how to best manage coyote-human conflict lies at the heart of the social conflict in Greenwood Village and Centennial.

Clearly, based on this chapter's analysis of how conflict is portrayed, thought about, and acted upon by different stakeholders, human-coyote conflict in and around Centennial and Greenwood Village is complex and multi-faceted, and involves much more than simply the physical acts that coyotes perform. Narratives of protecting loved ones or getting along with nature, of fighting a noble war or of being tolerant of other beings surround the social conflict that resulted from both the actions of coyotes and from the management plans that were enacted to deal with those actions. Different interpretations of coyote behavior also led to constructions of the opposing side by both the pro- and anti-lethal advocates. These narratives have helped to clarify the underpinnings of social conflict in Greenwood Village and Centennial over coyotes. However, more work is necessary to understand these constructions and differing opinions in order to work towards reconciliation.

## CHAPTER 4: THE ROOTS OF HUMAN-COYOTE CONFLICT

In chapter 3 I examined the way that conflict was thought about and discussed in Greenwood Village and Centennial. In this chapter I explore why the conflict is happening and how this situation fits into the larger picture. The “ecology of place” theory discussed by some urban sociology theorists (e.g., Klinenberg, 2002) postulates that the physical characteristics of a neighborhood directly influence the social interactions between residents.<sup>18</sup> This study uses two bordering suburbs that differ in the plans and institutions they have built to deal with human-coyote conflict and interactions in their confines; in fact, even the way that conflict is defined is different. In addition, the physical characteristics of the towns help to set up how conflict will play out, both in the natural environment (the amount of habitat available to coyotes) and in the built

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<sup>18</sup> A prime example of this is Eric Klinenberg’s *Heat Wave*, where he demonstrated that the difference in mortality rates in two bordering neighborhoods during Chicago’s 1995 deadly heat wave was in large part due to the differing street-level characteristics of the two neighborhoods. The community with the lower mortality rate had a vibrant street life (and therefore residents felt it was safe to leave their apartments and houses), while the one with the higher rate had few stores and many abandoned buildings and lots, contributing to a sense of unease and making it more possible for street crime to thrive. Residents (especially elderly residents, who experienced the highest mortality rates) felt less safe leaving their houses and apartments, and there were fewer places for them to go to in any case. As a result, many elderly people died of heat-related causes in their non-air-conditioned dwellings in one neighborhood, while residents were more likely to seek relief in the other.

environment. For example, in parts of Greenwood Village, residents are not allowed to have fences (which might help to protect their pets from coyotes), even when they back onto the area's plentiful green spaces and wildlife preserves. This dramatically increases the chance that conflict will occur. Based on my data analysis, I argue that the political, social, and geographical characteristics of Greenwood Village and Centennial communities have a strong influence on coyote-human conflict and the resulting social conflict that occurs. In this chapter, I support this argument and detail each with data.

The first section of this chapter, (*The Politics of Coyotes*) will demonstrate how coyotes act as a proxy for many political concerns, from private property issues to national and even international affairs. Here, I am defining "political" as anything having to do with governments and public affairs. The second section (*Social Contributions to Human-Coyote Conflict: Who is Responsible?*) will address the disagreement over who is ultimately responsible for dealing with (by preventing or mitigating) human-coyote conflict, an issue that seems to be at the heart of much of the conflict. I am using a broad definition of "social," meaning anything that pertains to human society that does not directly involve political institutions and public policies. The third section of this chapter (*Greenwood Village and Centennial*) will discuss how perceived and real community characteristics differentiate the two towns' approaches to human-coyote conflict, as well as how pro-lethal and anti-lethal stakeholders see the two towns. The final section of the chapter (*The Geographies of Human-Coyote Conflict*) will examine how the physical characteristics (including the expansion of development in general and the types of development common to the area in specific) of the southern suburbs of Denver



influences both the type and prevalence of human-coyote conflict, as well as how the conflict is played out across the area's social systems. I am using an integrated definition of geography, which focuses on the interactions of humans and the natural world.

### ***The Politics of Coyotes***

Coyotes can act as symbols fraught with political meaning on both a local and a national (and even international) level. Although Greenwood Village and Centennial are located solidly in a metropolitan region, an American West philosophy and attitude towards the natural world permeates the area. However, definitions of what constitutes a “true” Western philosophy and attitude differ from person to person. Some feel that valuing and protecting native wildlife is a legitimate attitude, while others take a more utilitarian, “conquer—nature” type of approach. A letter to the editor (LTE) discussing President Obama's appointment of Ken Salazar (who comes from a ranching background) to head the Department of Interior, explained:

*Livestock is not a “resource.” It is a profit-driven industry with a long history of putting cattle and ranching first. Wildlife habitat and its native animals, particularly predatory animals such as coyotes, foxes, wolves, bears and other native animals, are considered “nuisances” to be gotten rid of.*

Although this LTE focuses on rural livestock issue, a similar attitude towards predators can be found in urban and suburban environments as well. Some pro-wildlife people I spoke with see this as a traditional response to coyotes, prevalent in much of the livestock community and tied to the state's history of ranching and extractive uses of resources.

On the other hand, some people characterize a “Western mentality” as one of enjoying and valuing wildlife: *“Surely those lovable, furry coyotes deserve a better fate than being shot to death. In these leaner, meaner times, the coyote should be an inspiration. Why not make it a state mammal to help protect it from its enemies?”* said one anti-lethal control proponent in another LTE.

Another part of some Westerner’s worldview is to make a distinction between the Eastern part of the country and the Western part of the country. Part of this narrative includes anger over East Coast residents—especially politicians who dictate policies that affect traditional land uses in the West, including land-use policies such as livestock ranching and extractive industries on public lands. One 2006 LTE used coyotes to make the point that Congress should stay out of land use decisions in a humorous way:

*I read “Wily coyote turns police into off-the-road runners,” the March 23<sup>rd</sup> story about the coyote in Central Park with interest. I am hoping that Congress can sponsor a program to reintroduce the coyote to this mid-Manhattan habitat. Sections of Central Park could be closed so that the reintroduced species can establish themselves and raise their families unmolested by the non-native dogs and their human chaperones. A new agency could be created to track the coyotes and issue dire warnings about their imminent extinction. Residents of Western states could hold meetings, vigils and news conferences in support of the creation of new wilderness areas in Manhattan. And we could send them a “starter colony” of prairie dogs, so the coyotes would have something to chase around. Land use policy and changes under consideration would need to be approved by Congress, after consulting with “interest groups” that live west of the Mississippi. The coyote could be a very mischievous visitor indeed, and could offer some lessons to our Eastern brothers.*

Conflict over and attitudes towards coyotes can act as symbols for other larger political issues, as well. In the op-ed discussed in chapter 3’s *What is a Real Coyote* section, when a woman comes to regret her decision to take on a coyote as a “business

partner,” her conflict with the coyote ends up being treated as an allegory for a larger, national and international issue:

*While I am furious with myself for letting a coyote in coyote clothing put my family and property at risk, like Congress I am outraged over the potential security risks such a sale to Dubai could present. After my coyote debacle, I find Bush’s proposal an untimely business venture with the second-largest member of the United Arab Emirates found to have been home to at least two of the Sept. 11 hijackers.*

A column in a local paper included an interview with Brad Gumm, a leader of ReCreate ’68, a Denver-based group that organized demonstrations during the 2008 Democratic National Convention, which was held in Denver.

*“Anything we see that is not good for people, the environment or animals, well, we jump on that,” explained Brad Gumm, 31, a professional mixed martial artist, who runs his own Denver studio. Protecting coyotes from death is a form of civil disobedience, he further explained. Killing coyotes because one or two ate a pet, he said, simply is not a function of a well thought-out wildlife management plan.*

Here, Gumm and his colleagues see their fight against lethal control to be a part of a broader political picture.

Another member of ReCreate ’68 said in the same column that protecting coyotes in the Denver area was especially important to members of the group who were American Indians, *“since they believe coyotes to be sacred, spiritual animals.”* This notion, that coyotes perhaps deserve a privileged position because of their role in some traditional American Indian cultures, was brought up by several of those I interviewed, as well. American Indian issues are a wider societal issue, and a narrative that is perhaps especially important in many western parts of the country. Barbara, a coyote coexistence volunteer who also volunteers at local parks and nature centers, told me: “. . . *I think*

*there's a lot of stuff from Native American literature, culture, "song-dogs," you know, as they called them. A lot of respect for them . . . So maybe we need to bring some of that out or something."*

Iris, another volunteer, used the pro-lethal control attitude as a jumping off point for a larger discussion about the Western tradition of domination over nature, compared to what she sees as a traditional American Indian perspective:

*OK, so my fundamental beliefs are, I don't really subscribe and I don't understand the Western philosophy of domination, right? That we must dominate every single piece of land and just, if you want to go historically back, run off Indians, run off animals, or kill off all the buffalo, you know, versus the Indians who have the approach of, we take what we need, right? We kill what we need. We leave the rest, etc. I believe much more in, I don't know, why can't we share the environment? The coyotes don't bother me personally, right?*

Coyotes were used as an example to discuss larger environmental issues. Kate, a coyote coexistence volunteer, told me why she thinks local wildlife is important:

*[They] just . . . gave me great joy. I saw a couple [of coyotes] out in the open space, the Willow Spring Open Space, just, you know, frolicking and that was just fun to see. I mean, I dread the day where you don't see wildlife, you know, if you've ever read Rachel Carson's *Silent Spring* or anything else; I'm worried about that, and so I think it's really cool, it's a really great experience to show your kids, get them to appreciate wildlife.*

Kate sees coyotes as an opportunity to show children how to and why one should appreciate wildlife; without that immediate, close-at-hand experience, she believes that wildlife appreciation in general could diminish.

Elizabeth, one of the volunteers with the coyote coexistence program, explained her belief that coyotes were used as a scapegoat for other issues in the community, and

how her view of the role humans play in the destruction of the environment had a profound impact on her life:

*So, please don't blame the animals for your problems. Blame yourself, blame culture, blame society, blame progress, blame our capitalistic world and society that we have to have everything and three and four of everything. That's what's to blame, not the animals. So I just have a very short fuse when it comes to people wanting to blame animals for their own issues. The pollution that we've caused ourselves, I don't see it getting any better; that's the sad part. Basically why I never had children is I don't want to be part of that problem, and it was a huge reason why I didn't have children. I made that decision very early on in my life, in my late 20s and for sure my 30s. I know it sounds dark, but I don't know—maybe I'm too much of a realist.*

Other respondents linked pro-lethal control attitudes and behaviors to what they saw as more general anti-environmental (and perhaps anti-community) attitudes and behaviors. For example, Iris said:

*Maybe [pro-lethal people are] instantaneous me-focused, that's somebody else's issue . . . I don't want to deal with it. I don't want it around . . . I just think it's just society in general, and it certainly applies to [pro-lethal control] people. They don't really weigh the consequences or they don't really look at the long-term impact. What does that really do? . . . You know, you could say the same thing with recycling, not making an effort to recycle or something. Well, what does that mean long term? You know, what does it mean if I take the extra effort to throw something in the recycle bin versus I'm just not going to do that, and I think it's just that sort of mindset.*

While human-coyote conflict can be seen as a means of talking and thinking about larger national and international issues, it can also act as a demonstration of how local politics can work. Greenwood Village and Centennial ended up with different management plans, and those plans ultimately are being implemented in different ways. While this will be discussed at greater length in the “*Greenwood Village and Centennial*” section below, the politics behind creating and implementing the management plans

deserves to be mentioned here. Many people who participated in the meetings that Centennial held to create their plan reported to me that the meetings were structured in a way to make them inclusive to all stakeholders, including animal and wildlife advocacy groups. Because of that, the management plan was seen by many as being a collaborative effort, and was given both political and logistical support by WildEarth Guardians and other groups. Margaret, who works for an animal advocacy group, told me that she considers the Centennial program to be a success, as their goal was to reduce and prevent conflict:

*And I think that's their goal . . . to solve problems before they happen, to prevent problems before they happen, and to make coyote conflicts in Centennial a non-issue, and from my perspective, from what I can measure, they have 100% succeeded. I've gotten literally zero complaints about Centennial and the way they've handled it, and I have seen zero negative media accounts of how they've handled it. So if their goal was to diminish the conflict, I'd say they've done it. Now I haven't looked at their reports. You know, have zero house pets been killed? I don't know . . . But it has at least maintained a level of peace in that city with coyotes enough that it's not on the news and I'm not getting emails and phone calls and all that. You know, on the scandal reduction scale, it's been a raging success.*

Alice, a volunteer, told me that she was happy a small group of pro-coyote people could make a difference in Centennial's plan:

*And there was just a handful of us. The people at the [other] end make the most noise, they're the ones that are making the most noise. There was just a handful of us, and had Nicole<sup>19</sup> not taken it on and gotten involved, I'm not sure . . . she had the wherewithal to do all that and it made a difference. Plus we had a couple of city council people there, they were probably the minority. So one person can absolutely make a difference, you know? It's not the same in Greenwood, though, 'cause there's one or two people who tried so hard in Greenwood but they couldn't . . .*

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<sup>19</sup> Nicole Rosmarino of WildEarth Guardians.

Other respondents told me that they felt Greenwood Village shut advocates (and even some residents) out of the planning process, and many felt that the Greenwood Village government had bowed to political pressure to do something to appease residents rather than deliberating how to manage the problem in a proactive manner. For example, one respondent told me:

*I was at the meeting where the city manager stood up and said, "I promise you we will take care of this problem for you," and I was all, "Really? You in the whole United States, you're going to take care of this coyote problem when nobody else has been able to." I mean, that's a big huge statement that you make, and it was one of those that she could never take back. And I think that that's what snowballed; what happened over in Greenwood is because she made a promise to the residents, something she couldn't take back.*

Danielle, a volunteer who periodically sent emails to the Greenwood Village government to protest their management plan, told me: *"I'm never happy with their answers. Their answers to me are very half-assed and I really think that they're bowing to political pressure. Especially in a place like Greenwood Village, we're talking about people who are powerful, the power brokers in the area."*

Several respondents told me that they felt the Greenwood Village government was responding to very vocal constituents who were allowed to circumvent the management plan. Alice said:

*The people in Greenwood Village, for the most part . . . they want them gone . . . Period, end of story. And, I think [the] city council . . . listens to the people . . . heaven sakes alive they've got people, the mayor was complaining that they've got, [she's] got people calling [her] in the middle of the night because they heard a coyote out the front door. Well, whose fault is that? I mean, if you're gonna coddle these people to where they can call you at home . . .*

However, Rebecca, a Village resident and animal advocate, had a slightly different perspective: “*Where Greenwood Village has really fallen is that they allow people to go around the established protocols and that’s where the problem lies.*” Rebecca told me that her experiences with the Greenwood Village mayor and many of the Council members has been very positive over the years, that many (including Mayor Sharpe) worked hard to preserve open space in the Village and placed a high value on local wildlife (in fact, Rebecca was saddened that Greenwood Village had gotten so much criticism and negative press over the coyote issue): “*I still don’t think [lethal control] is the primary [management tool]. The people I know on the council, and especially our former mayor, [are] very wildlife oriented, very pro-wildlife.*” As discussed in the *Who is Responsible?* section of this chapter, Aaron, a Greenwood Village official, told me that the Village government saw this as a public safety issue and not only a wildlife issue. When framed in those terms, Greenwood Village’s response to their residents seems more than reasonable—they were not being pressured by politically-powerful constituents, but rather addressing the legitimate concerns of their residents, a government function that most of the respondents in this study agreed was important.

The meanings ascribed to coyotes—whether a positive symbol of native wildlife or a negative symbol of trouble—play out in human-driven politics on many levels. While humans are the real political animals here, coyotes can insert themselves into our political thoughts and actions. Coyotes can be a metaphor for larger societal concerns, or act as the catalyst for community change (and conflict over those changes).



### ***Social Contributions to Human-Coyote Conflict: Who is Responsible?***

Respondents' beliefs in who held the most responsibility for preventing and dealing with the consequences of human-coyote conflict were complex and varied.

Rebecca, an animal advocate and Greenwood Village resident, summed up the balance the two towns had to play:

*I think most people -- I don't care if you're a Republican, Democrat, or Independent, or Tea Party or whatever -- most people want their government to do what they don't really want to do or what they don't really want to face they want government to take it away. They want laws for things and then they get mad when government butts in where they don't really think they should butt in. So you can't please all the people all the time as a matter of fact little of the time can you please very few people. So the government, I know, is in a very tight, very sticky position.*

Belief about responsibility fell into two broad categories: 1) it is primarily the responsibility of individual residents in the community; and 2) it is primarily the responsibility of the local government. These two categories can be further split into two subcategories (see Table 7). People who accepted personal responsibility either felt that ultimately it was their job to kill coyotes that were threatening members of their household (humans and pets), or that it was their responsibility to modify their own behavior and property and so prevent conflict in the first place. People who felt it was the role of government to deal with conflict either felt that their government should implement lethal control and solve the problem without residents help, or that it was the role of their government to work with the community on hazing and outreach/education efforts, with the goal of empowering residents to take personal responsibility towards reducing and preventing human-coyote conflict. Although many felt that responsibility

should be shared to some extent, most people seemed to feel that the responsibility fell primarily on one or the other. A split opinion between personal responsibility and governmental responsibility seemed to be more common for those who favored outreach and education methods, although this was not universal.

**Table 7. Beliefs about who holds responsibility for human-coyote conflict.**

|                        | Personal responsibility   | Governmental responsibility   |
|------------------------|---|---|
| Lethal control         | Individuals need to protect their household themselves by any means necessary   | Government needs to take responsibility for reducing/eliminating the local coyote population and so preventing conflict                                     |
| Outreach and education | Individuals need to modify their own behavior and environment to prevent coyotes from seeking food in their communities and on their property | Government needs to work with groups and residents on outreach and education efforts that will enable residents to prevent human-coyote conflict themselves |

A 2007 incident in Boulder, Colorado (not too far from Denver) illustrates the first point. Although people who fall into this category might not have a problem with predators near their houses in general, they do believe that killing a predator that was attacking a pet is the appropriate action to take. The incident involved a man who was facing criminal charges because he shot a mountain lion that was attacking his dog.

*In one article on the coyotes, it says that “attacks on pets” are not cause enough to capture and relocate the coyotes. (I do not agree with the capture and kill. Relocate. Duh.). It then references the Department of Wildlife’s stance on a person’s ability to protect their livestock and family. Then, the article on the guy*

*who killed the mountain lion and Dept. of Wildlife says that the paragraph (that they just used in the coyote story) does not apply because it was a dog. Geez. If anything, person or animal, threatens your property, you should have the right to defend it. I would have shot that mountain lion myself if it had been my pet. Not because I think that wildlife should be killed, but because at the moment it was threatening my pet.*

Although the author is not, broadly speaking, a believer in lethal control (hence this preference for capture and relocating coyotes), he states that he would not hesitate to kill an animal that was attacking a member of his household (in this case, a pet). He continues:

*If a wild animal comes onto my property and is attacking or going to attack my family or pets, I will do what I need to stop it. All PC and animal protectionism aside, that's the bottom line. Wild animals have passed through our property many times. Doesn't bother me. But a clear attack is the limit.*

Others, however, seem to oppose this point of view. For example, Alice, a volunteer, described a situation she faced involving her elderly dog and a group of coyotes:

*About a year ago, I had my, I have an old dog that I let out front in the mornings 'cause he can't do the steps in the back. And I let him out, it was my mistake, I went for two seconds to go get a cup of coffee and I came back and he was out front. It was dark, and I came back out and there were three coyotes that were actually coming up. He was back at the front door but there were, one was actually coming up the stairs. I would imagine—he is a big dog, but nonetheless I would imagine they were looking at him either as a threat or whatever. That was my fault; it was not the coyotes fault, I know they're in the neighborhood. And it was a real wake-up experience for me, two seconds that dog was out. I should've known better than not to watch him, but there was one coming up the stairs and there was one in the background so I am guessing they were gonna ambush him. Is what I'm guessing, but it was . . . I will . . . it won't happen ever again with any of my animals.*

Although the encounter made Alice fear for the safety of her pet, she did not feel that she should have used violence to protect him (in this case protecting him was simply a matter

of letting him back inside the house), instead claiming responsibility for letting the situation get out of hand in the first place. She went on to tell me: *“I could probably lose a cat or a dog to a coyote, I still do not believe that we should go out and kill [coyotes], because they are what they are. I mean, we have created this problem.”*

The second group in the pro-lethal control category comprises those who believe it is the responsibility of their local government to deal with the coyote problem. In some cases, people in this category felt that preventing conflict is beyond their capabilities. For example, a 2009 LTE stated that, *“These predators are so stealthy, that our ability to protect our animals is limited.”* A different 2009 LTE was written in support of the lethal control actions that the Greenwood Village government was taking, highlighting the author’s belief that the government was responsible for helping those who were in danger:

*The Greenwood Village City Council should be applauded for taking decisive action against a predator problem. Too often, lily-livered politicians are afraid to take timely and necessary steps to protect the vulnerable. Typically, bureaucrats wait for a dead body before taking decisive action. Then they’re all pointing fingers and wondering why no one did anything sooner.*

On the other hand, some people who disagree with Greenwood Village’s use of lethal control feel that the Village is not, in fact, protecting the vulnerable of their residents, but rather catering to residents who do not want to address the problem themselves or have the solution to the problem impact their life.<sup>20</sup> Danielle told me about a conversation she had with a Greenwood Village official: *“I think it was along the lines of, ‘we have to*

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<sup>20</sup> This is related to the way that some anti-lethal control people see pro-lethal control people, as discussed in chapter 3.

*protect our residents, ' which is . . . crazy. I don't know what to say to that . . . if you want to protect them, educate them, teach them about hazing and teach them about keeping their pets indoor and on a leash." Elizabeth, a volunteer, told me:*

*It's kind of like, "I have the money to hire somebody to do it so I'm not going to do it myself. I'm not going to take the time and the effort to educate my neighbors who might be doing the wrong thing. I don't speak to my neighbors so I'm not going to go over and tell them what to do about, you know. I see they leave their cat or their dog out at night, you know, I'm not going to interfere with them. I'm going to instead take the long way around. And besides, I have the money to hire this guy to come in and just kill animals."*

Those who more strongly believed that outreach and educational efforts targeted to residents of the area was the solution to human-coyote conflict felt generally that there was both a personal responsibility element and a role that the local government should play. Gary, a volunteer, told me:

*Well, I think government has a really important role to play in that. Their elected officials are really going to be the ones that I think will have the authority to make some other policy decisions to really direct how a lot of that interaction and efforts to direct that interaction will happen. So I think the government has a crucial, very important role to play. And I think those are the folks that, as I said, have the authority to make some pretty direct influence on how things go.*

However, unlike those who felt that the local government should implement lethal control, this group of people generally felt that the role of government should be limited to providing resources for residents and otherwise empowering them to take personal responsibility (and, in some extreme cases, use targeted lethal control), rather than solving the problem directly. Lindsey, a woman who used to volunteer for the coexistence program, told me:

*I think the local government needs to provide more education for its residents [about] interacting with wildlife on a positive level, so providing education that [will help] mitigate a bad interaction. And I don't think that local government should ever choose lethal control. They should instead educate the public on ways to live effectively with wildlife.*

In fact, Centennial's government has a similar view. In a 2009 public meeting where the draft coyote management plan was discussed, a Centennial official said:

*One of the focuses that we worked on is to look first to outreach and education. I think what we found over the past year is that there is -- as we had our meetings here, a lot of people came up to us afterwards and said -- "Wow, I didn't know that. I didn't know that you could simply use an air horn and scare a coyote. We didn't know that you could use walking sticks and scare them to protect yourself on trails. We didn't know. We didn't know." So one of the things that we are doing as your city right now at this very moment, without the plan being in place, is actually starting to reach out and we're talking to schools. We're talking to residents. When we know we have a situation in a particular area, we can target that area with literature and with educational materials.*

Many of the people I spoke with, and many of the editorials, columns, and LTE's in the dataset felt that people needed to take action to protect their pets by modifying their behavior, once they made the decision to live somewhere with wildlife populations. For example, *"I also have pets at my Greenwood Village residence. However, I realize the risks we have to take when we make a decision to be neighbors with wildlife."* A 2007 LTE pointed out that, *"Anyone who lets a pet outside alone to run is always putting the animal at risk, whether it be the wheels of a car or a hungry wild animal."* A 2007 LTE said: *"I'm also not looking for someone else to solve the problem of the coyotes because I've taken responsibility to keep them away and to protect my pets. I think others should take the lesson we've set and do the same."* Joanne, a volunteer who lives in Centennial, told me about a neighbor of hers whose backyard opens onto open space:

*She said that her dogs had been attacked a couple times, but it was totally [her] issue. She understood that her dogs . . . didn't come on command. They didn't respond to her on command, so she was doing a lot of training with them to make sure that she could continue to walk with them off-leash, but she understood. I mean, if her dogs were going to get into it with a coyote, her dogs were going to be on the losing end, and they were big dogs. But she appreciated the fact that coyotes were wild and . . . if the dog was going to antagonize them or vice versa, there was going to be an altercation. And so, she understood that. She didn't like it, but she understood the 'why' it happened and, you know, that it was her responsibility to keep her dogs away.*

Another respondent said:

*I live in Parker and we have coyotes everywhere. I mean, I hear them at night. I take my dogs out on a leash. If I didn't, you know, my little corgi would probably chase after them, probably get eaten, you know. I mean, that would be my responsibility. If my dog got eaten by a coyote, it would be my fault. And I don't know if people really understand that.*

Some extended this attitude to taking care of children, as well. The same 2007 LTE said, *"I knew of some neighbors whose child was bitten by a rattler. They did not go to the newspaper and insist someone remove the snakes. Instead, they took steps to watch their children more closely and discourage the poisonous snakes from hanging out in their yard."* Bob, a resident of Greenwood Village who holds a moderate view towards lethal control, told me:

*I believe that it's up to families, individuals. I believe it's up to parents to learn about wildlife and how to co-exist with it and deal with it and teach your children. And then be vigilant. I don't believe it's any different from the neighborhood watch program for people in your area that really shouldn't be here that have ulterior motives. I think that neighborhood "watch" program extends to watching out for coyotes for your neighbors or the deer or giving people a head's up.*

Bob went on:

*You teach your children how to cross the street; you teach your children how to ride a bike. At some point you have to let them go to school by themselves. You*

*have to let them grow as an individual and learn to cope for themselves, protect themselves mentally, physically, whether it's with other people, automobiles . . . wildlife is the same way. It's no different . . . You have to learn about them and teach your kids about them. Any animal pressed into a situation is going to defend themselves. We'd do the same thing. So I think you have to learn to coexist.*

Bob felt that, although most of the responsibility fell to individuals, the government should act as a “support mechanism,” to both provide information and step in when necessary.

In general, people who felt that residents should take personal responsibility to prevent human-coyote conflict felt that this was an on-going responsibility, not a one-time change. One respondent told me:

*[Coyotes' intelligence] just puts the obligation back on the people to be constantly creative and constantly changing the hazing plan, coming up with new sounds and noises to find out [what] works. I mean, maybe clapping works one day and then they realize you're just kidding. They aren't scared of that the next time, so I think there is an obligation for humans not just to learn how to haze a coyote one way and stick that way the whole time or, you know, if you build a fence and the coyote jumps it, you have an obligation to modify your fence.*

While personal responsibility was one side of the coin, disagreements over what specific role local governments should play (and the extent to which they should play any role at all) was the other. People on both sides of the issue felt that it was the role of local government to act on perceived problems in the community; the difference was mainly one of what those actions should consist. Danielle, an anti-lethal advocate, said:

*Well I think that the government has to be responsive to any perceived problem in the community because that's why they're elected. Uh, I do think that the government has to educate itself and I think that it . . . as a human organism, you know, it needs to be compassionate as often as possible in all of its dealings. I mean, these are the same people who will get up and tell you how Christian they are, well, go ahead and prove it. It always comes back down to that, I have never*



*seen a religion in which compassion is not, you know, like a cornerstone, and especially Christianity. So they need to be consistent, and um, that's what I want, that's what I want from government. They need to be compassionate and educated.*

Margaret, who works for an animal protection organization, told me:

*I think government both has the responsibility to train people how to help themselves and an obligation to look at problems from a perspective of long-term sustainable solutions. It's too easy to do whatever the loudest crowd is screaming and walk away after your four-year term or whatever it is, but I think it . . . there should be an obligation to develop a plan, not just seek vengeance and, you know, little, small, little things that make people feel good in the moment don't solve large community problems over a long term, and I think . . . government has an obligation to train people how to keep themselves safe, how to protect their property, and to fine them when they are acting irresponsibly in a way that is going to endanger their neighbors.*

On the other hand, Deborah, a resident of Greenwood Village who asked for and received help with lethal control from her police department, felt that:

*Well, I think Greenwood Village is doing what they are supposed to be doing. I think I'm very impressed with the Greenwood Village government and the police department and the communication with the public. I mean, they almost . . . every month their newsletter usually has something about the coyotes and what to do, you know, and what not to do. And they keep repeating it, and then they have meetings. I think if there are enough citizen calls and concerns, they will have a meeting. They will have the police officers there and the city council representatives, and the mayor has been there before at these meetings. And then if they need lethal control they have the detective out . . . You know, it's just . . . it's a small little government that you can call and talk to somebody or you can call the headquarters and communicate with them.*

Carlos, another long-time Greenwood Village resident, told me that he was not satisfied with the response they've received from the town about wildlife:

*I've called up the animal control, about the bunny situation; you know, we can't do anything about it. I've called them up about the coyote situation. Nothing they can do about it. And I've called them up about the deer deal. So basically we're kind of . . . on our own.*

It is possible that by calling Animal Control and not the police, Carlos was not able to circumnavigate the management plan in a way that other residents have been able; or it might be that his complaints did not raise any red flags to Animal Control. Regardless, Carlos made it clear to me that he would like to have lethal control of coyotes implemented on and near his property, but he was unable to get this service from the town.

Aaron, an official with Greenwood Village, told me that about the thought process behind Greenwood Village's management plan<sup>21</sup>:

*From our perspective we saw it a public safety issue. And I think that's part of where perhaps other cities may be . . . different cities in general maybe take a slightly different approach to this . . . it's how you define it and how you see it. So our community and our policy-makers saw it as a public safety issue. And you know, be it your pets, just feeling safe in your backyard or your own personal safety if you're jogging and you're being followed by a coyote. So, we most definitely saw it that there is a role in government obviously, for in general "public safety" as you define it. And so we thought it was appropriate. Now, that's not to say, and that's a big part of the education, that there's a personal responsibility. . . . There's a personal responsibility there as well . . . So that's where the education came in, to try and really say, you know, there's something you guys really need to do too, as residents.*

Debbie Scheper, a resident of Greenwood Village and the mother of Matthew Scheper, the boy who said he was attacked by a coyote in a Greenwood Village park on January 1, 2009<sup>22</sup>, strongly felt that it was the role of her local government to take direct action to lethally control the coyote population. In a January 2009 public meeting, she said:

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<sup>21</sup> Insight into Centennial's thought process is discussed below.

<sup>22</sup> See Appendix A for the transcript of Matthew Scheper's testimony. This incident is more fully discussed in chapter 2.

*I want this to go on record that this over-populated and aggressive coyote situation has escalated into an attack on a 5'2" boy. Make no mistake this coyote was going for my son's throat. This problem is not going away, it's getting more severe. So far, our only options are to throw golf balls at them, blow horns, or shoot them on our property. The first two clearly don't work and the third, I don't think the Police department would like us to result to. Two years ago, Tri County Health, the government agency responsible for this situation had granted Greenwood Village a permit to trap coyotes for 45 days. But the permit was illegally revoked because of the pressures of the animal rights activists. They trapped 4 coyotes. To those who believe it inhumane to trap coyotes, I ask you this: How is this any different than controlling elk or deer populations? We've made a decision as a city to build on the coyote's territory. Now there are diseased and overpopulated. It's cruel not to monitor their population as we would do any other animals. My neighbors pets are getting killed, my kids can't walk to school, and my 14-year-old wasn't stalked, he was attacked in a public park. I am asking you, City Council, what more is it going to take for you to hear your community's cry for help. Your community needs you to solve this aggressive coyote situation before another child gets hurt or worse.*

As discussed in chapter 3, some anti-lethal advocates believed that pro-lethal residents of Greenwood Village felt that it was not their job to prevent or mitigate human-coyote conflict, an attitude that many anti-lethal advocates labeled "entitled:"

*I mean, they're . . . the entitlement from some of the anti-coyote residents was really interesting to me, that, you know, I have . . . I have the kind of dog that I want to have. I live on a wildlife preserve because that's where I want to live, and I want to have the view that I have paid to have, and I don't want to have to build a fence to protect my dog and I don't want to have to X, Y, and Z. I mean, this inflexibility on being inconvenienced in any way, shape, form, or fashion . . . Oh, and by the way, I want you, government, to take care of my problem.*

Nancy, a resident of Greenwood Village, told me:

*We want to make things as convenient and coddle the people as much as possible . . . but I do think if they left them on their own . . . people would learn how to manage. But see, they have learned. Greenwood Village has educated them one way very well, that if you don't like coyotes, no matter what . . . doesn't matter what your reasoning is, we will come and kill them for you. It doesn't matter what your reasoning is. If you just do not like them, we'll come and kill them, and that's the message they have sent. They have sent out the message that you don't*

*have to be responsible. You don't have to be a responsible pet owner. We will take care of it for you. And see, therefore you have a lot of irresponsible people.*

Another respondent, an animal official who works for another local jurisdiction, believed that the fact that Greenwood Village is a wealthier community than Centennial has an impact on what role people think the government should take:

*And that just makes a huge difference when dealing with coyotes. You wouldn't think that it would, but it does. It makes a huge difference. Because people that have a lot of money are used to having things taken care of for them. So they want you to take care of the coyote problem for them. Whereas in other cities people just understand that the city's not going to come in and take care of this problem for them . . . and we talked about that at several different meetings that the income level makes a huge difference on the coyote complaints. Because they want something taken care of. And it's really hard to get people that aren't used to taking care of their own properties to take responsibility for the coyotes on their properties. So, because, you know, they hire people to do everything for them. So, when you say this is a joint effort between the city and the residents, and the residents need to take responsibility for doing the hazing on their own property, they're like, "No, you know, you do it," you know. So, we just don't have the manpower to sit on everybody's property all day long.*

Rebecca, a Greenwood Village resident, suggested that, “[Greenwood Village] has done some phenomenal efforts for educating [their] citizens, but most citizens live in their own little world. You know, unless there is an issue, and it's so much easier to pick up the phone and yell at a city council person or . . . call the police . . .” And Bob, who also lives in Greenwood Village, told me about a situation in his town that to him demonstrated an entitled attitude in some of his neighbors:

*And was it last summer . . . there was somebody or some bodies robbing houses all through this area. And their MO is very consistent, they go in through unlocked doors, open doors and windows, security systems not set. You'd be hard pressed to go in a home around here that didn't have a security system. Hello, help me out here. And lock your doors; lock your windows if you're not there. You know, don't leave your house wide open. People like to say, "Well, I like to leave*

*my house open.” We don’t live in that day and time anymore. We don’t live in the day and time in this area where we don’t have wildlife. They’re not going to close Cherry Creek Reservoir and let it dry up; it’s just not going to happen. Or any of these creeks around here, the water needs to go someplace when we get all these rains. And I believe we need to learn to live. I’ll say it again: we need to learn to coexist with them, and the county and/or city or town you live in need to have the tools to educate us in that and then defend us if there’s a problem.*

However, others felt that the expectations that many residents had were not unreasonable. Aaron, who works for Greenwood Village, said:

*When you have a six-foot fence and an enclosed back yard in a typical suburban environment, it seems reasonable that you should be able to leave your dog out there. I know that’s what I do in my backyard in the middle of Denver. And I wouldn’t expect a wild animal to jump over the fence and get my dog. If I did, I’d probably want something done, whether or not I hired somebody or asked the city to help me out. So there certainly seems like a reasonable expectation, I guess, for a lot of the discussion. Isn’t it reasonable to have an expectation as a resident or as a person to be able to sit out in your backyard with your dog or leave your dog when you go to work all day, out in your backyard?*

Bill Walsh, a resident of Centennial who testified in favor of lethal control when their management plan was being created, made it clear that he did not think it was reasonable to be asked to change his behavior:

*And this coexistence policy, I just don’t buy that we have to make so many sacrifices as citizens. When I moved into Willow Creek 30 years ago . . . There was no coyote problem then. They’ve come in and now we have to change our way of living to accommodate and I find it totally unacceptable.*

Many people suggested that the local government should help people guard against human-coyote conflict by partnering with local volunteer groups who would speak to the public, pass out educational materials, haze coyotes, and generally assist the government in promoting coexistence measures. This, of course, is what happened in Centennial. A 2009 LTE said:

*If cities need to deal with coyote problems, they could recruit a volunteer task force to simply haze the coyotes and teach them to stay away from. This provides a long-term solution, no tax dollars used and no danger to residents or domestic animals or other wildlife from ricocheting bullets.*

Others felt that it would be an appropriate use of government funds to pay employees to do the same (a tactic that Centennial also employed for a while by hiring a dedicated coyote technician. That position has since been phased out, and now their Animal Control deals with complaints about coyotes, although some of those calls are referred to the volunteer group). In both cases, though, the general feeling was that the government's job was to empower the community to act, not solve the problem directly. As Elizabeth, a volunteer and resident of Centennial, said:

*Whereas in Centennial it's like, "Yes, let's take one of our employees and put them, two or three of them, on this little committee and try to explain what they [residents] shouldn't be doing using whatever means we have available, whether it be meetings at the library, whether it be advertising that we have this woman who is temporarily working on a committee to address the problems that you're having, maybe putting up signs, you know." It's more of a self-educating type thing, more of a "let's solve our own problems in our own neighborhood instead of just spending." We've got all kinds of funds available, so why not use them to get rid of the problem completely?*

Rebecca, an animal advocate who lives in Greenwood Village, told me that she believes the Village should hire a wildlife expert:

*So that's the problem is that there's just no consistent, repetitive exposure and protocol that's being followed. You know, education is their number one criteria on the control. They have done everything they can do, but people want real people, right, they want to know where they are, they want to know how to get a hold of them when they want them. That's why having a coyote expert or a wildlife expert on the city payroll, and they could start them off part-time just to see how much draw there is, how much demand, but to have that person be the contact person for coyote and wildlife compliance [and] education . . .*

The Centennial government also saw its role as one of providing information to its residents. Ron Weidmann, a Centennial City Council member, told the Council in a public meeting about the coyote plan:

*This is an emotional level that we all dealt on or dealt with for the past few weeks and thank goodness we have such a great educational program that was presented to us because I'm thinking coyotes . . . and all these gangs [of coyotes] coming forth, and it's not the case so I think a little bit of education has gone quite a long way. I don't believe that we have as great of a problem, and I'll qualify that because we really don't know, and thank goodness we're going to actually step back and get some data and try to figure this thing out, because making an emotional decision is not a good decision. I am not for lethal force unless our children are in peril and that has not been proven yet. And we need to qualify our sightings. I moved to Colorado because I like the wildlife, I like to explore the wildlife, and that's part of our environment. And we as humans have brought our environment into their environment so we've got to figure out a way to make all of these things work.*

Centennial's mayor, Randy Pye, also felt that it was the proper role for government not to jump into decisions, but rather gather information and then make decisions "that makes some sense:"

*I would like to also say that I don't think anything we're doing tonight diminishes the citizens that have come before us and really heart-wrenching stories of pets that have been killed, of times when you've been concerned and scared by coyotes where you may have had a coyote you feel aggressive towards you or towards your child. This is not to say that Council does not take this seriously. As you can see I think Council takes this very seriously. But one of the things I have found from this Council in particular that we are taking things methodically and not just jumping into something without trying to come up with a plan that makes some sense.*

While some opposed to lethal control felt that the major role of government should be to educate the public, others also felt that a certain level of enforcement of

existing laws (and perhaps enacting new ones), such as anti-wildlife feeding and leash laws, would go a long way towards preventing conflict. A 2009 LTE said:

*The Greenwood Village City Council should make, publicize and enforce limits on the kinds of human behaviors that put both humans and coyotes at risk. If this is done, perhaps a coyote will occasionally become a problem there and need to be killed. That seems a lot more effective, cost-efficient and ethical than ignoring the human contribution to the problem while killing many non-offending wild animals.*

A 2009 *Denver Post* editorial also called for increased enforcement:

*Realizing [that fox and coyotes that are fed by people can become problems], Colorado in 2004 made it illegal to feed foxes and coyotes, and imposes a minor fine for offenses. But clearly, that law is not working. People must stop feeding the wild animals, and make sure they don't get into garbage or find outdoor food to eat.*

Kevin, a Centennial resident and volunteer, told me that he thinks it is important for local governments to consider the costs of programs, especially during times of economic downturn:

*. . . this hunter guy didn't come cheap . . . at some point, is it really worth it to pay this guy? You know . . . he was out there for months [and] it didn't really accomplish anything. It's doing the small things, like a lot of people, even now in the neighborhood, put their garbage out the night before and . . . [one time I saw] one raccoon, and by the time I looked, he was going through a bag of garbage when I got up early to go to work, so I know that there's probably more raccoons. If you leave garbage out, of course they're going to go through it because it's easy pickings. So a lot of stuff is just real simple, and it's also cheap. You don't have to pay some guy \$25,000 or whatever it was to kill animals.*

Others opposed to lethal control felt that it was also the responsibility of the government to know about the wildlife populations living in their town, so as to better manage the situation. Kevin continued:



*They should either do research or have access to research. I think one of the issues is, even now, when this is going on in Greenwood Village, they didn't even know how many coyotes they had. So, I think that's basic . . . to manage. Wildlife needs to be managed. You just can't let it go. Like we're both from back east and the deer herds are just totally out of control. They should be managing, but it has to be managed based on research...Now, there is a threat and they need to take care of that, but it should be a real threat, not just a made-up one. So they have a management problem. Just like managing the open space, but . . . once you start looking at it, it's more complicated than what it appears.*

Still other anti-lethal advocates felt that there were more pressing concerns in the community that needed to be addressed directly by the government than the “coyote issue.” Kate, a volunteer and resident of Centennial, told me:

*I think there's bigger issues in our city to spend the money on, I really do. I think it's wonderful that they're concerned about the citizens, and they're taking their citizens concerns . . . But, with people out of jobs and everything else, I think we've got way more serious issues. When you see people on the street corners who don't have any food, and our school systems are really in a bad shape, kids are not doing as well as they should, and that's our next generation of people running the country. I tend to . . . not that this isn't an important topic, but I tend to think that money should be spent on other things, and you should do things like this through volunteer programs if you can.*

Although not part of the city or town government, some respondents spoke of the need for Homeowner's Associations (HOAs; ubiquitous in the area), to play a more active role in preventing human-coyote conflict, either through education (for example, one animal advocate I spoke with told me that she regularly offered to speak at HOA meetings about coyotes, but was rarely invited) or by modifying their covenants to allow for property modifications such as fences.<sup>23</sup> One respondent told me that she thinks it is “irresponsible

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<sup>23</sup> Many local HOA do not allow fences, even when the property backs directly onto an open space. For people with pets, this is especially a problem in terms of coyotes. This

*to have a neighborhood or homeowner's association in a place where there are coyotes and then have these fence restrictions that prevent people from protecting their property.”*

Disagreements over responsibility seem to be at the root of much of the social tension between people who support lethal control and people who do not. While some people seem to believe that human-coyote conflict should ultimately be the responsibility of their local government, others disagree and believe that residents should take equal (or more) responsibility. Governmental responsibility seemed to break down into two approaches: either using lethal control in an attempt to prevent and reduce human-coyote conflict, or providing the necessary tools for residents to learn how to prevent and reduce human-coyote conflict themselves. Most people felt that personal responsibility should take the form of modifying their behavior and environment to make it less likely for coyotes to perform unwanted behaviors, as well as hazing. A smaller minority felt that residents should be responsible for lethal control on their private property; some Greenwood Village residents hired someone to shoot coyotes on their property, and there was also some interest in finding ways of using traps.

### ***Greenwood Village and Centennial: Why the Difference?***

How stakeholders perceive not only each other, but also the political and social institutions of the two towns, has helped to shape the conflict over coyotes in these two

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issue is discussed more fully in the “Geographies of Human-Coyote Conflict” section in this chapter.

communities. Most of the people I spoke with characterized Greenwood Village as being one of the most wealthy communities in Colorado, and substantially more wealthy than Centennial, usually described as having more middle-class residents.<sup>24</sup> Gary, a volunteer, told me:

*I used to work in Social Services in Arapahoe County. When I first got to Arapahoe County [the County where both Centennial and Greenwood Village are located], I knew something about it, but not in detail. I was meeting with the mayor and a staff person from Greenwood Village, and they wanted to do a big Christmas thing for kids and for families, and stuff. And as we were talking, they wanted to put on another, to put a lot of good gifts for the kids in there. And I said, "Well, did you want this to be for poor kids and families in Greenwood Village, or throughout the county?" And he looked at me and said, "We don't have any poor people in Greenwood Village!" And I was like, "Oh, OK! OK! I'm clear about that, then." And they were like just stunned that I would suggest that they had any poor people in Greenwood Village. And the more I found out, the more I said to myself, "Oh, there aren't any poor people in Greenwood Village!" I mean, I know there were a lot of rich people, but I thought, you know, there could be parts of it that bordered on it, you know. And they were chagrined that I would even suggest that!*

As mentioned previously, many were of the opinion that wealthy residents of Greenwood Village were "spoiled," and so felt that it was their right to hire someone to kill coyotes if that is what they wanted, whereas Centennial approached the subject with a more open-minded perspective. Danielle told me:

*I think that Centennial, where I live is, it's . . . we're more regular people . . . And working people, who will . . . I guess we're just more realistic. Maybe we also come from more different parts of the United States,<sup>25</sup> I don't . . . I'm not sure about that, I can't speak to the demographics. But I do know, in Centennial, I*

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<sup>24</sup> See chapter 2 for income information for the two towns.

<sup>25</sup> This counters what Hillary said earlier, expressing her belief that more Greenwood Village residents might come from other parts of the country, and so do not share a pro-wildlife Coloradoan attitude. However, there is no available demographic information that can clarify this point.

*mean it's still a wealthy community, comparative to other parts of the Denver metro area, but yet I think Centennial is just more working class, and we just don't have an attitude like that.*

Kevin, a Centennial resident and volunteer, said:

*You know, maybe if you're low-class, you're going to be a little more adaptable, and if you're wealthy, you're not because you've got the wealth. What's the point of being wealthy if you've got to make changes, be adaptable? Maybe that's stereotyping, but that might be what it is. Centennial's more of a middle-class, maybe upper middle-class, middle management-type community, and then the lawyers and the doctors all live in Greenwood Village. You know, what's the point of having all the money if you have to change your lifestyle for a coyote?*

Hillary, a volunteer who does not live in Centennial, said, “*Centennial . . . seems to have a little bit more down-to-earth kind of people.*” However, not all respondents chalked up the perceived differences between the two towns to money; some felt political beliefs were the main demographic difference between the communities.<sup>26</sup> Lindsey, an animal advocate, told me:

*I live in a very affluent community . . . and we got wildlife all over the place; we're communing with nature. That's why I moved out there. And, you know, it's got people with million dollar homes all over the place . . . they're my neighbors. And, we're walking amongst the mountain lion and bear and the coyotes and the foxes, and that's why everybody's living out there . . . And so, that community, the community I live in, is as affluent as Greenwood Village. But I think they're a little more liberal. I think they're just more democratic, frankly. They're your liberal rich folks.*

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<sup>26</sup> Unfortunately, I was only able to obtain anecdotal evidence—although this came from several respondents—that there are more political conservatives in Greenwood Village than in Centennial, as voting results are calculated by county, not city (both of the towns are located in Arapahoe County).

Margaret, an animal advocate and long-time resident of the area, said that she felt that there was a division between what she called “old” and “new” Greenwood Village that also helped to explain some of the situation:

*There’s also separation, I think, culturally between old Greenwood Village and new Greenwood Village. The new Greenwood Village, the newer homes, the newer developments, have a reputation for being less flexible for working with wildlife and [have] higher expectations for what their quality of life should be. And the older homes in Greenwood Village have a reputation for being more tolerant, kind of like it is what it is. You know, life is hard. You got to do what you got to do . . . and not necessarily one is pro-coyote and one is anti, but one feels more entitled to have what they want and the other feels more entitled to take care of themselves.*

Budgetary priorities also were frequently mentioned as a difference between the two towns. Alice, a coyote coexistence volunteer, told me:

*[Greenwood Village] hired, from what I understand, a shooter to come out; I think he was \$20,000 a month. I mean, you could have paid a part-time biologist to go door-to-door in town to those people and educate and work with them, but . . . the neighborhood wants them dead and gone . . .*

While Elizabeth, another volunteer, commented:

*Yeah, they’d rather hire somebody . . . to come in and just kill the animals instead of trying to solve it. Whereas Centennial is more, ‘We’ve got to save and conserve, save our money, spend our money on roads. We [need to] use our tax base for something more.’ So I see it as . . . a different approach to problem solving . . . It’s more of a self-educating type thing, more of a ‘let’s solve our own problems in our own neighborhood instead of just spending; we’ve got all kinds of funds available, so why not use them to get rid of the problem completely?’*

Some respondents speculated that Greenwood Village residents simply had more negative encounters with coyotes, as per capita they had more greenspace than Centennial. Gary, an animal advocate who occasionally volunteered for the coexistence program, said, “*But I think in Centennial, at least from the people I’ve talked to, there*

*haven't been the same kinds of incidents that either really occurred or allegedly occurred between coyotes and people.”* Aaron, a Greenwood Village official, said that there might be more potential for conflict in Greenwood Village, compared to Centennial, because of their extensive open space network.

Many people I spoke with portrayed Greenwood Village as having an insular outlook on life, with both residents and the town making efforts to isolate themselves from the larger community. The Greenwood Village residents I spoke with, however, felt that this was only their government being responsive to their needs as a community.

Elizabeth, a volunteer with the coyote coexistence program, shared with me her thoughts:

*You drive around here and you see 8-foot, 10-foot walls around neighborhoods. You don't see that in Centennial. So right away, you get a feeling of, you know, we'd rather keep to ourselves, we'd rather not see the detritus of society, and we'd rather not have society interfere with our style of living. It's kind of like, "We don't want to see it; we don't want to be seen. And if we've got problems we'll take care of them ourselves." I mean that's the feeling that you get when you drive through Greenwood Village a lot. So to me, it's a visual thing, as well. It's not just, "Let's hire somebody to take care of our problem."*

Alice told me:

*Of course, it affects all the cities around them but, but they don't care, they're their own little entity is what they are. There were several huge [metro Denver] meetings where they, the city powers that be got together to talk and figure out how to manage this program. Well, Greenwood I think attended one and didn't like the way it was going and chose not to be a part of it, you know, "we're better than anybody else, we'll manage our own thing" and so they're out there eradicating them, which affects all the cities around them. So that's the sort of mentality that they have. Greenwood Village is their own little world, their own little entity. I work for [someone who] caters to Greenwood Village [residents], I mean, the very people that I just don't like very much, and he caters to them. And it's the same sort of thing when they come in—not all of them, there are some really wonderful people that come in that live there that have money. But it seems*

*that most of them are just demanding and, just better than anybody else and it's just a Greenwood Village thing. So, they are their own little world that know better than anybody else, and that's just my own opinion.*

Kevin, a volunteer and Centennial resident, told me that, “*There's always a bit of hostility between Greenwood Village and some of the other neighborhoods.*” Kevin also told me, “. . . *they just want to keep people out. That's the kind of message you get sometimes.*”

Kevin and his wife, Joanne (also a volunteer) told me about a conflict their community had with Greenwood Village when Centennial did not yet exist:

*Joanne: Actually, this neighborhood was going to be split in two because it had to be a continuous piece of land.*

*Kevin: What they wanted to get was the commercial land along Arapahoe Road.*

*Joanne: And they didn't want any residents.*

*Kevin: So they needed this whole strip of land to take the commercial land along Arapahoe. So that became a big issue and then Centennial was basically started to prevent the annexation because we weren't incorporated. Just county land until then. Which was working out fine, but then Greenwood Village would have cherry picked all the land that had the high tax rates.*

*Joanne: Yeah, they wanted commercial [land] for the tax revenue, but they wanted their residential area to stay pretty pristine.*

Some volunteers had decidedly negative feelings about the Greenwood Village police department, the department now charged with carrying out lethal control when it is deemed warranted. There was a general feeling of mistrust, and in some cases volunteers felt scared of the police department or of related government officials, such as the sharpshooter hired by Greenwood Village. Danielle told me:

*I think it was me and another woman. I remember once I was there the cops were there, they parked, I was very upset about that because I didn't know what they would do if they did see one because a few weeks prior to me doing that the cops had killed a coyote in that park. And the coyote wasn't bothering anybody. And they were out looking for this other coyote limping and I mean, talk about sick, like you know you can't leave a handicapped coyote alone and they think that the coyote that was killed was her mate. It's just disgusting, you know I was really upset with the police. Then they were supposed to change tactics and paintball them. I don't know how long that lasted or if it lasted. And I had also heard that the cops turned you know, that they didn't investigate residents killing coyotes. So I have a very negative view of the Greenwood Village Police. They could have been watching me. Another thing I don't like. You know, cause, you know, I'm really anti-authoritarian at heart, you know I don't like the "police state" feeling. I'm not harassing anybody then why are you watching me?*

Elizabeth shared with me another story:

*I was walking along Marjorie Perry [a park in Greenwood Village] and that Jay guy came along and he had his camos on. And I mean, he was all decked out, like he looked like he was ready for Vietnam or something. And he came up; he was standing from about me to that wall over there and he had a camera and he was just like clicking the camera. And I happened to have my Sony Walkman with me, and so when he started doing that I held my Sony Walkman up to my face like doing the same thing that he was doing, like I had a camera taking his picture. I mean, these people are just really intimidating. It was about the time they set the cages out there with rabbit carcasses in back of some of the houses on their private property. And it was about that time that I got . . . I lived by myself, I don't have a husband or boyfriend or anything like that that visits at night, and I got really fearful. I'm kind of paranoid anyway. So that kind of was the final straw for me, when he approached me, kind of in an intimidating manner and started clicking . . . and so I called the Greenwood Police Department, I went over there first, because I wanted to talk to this policeman Perry . . . I don't think he's there anymore. And he wasn't in the office, so I got his number and everything and I called him later on that day or the next day. And I said, "Look," I said, "I'm hazing the coyotes in Marjorie Perry . . . and I said, I want to know what the laws are regarding hazing wildlife." And he said, "By law you are interfering with any state . . . statute" And I have the statute number written down. He said, "You are interfering, and if there's a policeman there and catches you interfering with what our contractor is doing, you could be cited." And it was the law that interferes with . . . like if you go out and try to interfere with people who are hunting, like using noisemakers or firecrackers or something to scare off wildlife, you're in effect interfering with the hunting season process, so you can be cited. So I thought well, you know, I'm on social security, I can't afford an attorney, so*



*that's when I actually stopped the hazing. And I talked to Nicole about it, I told her why I was going to stop and that I just didn't feel, number one, safe, because I had heard some other stuff about this Jay guy that he had threatened this other woman a year or so earlier. And I just didn't feel safe around him. And I didn't feel safe legally, you know, like who's going to protect my rights. So that's when I stopped doing it.*

Several other respondents also shared similar stories of being distrustful of the actions and motives of Greenwood Village Police officers as they relate to coyotes. Nancy, a Greenwood Village resident, told me about several incidents where she felt that police officers were “*very dishonest*,” based on police reports and follow-up questions. Nancy, who requests many of the police reports filed about coyotes, said, “*I've got to tell you . . . I can't believe the police will take reports for this: coyotes howling . . . [and] in the winter, I think there're coyote footprints in the snow on my lawn.*” However, Aaron, a Greenwood Village official, told me:

*We started encouraging people, even if you just see one . . . running through your yard, give us a call, just to let us know what's going on. So that helps [us] understand where the activity is, so if we need to do, and we've done it at least once . . . we did a targeted postcard mailing of DOW brochures. Because, you know, that helps us see trends.*

In addition to knowing where to target educational materials, Aaron said that knowing where coyotes are active could help inform their police officers where they should focus their hazing efforts.

Some mentioned larger problems within the police department, including a history of alleged corruption. Several respondents mentioned they felt that Greenwood

Village police had participated in profiling, and a few mentioned larger scandals involving the police department.<sup>27</sup>

Much of the disagreement over whether or not lethal control is implemented responsibly in Greenwood Village seems to rest in the fact that Greenwood Village police ultimately have the responsibility to make decisions about when to use lethal control (and, in fact, when residents call with coyote sightings, they are directed to the police department). Aaron, the Greenwood Village official, told me:

*The Police Department makes that decision. So through the police administration typically, or . . . Obviously, if there's an immediate threat, they're not going to have to call their lieutenant or something like that. But typically, it's once you see a trend of habituated or aggressive coyotes, or the reports in one area tend to look like, 'They weren't scared of me at all. They were five or ten feet away, or whatever, you know. I was yelling and clapping, and they weren't running away at all. And that was right after they tried to get my dog.' You know, [as opposed to] if the reports were more like, 'when I saw him he ran away' So if we see more of that habituated no-fear kind of trend occurring they will make a decision sometimes, again based on their discretion, that 'Hey, we're going to use some lethal control in this area.' And they'll go out to that specific area. I think a lot of times they try and do it during the same time of day even that the complaints are occurring. And you know, if they get one in that area, sometimes they get one or two. And then they step back and see how things go for awhile . . . see how the complaints occur and what those trends look like. And then they decide whether or not to keep focusing on that area or not.*

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<sup>27</sup> This includes the 1984 death of Lawrence Ocrant, which was first called a suicide by Greenwood Village; a special grand jury later ruled it a homicide. In 2000, Greenwood Village settled a lawsuit with the children of Lawrence Ocrant, in which they claimed that his wife Sueann Ocrant, killed their father and that Greenwood Village Police officers helped to cover up the crime (Sueann Ocrant was a former Village city councilmember). At an initial trial, the jury awarded Ocrant's children \$2.3 million, but on appeal that ruling was overturned. At a second trial, the government settled for an undisclosed amount. For more information, see: <http://extras.denverpost.com/news/news1213k.htm> and <http://articles.latimes.com/1998/jun/14/local/me-59741>.

When I asked Aaron why calls about coyotes were handled by their police department (where most jurisdictions use their animal control officers or their wildlife specialist, if the town or city has such a position), he told me:

*Yeah. I mean, certainly we were aware of our resources and the limits of those resources and how far they would go. And that shaped the discussion. You know, as far as the officers, using them to go out and haze, to educate and then use lethal control when necessary . . . there are certainly maybe people you can pay less to do that. I guess, or maybe a better way to say it is that cost us a fair amount of money, to pay our officers a rate. And so doing that will cost money . . . But I think we found that they're probably the best people to do that for a variety of reasons. They know the neighborhoods. They have those relationships with the community already. They're trained in firearm safety, a variety of things like that. And we're able to make it work within the resources that we have.*

Rebecca, the Greenwood Village resident who has worked with the town on various wildlife issues, including coyotes, has a very positive view of their police department. She thinks that they will “*bend over backwards*” to help a stray dog, for example, but that they are not equipped to deal with wildlife. She believes that the Village would be better off if they hired a wildlife specialist and re-joined the regional coyote management efforts, rather than remaining isolated:

*And so Greenwood Village [police], they are all very people-oriented, they are very responsive to citizens and their concerns. They try to be very progressive. We have the highest educational [attainment] for police officers in the country. We have [a higher] police per citizen count than any other city in the country. The police are paid better than almost any other city in the country. But they don't have time to teach them everything. And wildlife knowledge is one of those things I don't think they are getting a good education on. Because there is no one there to do it, and no one has the time that actually works for the government. So I've always thought there's a disconnect between what they are trying to enforce and what needs to be enforced. And so when you've got people involved and you've got stuff going on with city manager and chief of police and police officers and wildlife and moneyed constituents, you know, it's a jumble. No one is talking to anybody except how do we make this person go away that is screaming at us. 'OK go shoot a coyote maybe that will quiet them down.'*

She later told me:

*Well, I think they've got a lot better things to do and they prefer to do . . . different things than go out and try to track down and shoot coyotes. I don't think that that's their big goal in life . . . I mean, they're highly educated, they're all college-educated people. And quite a few master's degrees. Those people aren't going to go out, get a big kick out of killing wildlife. They're just not that kind of people. . . . I think that they've got far more things to do . . . And they're so responsive to citizens. They really try hard. I don't know that shooting coyotes would be high on their list of their job description. And I certainly know the animal control officers are very against it. And they get very frustrated with the, uh . . . the hierarchy and the, the web of rules and regulations and stuff. Um, but I think everybody does, when you're in an organization.*

Some other Greenwood Village residents I spoke with also had positive views of their police department. Carlos told me, “*You know, other things in Greenwood Village I like very much is the police. You call them up and within two minutes you got a squad car out there.*” Bob told me,

*When you call, they're very prepared to take the information, they're not standoffish at all, or try to shuffle you onto somebody else . . . Greenwood Village police force is extremely responsive. I could not say enough about it, whether it's coyotes or speeders or whatever it is. They're just all over it, whatever it is.*

Respondents were therefore split between those who had negative opinions about the Greenwood Village police department and those who favored them. Similarly, some respondents expressed dislike for the Greenwood Village government and their elected officials, while others had positive opinions and praised them. For example, Pam, a resident of nearby Cherry Hills and a coyote coexistence volunteer, told me:

*So, I think there's a lot of unwise people in positions of power in Greenwood Village . . . to me we should look at things like our humanity and the big picture, and they don't. I think it's just the money. The mayor was very impressed with [a visibly wealthy women speaking at a meeting who were pro-lethal control] and I think was not about to disbelieve her, even if the truth was*

*presented to her she still wanted to support these particular people. So, that to me is the sad tale of that government.*

However, Rebecca, a Greenwood Village resident and animal activist, had a different take on the situation. Rebecca has worked closely with Greenwood Village officials on other wildlife-related projects, including turning an empty field into a wildlife habitat area (as opposed to a recreational park), which she worked on with a Village councilperson as well as the woman who was mayor during the height of the coyote controversy:

*When they were first talking about developing the field behind my house . . . people started clamoring. We want more hockey fields, we want more baseball fields, we want more soccer fields. Let's develop that field. Let's pave it and build something on it, or let's develop it into more things for people. So, when I went in with the Natural Habitat Proposal, I just kept hammering away at it year after year after year, showing up at the meetings, refining the proposal, educating myself on what wildlife would return to High Plains Prairie habitats . . . When they decided to do the habitat, one of the first things they did at the time, T-Rex, the big highway project here, was being built and it was right in our area. So . . . Parks & Recreation negotiated with the T-Rex management people to bring their fielder to us . . . to build noise attenuation berms . . . And then the city came in, and they've been getting funds from various organizations—many of them have written letters on behalf of the city to get funding for natural habitat plantings. So, they really have worked very, very hard to create open space and to create habitat, but also to try to please their people. And it's very difficult . . .*

*When the prairie dogs were living in that field, I went to [Parks and Recreation] and [the] city council, and I said 'You're not just going to bury these guys.' I mean, you can't just bury them. It's spring, they're having pups, you know, you can't just go out there and murder them, you know? And they said no, that they had had wildlife specialists, biologists, come in and study the area, and determine how to gradually encourage the prairie dogs that were in the way of the berms to move . . . They gave me the entire biologist's plan. The report, everything, they were totally open. And so, the night they started one of the berms, I got home from a function around 11:30 PM, and the T-Rex guys were out there dumping dirt on the prairie dog colony. And I called [a Parks and Recreation official] in the middle of the night, left her a voice mail. We had a phone tree established in our neighborhood, we all called the city government. So, at 8:00 [AM] when they*

*came in they had hundreds of calls complaining about this. And then, the city councilman that was across the street from me, [I saw] his wife . . . heading out there to check it out. And I went out with her. And by the time we got out there, the Greenwood Village city engineer was out there shutting everything down. All right, well by then it was too late for a lot of them. But here they'd paid for this extensive study on how to gradually have these prairie dogs move themselves. And the T-Rex highway people went out there and blew it. So that's what I know about the city government . . . And to have them just totally black and white, bad and good . . . You know, nothing's that clear.*

While Rebecca found the Village government to be easy to work with, open to her suggestions, and overall helpful, she did not have luck in getting schools and HOA's to provide her with a stage for the coyote educational programs she put together. When describing Greenwood Village's educational efforts (which include Rebecca's attempts to speak at HOA's and schools, as the government did try to help connect her to those entities), Rebecca told me, "*[Greenwood Village has] done huge efforts. You know, people who don't choose to pursue it, or avail themselves of it, I mean, I don't know what else the city can do, really.*" Aaron, a Greenwood Village official, told me that, besides increasing the educational materials they provided residents, they also changed their methods to increase their effect. For example, when they heard that some residents might be feeding coyotes, they, "*changed the message and made it a little stronger, from 'Hey, don't feed the wildlife,' to 'It's illegal to feed wildlife. Hey, you're breaking the law when you do this, and you're not helping the coyotes. You're doing more harm than good by a long shot.'*" This suggests that the government is making attempts to provide information and educational opportunities to their residents; the problem perhaps is on the receiving end. Deborah, a Village resident, told me that she was happy with the way the

government was dealing with coyotes (and in general finds her local government to be very responsive to citizen needs):

*Well, I think Greenwood Village is doing what they are supposed to be doing. I think I'm very impressed with the Greenwood Village government and the police department and the communication with the public. I mean, every month their newsletter usually has something about the coyotes and what to do, you know, and what not to do. And they keep repeating it, and then they have meetings. I think if there is enough citizen calls and concerns, they will have a meeting. They will have the police officers there and the city council representatives, and the mayor has been there before at these meetings. And then if they need lethal control they have the detective out . . . it's a small little government that you can call and talk to somebody or you can call the headquarters and communicate with them.*

In at least one case, however, a resident that I spoke with did not feel like the Village government had an adequate plan to deal with coyotes. Carlos told me that he had called the government on several occasions about coyotes in his neighborhood, but, “*when you call them up, they don't seem to care.*” Carlos, however, did not call the police department, which might explain what he saw as a lack of service.

Some other anti-lethal control advocates have not seen these educational efforts. Nancy, a Greenwood Village resident and anti-lethal control advocate, told me, “*So they don't even attempt education . . . I've only seen one piece of educational material ever. Cherry Hills also put up these folding placard signs on the canal with brochures in them . . . and I suggested the city do that, and they said, 'well, we don't want litter.'*” Carlos, a resident who was pro-lethal control, told me that he had never seen any educational materials and did not know about the management plan.

Rebecca expressed sympathy for Greenwood Village officials who, she felt, were perhaps pushed into supporting policies that they might have written differently, given different circumstances:

*So there was this big meeting . . . there were three women who showed up in coyote fur coats and I just thought that there is no way that this would be an objective problem-solving meeting. The mayor, the city council, I mean they were there and they were trying to be very understanding and listen, but these people were sitting there yelling at them. I mean, they were literally stuck in the middle and these people were just beyond reason and so I kind of understood that, and I can see where everybody is coming from.*

Rebecca told me that she believed the government was more open to working with her, as she is a resident, than they were to individuals and groups who live outside of the Village:

*They were impressed that I was a citizen, and they will listen far more to citizens than they will to outsiders, which is why [some outside groups and individuals], not only do they come across as extremely hostile, but they kind of cornered city council and city council shut down to them the whole city government, and would not allow them access to any information or any people. And I came in as a citizen, who had already worked with them on other issues, so they were more . . . open to me.*

Nancy, another Greenwood Village resident who has had less success in working with the Village government, told me,

*In city council meetings, if anybody wanted to get up and talk about the coyotes who wasn't from Greenwood Village, [Mayor] Nancy Sharpe would discount it; she'd say you're not from Greenwood Village. Basically your voice doesn't mean anything. She would say that right in the council meeting.*

Nancy believed that this attitude was a negative trait of her city officials, especially as the Village coyote population is a regional population; the coyotes do not pay attention to jurisdictional boundaries. She and others contrasted Greenwood Village's behavior to



Centennial's, which took a more regional approach to their coyote management plan. Many told me that coyotes were not the only issue where Greenwood Village seemed to keep itself separate from the surrounding communities; Greenwood Village has a reputation for keeping itself isolated. Margaret, who works for an animal protection organization, told me:

*I lived in the same county as Greenwood Village for years and I've lived in Colorado for over a decade, and from my perspective, Greenwood Village has a reputation for being a very affluent and somewhat isolated community, even though it's right in the middle of a bunch of other Denver suburbs, it's definitely got a reputation for being different and far more wealthy and more isolated, kind of to itself.*

Rebecca told me about a time when Greenwood Village officials walked out a regional coyote management meeting, a process to which they have not returned:

*I don't know the whole inside story of that, but at one point they felt, right or wrong, they felt that they were being singled out for attack and they walked out of the meeting. So all the other cities communicated, all the other cities worked together. Greenwood Village is like this little island, it refuses to deal with it at least at last I heard.*

Later, she told me, “*Greenwood Village has totally eliminated themselves from that communication [the regional planning process]. Mmm-hmm, totally isolated. Last I heard. And it's unfortunate, because it's just made a bed of worms for them.*”

When I asked Aaron, a Greenwood Village official, why so much negative attention had been placed on the Village, he wondered if their negative press happened in part because they acted first when human-coyote conflict became an issue in 2008 and 2009:

*You know, I don't know if we were . . . maybe the first out of the gate when it came to a head. Because there were certainly other cities in the Metro area that were reported on the media. And then the DOW [was] also stepping into those communities and utilizing some lethal control, or at least attempting it. I think in some cases they did euthanize some coyotes . . . We may have been the first out of the gate on it, and so . . . we just became associated with that issue more intensely than anyone else. But then other cities, I think, did make conscious decisions either not to do lethal control, or maybe they had it in their plans, but they weren't . . . they didn't act on that tenet of the plan. So some of the comments were, we were more likely . . . to utilize the fourth tenet of the plan, the lethal control than others were. And so I think it's kind of a chicken or egg thing. I think we probably already had that association, maybe even before that. I don't know. Maybe we were just the first out of the gate.*

Aaron also expressed regret that so much of the attention they received focused on lethal control:

*Well, you know, I would say that it's certainly not, by any stretch of the means, where the majority of our resources have gone, to lethal control. Like you said, that's certainly gotten the most attention from the media perspective. Because that was the controversial component of it. You know, from our perspective it's unfortunate. I guess from our perspective maybe it felt like it wasn't being recognized how much time and effort we were spending on the other things, for whatever reason. The focus was on lethal control, as far as the public attention. And we sort of became . . . for reasons I guess I don't quite understand even to this day . . . we kind of became the poster child, so to speak, in the Denver Metro area, for the example of who's using lethal control. And we became the focus of a lot of that debate on talk-show radio and national news. I mean, it was pretty amazing how much media attention the whole thing got . . . [even a] Christchurch of Auckland newspaper in New Zealand ran something. It was just crazy! It's amazing the amount of attention it, you know, it got nationally and, in some cases, even internationally.*

The perceptions not just of Greenwood Village residents, but also of the institutional and political systems in the Village, serve to drive the social conflict over coyotes. How people perceive of the orientations of the two governments (from seeing themselves as part of a larger community to focusing more exclusively on their own residents and land, for example) explains some of the conflict and reaction to the conflict; a better

understanding of these attributes and beliefs might help pave the way for more open communication.

### ***The Geographies of Human-Coyote Conflict***

Greenwood Village and Centennial are both located in a heavily developed suburban area, part of the “suburban sprawl” that has spread out from Denver onto the Colorado plains.<sup>28</sup> The commercial centers of these towns are by and large located on central roads in the form of office parks and strip malls, with residential areas and open spaces between the main roads. Housing consists of single-family homes, townhouses, and apartment buildings, some of which borders the two towns’ parks and other green spaces. Some people see these developed areas as solely within the human, built-environment, and so wildlife has little or no place there; while others see sprawl as an encroachment on animal habitat, and so it is humans’ responsibility to learn how to coexist with them. Many of the people I spoke with felt great pride about their communities, both in terms of their physical characteristics and the social and institutional structures of the towns.

There are two different approaches that residents generally take when thinking about the local landscape. In the first, humans have intruded into coyote habitat through suburban development. While all of the people I spoke with live in the Denver suburbs, and so are part of that encroachment, people who tend to think in these terms feel that it is humans’ responsibility to learn how to coexist with the wildlife that is able to survive

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<sup>28</sup> For more information on the two towns, see chapter 2.

amongst us. A 2007 LTE said, *“The coyote is a natural part of the Colorado ecosystem, and has as much right to be here as the esteemed Greenwood Village City Council.”* In these cases, although humans by and large have taken over the landscape, this does not diminish the fact that wildlife has a right to live on the land as well, to the best of their ability.

In addition, many felt that enjoying wildlife was a natural component of being a Coloradoan. Hillary, a coexistence volunteer and college student, told me why she thinks some Greenwood Village residents might support the use of lethal control: *“Part of it, I think maybe Greenwood Village has . . . more people from out of state, and possibly [they] don’t understand . . . You know, a lot of Coloradoans like their wildlife . . . I was raised here.”* A 2009 LTE stated, *“Wildlife is the pride and focus of Colorado and needs to be sustained.”* Others placed value on coyotes as they were a native to the area, *“Native animals such as wolves, coyotes, mountain lions and foxes have a right to live and thrive, do they not?”* Others I interviewed spoke of their enjoyment of sharing their neighborhoods with wildlife. Joanne, a Centennial resident and volunteer, said: *“I think it’s cool to see wildlife running up and down the block . . . I just like nature.”*

The other approach is to believe that humans have won the land, and that wildlife no longer has a place in the built environment. We can see this approach in an LTE mentioned in the first chapter, which reads: *“The coyotes have to deal with the reality that they lost the battle for habitat and move on . . . .”* This is complicated by the fact that many people move to both of the towns in order to benefit from the extensive park and trail systems (with their resultant wildlife populations) (Figures 5 through 8).

Many of the volunteers I spoke with believed that people moved to Greenwood Village in order to be close to wildlife, but only wildlife on their terms. The feeling is that some prize only certain species (i.e., song birds and water fowl), and believe that wildlife should exist only in certain areas. Others heavily criticize this attitude. A 2008 LTE said:

*In the process of all the construction, building and development, a lot of wildlife habitat is ruined . . . Oh and by the way, that field they could've moved into instead of staying in their area and eating their pets: That's where they just put in the new Lowes or the new Applebee's, because even though you wanted nature and peace, you still wanted all the convenience of the city.*

A 2006 LTE focuses on the more mountainous regions of the area (and not the plains, where Greenwood Village and Centennial are located), but is still relevant to this discussion:

*Call them hillbillies or berry pickers or just plain dumb, we now have an alleged million ecological morons living in sensitive mountain environments. These are the people who want to live "the good life," but complain about the lions, bears, mosquitoes, skunks, coyotes, elk, farm smells, and slow snow removal.*

Alice, a coyote coexistence program volunteer, shared with me that she thinks:

*A lot of people move into Centennial because of the wildlife, and the openness and large trees . . . Greenwood Village, I think people move there more for their prestige. Of course . . . it's just my feeling, but people seem to embrace wildlife more here in Centennial than they did in Greenwood Village.*



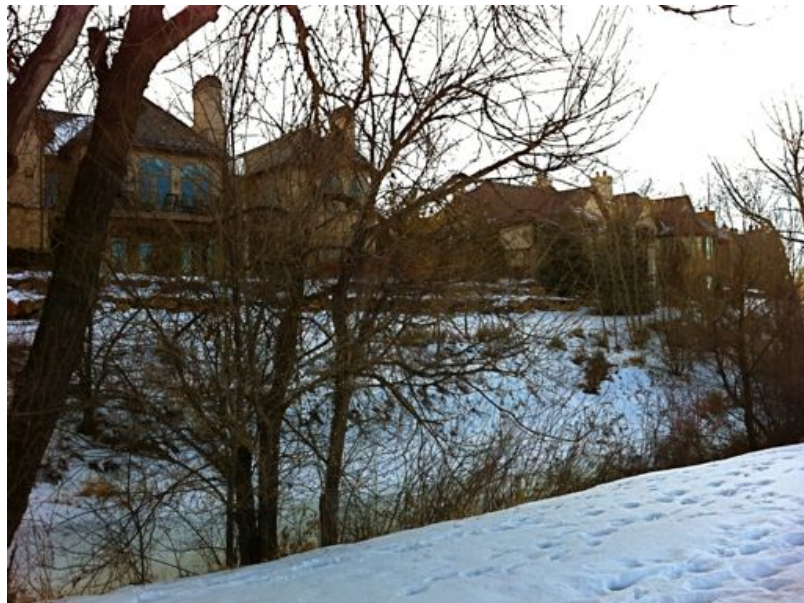
**Figure 5. Marjorie Perry Nature Preserve, Greenwood Village.**



**Figure 6. Marjorie Perry Nature Preserve, Greenwood Village.**



**Figure 7. Marjorie Perry Nature Preserve, Greenwood Village.**



**Figure 8. Marjorie Perry Nature Preserve, Greenwood Village.**

Some felt that the way that the area has grown, and some of the rules and restrictions placed on that development, directly led to an increase in human-coyote

conflict. Margaret, an animal advocate, told me about this problem, referring to an area around Marjorie Perry Nature Preserve<sup>29</sup>:

*. . . there are no wildlife corridors built in that whole development. They're sidewalks with people. There's really no way for wildlife to travel. There's an expectation that wildlife will be there, so that you can look at it and appreciate it and see it, but that it won't bother you even though your house is right on top of their habitat and there's no barriers or fences. It's just insane. It's beautiful, I can see why people want to live there, but there are problems that come with living on top of wildlife.*

By not planning for wildlife's needs in an area where wildlife exists, Margaret thinks that developers and city planners set the stage for conflict<sup>30</sup>. She later told me that she wished developers would “*consider wildlife corridors and that kind of thing when they're building the neighborhoods in the first place.*” A 2007 LTE stated, “*If coyotes are running around neighborhoods and eating pets, it is not the coyotes' fault. Developers continue to build condos and homes at a record pace, encroaching on and destroying the land that wild animals need for hunting.*” Elizabeth, a volunteer, said:

*And I keep saying, did you ever drive out southeast of Denver and look at the habitat that we have destroyed out there where these animals used to live? Take a drive out east and take a look at the open prairie and see all the ground that has been paved over; see all the ground that there is nothing but trapped homes now, the farms that were once out there where these animals once lived. Drive . . . south to Colorado Springs and look at all the building that has happened there in the past five years. There used to be open space in 50 to 70 percent of that . . .*

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<sup>29</sup> Marjorie Perry Nature Preserve is a 59-acre open space in Greenwood Village, surrounded by housing developments. The park is very popular with local residents, and the High Line Canal trail runs through it, connecting it to a regional trail system.

<sup>30</sup> One respondent told me that she has heard that some realtors are not honest with potential buyers of houses where there are coyotes; if this is an issue, then even with proper planning there might be conflict. Other respondents told me that they feel new resident outreach is important for that very reason.



*area. Now, it is 70 percent covered with box stores and homes and you name it, it's been built on. And so where are these animals supposed to go?*

Indeed, others mentioned that the development occurring in the Denver metropolitan area actually creates what is in some ways an ideal habitat for coyotes. Jennifer Churchill of the Colorado Division of Wildlife again spoke to the author of a 2008 column:

*Cities and their suburban sprawl, she said, provide ideal habitat for coyotes, what with all the garbage we produce, which gives rise to rodents which, along with jackrabbits, are the No. 1 staple of the coyote diet. 'With more greenbelts and open space being designed by cities, it creates ideal living space for coyotes,' Churchill said.*

Many of the most expensive communities in Greenwood Village abut parks and nature preserves, and many of these communities forbid the use of backyard fences so that there is little or no physical separation between the nature preserve and private property (Figures 5 through 8). This sets the stage for conflict, as people cannot control coyotes' access to their property, and, when coupled with the fact that many people still let their pets outside unattended, it is not surprising that there has been a lot of anger over the coyote issue (Figures 5 through 8). Lindsey, an animal advocate who volunteered with the coexistence program for a while, told me:

*The problem with Greenwood Village . . . they don't have fences out there. I guess it is part of the appeal, too, because it's open, there's a lot of open space, it's very attractive . . . but it's also to the detriment of the coyotes, because there are fences . . . six-foot fences, that would keep the coyotes out, for the most part, and the little . . . dogs [in].*

Carlos, a resident of Greenwood Village, liked the fact that his neighborhood does not allow fences, but also recognized that it caused problems with wildlife:

*The issue is that we have no fences, so the wildlife just comes and goes as they please. So I like no fences, it gives a more airy feeling . . . if you go to some of the other neighborhoods, Denver neighborhoods . . . it looks like a canyon; you know, there's walls on both sides of the street . . . Here, it's a very airy feeling.*

Margaret, an animal advocate, told me that she believes these restrictions are a direct cause of coyote-conflict:

*[Another] big stakeholder in this whole problem is HOA's and . . . neighborhood associations because I think it's irresponsible to have a neighborhood or homeowner's association in a place where there are coyotes and then have these fence restrictions that prevent people from protecting their property.*

Alice, a coyote coexistence volunteer, said, “. . . there's a lot of communities that don't allow the high fences . . . and you know what? They could fight that if they wanted to; they want the view. I'm sure they want to see the ducks and the ducklings and all that stuff.”

While fences are commonly cited as a management tool to prevent human-coyote conflict,<sup>31</sup> Aaron, a Greenwood Village official, told me that fences did not necessarily prevent conflict in the Village.

*A lot of the discussion at the time focused on kind of the make-up of our neighborhoods. In other words, we have one part of our city, at least, that's more rural in nature. And the properties can be several acres. And a lot of them don't have fences. Some of those areas and neighborhood more adjacent to those more rural areas don't allow fences, for example, in their covenants and their bylaws . . . and what they'll have is the electric shock collars on their dogs. So that works to keep their dogs in, but not to keep animals out, obviously. And so there were some*

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<sup>31</sup> Most experts believe that to be “coyote-proof,” a fence has to be at least six-feet tall with no spaces large enough for a coyote to squeeze through. In addition, many suggest installing a “coyote-roller” (a piece of pipe attached to a bar on the top of the fence; coyotes cannot get a purchase on the pipe as it rolls when they try to use it to help push themselves over the fence).

*instances happening there. And so a lot of the conversation was, well, fences would solve that. Why don't people have fences? And so there was discussion around that. But we have plenty of neighborhoods, particularly on the eastern side of our city, that are more suburban in nature, where it's more of a tract home development with fenced-in yards on smaller lots, and stuff like that, like your six-foot privacy fences . . . and since then there have been instances where people said, well, they jumped our fence.*

He went on:

*So one instance in particular that occurred was . . . a coyote was jumping over into people's back yards, and kind of jumping from fence to fence, just kind of scoping things out. And the residents, those that were home, at least, were running out and pulling their dogs in when they saw the coyote there. And so that kind of bumped off some of that . . . notion that this was really more of a rural Greenwood Village problem, or more of, 'Oh, that's only an issue if you don't have a fence,' kind of thing. You know, who's to say . . . it certainly seems logical that it might help reduce the likelihood that a coyote will come in your yard if it's fenced. But it certainly doesn't prevent it. It's not a hundred-percent guaranteed. So that always kind of stuck out in my mind.*

Perhaps at the heart of this issue is a fundamental disagreement over what constitutes “wilderness” and “nature.” Some feel that the separation between the built environment and the natural environment is artificial, while others feel that there is such a boundary, which needs to be guarded:

*The coyotes are not simply staying in the wild. Just last weekend, my spouse and children were traveling along busy Broadway Street near Dad Clark, in mid-day with heavy traffic, walkers and bikers. They witnessed two coyotes boldly hunting along the fences paralleling Broadway. There is no mistaking these animals for dogs, in their appearance or behavior. At night, they are howling and crying outside the fence with their unmistakable sounds.*

A 2007 LTE was written in response to an article about a mountain lion attack in the mountainous region west of Denver:

*Then the article goes on to cite that this mountain lion may have been the same animal that made previous attacks. Yet, I wonder why this animal was not*

*tracked, captured, and relocated after the original attack, or even the second. Maybe stop selling hunting licenses for a while and see if the coyotes and mountain lions will stay out in the rural areas where they belong. Oh wait, that would cause them to lose money.*

The author of this LTE believes that predators, including coyotes, “belong” out in rural areas, and are only coming into more heavily populated regions because of pressure by hunters. Their presence in urban and suburban communities is unnatural. Likewise, Carlos, a Greenwood Village resident and proponent of lethal control, told me:

*Yeah, in my ideal world I wouldn't want to see the coyotes or hear the coyotes . . . if this property was out there in the middle of nowhere and I had horses and cows and everything else, you know, fine, I'll share my world with them. But this is really an urban environment . . . and they just don't belong over here. So I don't know, maybe you cannot kill all of them, so I don't know. Yeah, the ideal world I just don't want to deal with them.*

Some who identify themselves as environmentalists hold the belief that nature and its resultant wildlife is something that happens away from urban and suburban areas. Nancy, a Greenwood Village resident and coyote advocate, told me about an experience she had with one such person:

*We even had [the] Sierra Club help us a little bit. I contacted their [local representative], and she sent out emails and letters to all their members who were residents about the coyotes, and they actually got some nasty responses. Uh huh, from residents who were members who said they were dropping out of the Sierra Club. Yes. Can you believe that? Can you believe that? One woman said, “I used to be a guide for the Sierra Club and a coyote killed my schnauzer, and I will never send you money again and I am never going to be involved in your club again.”*

While it is likely that this woman was a wildlife admirer and even advocate (as her volunteerism would suggest), her perception of wildlife seems to depend on where the wildlife resides and performs certain behaviors—a perception not uncommon in the

Western world.<sup>32</sup> Carlos, the Greenwood Village resident, told me, *“I don’t think the coyotes belong here. Somehow the deer don’t belong here either. And certainly all the rabbits don’t belong here.”*

Others see coyotes’ presence in the area as normal and even inevitable. Jennifer Churchill, a Colorado Division of Wildlife official, said, in a 2008 column, *“The only way you might get rid of them is by pouring concrete over this entire state, and even that may not work.”* A 2009 op-ed by the *Denver Post*’s editorial board stated: *“Coyotes live comfortably in some of the most urban areas in the country, howling away in New York, Los Angeles and Chicago. They’re not going anywhere. As Colorado’s cities and towns expand, encounters between people and wildlife will continue.”* Bob, a Greenwood Village resident, told me, *“I’d say if you don’t want to be around coyotes, move into a high-rise condo someplace. And I don’t think the answer is moving down into Denver closer to downtown because they have parks.”*

This also plays into differing opinions about what is natural and unnatural coyote behavior.<sup>33</sup> For example, while many see coyote depredation of small dogs and cats as unnatural behavior, others see it as a natural extension of normal behavior. Danielle, a volunteer with the coyote coexistence program, told me, *“I have this feeling that, if you move next to wildlife, you have to expect that wildlife are going to act according to their instincts, so, you know, them eating your pet is what they do naturally.”*

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<sup>32</sup> For more on the so-called nature-culture divide, see chapter 2.

<sup>33</sup> For more on this, see chapter 3.

Carol, a volunteer with the coexistence program, explained that she thought people's expectations were just unrealistic:

*Let me just give you a little example. An acquaintance owns an urban wildlife rescue company here in town and he has some incredible stories. Oh, my gosh. Um, one of the ones I think stuck in my head was he got a call from a woman who moved to the country, specifically to move to the country, and then she had called him and said, "I have all these animals on my property. I want you to come and get them," and he said, "Excuse me. Why did you move out there?" "Well, to be in the country." He said, "Lady, I am not coming out. You moved to the country. Now deal with the results. You wanted to be out there. That's part of it, okay? Didn't you know that when you moved there?"*

This fundamental difference of opinion about what the land means plays a large part in maintaining the social conflict between pro- and anti-lethal control groups.

Disagreement over whether or not coyotes belong in a substantially developed area (albeit one with ample greenspaces) coupled with institutional influences on the landscape (for example, by having HOA restrictions on fences) and the fact that the two towns provide excellent habitat for coyotes, seem to affect both the occurrence of and response to human-coyote conflict. Therefore, the physical attributes of the area, both natural and manmade, have a profound effect on the social conflict about coyotes. In addition, narratives about humans' roles in the environment, whether as a species that is intruding on other species' habitat (and so needs to learn how to coexist) or as a species that has conquered the natural world (and so owes nothing to other species) also impact human-coyote conflict in Greenwood Village and Centennial.

Human-coyote conflict and the social conflict over coyotes is caused by a variety of variables, including the political meanings we give coyotes, how we structure social interactions and institutions, and the geographic reality of a place. Coyotes can become

political symbols on many scales of politics, from the very local to the international; this can color how individuals respond to the actual physical animal. How individuals and communities assign rights and responsibilities to stakeholders (including residents and governments) can also impact people's expectations of what it means to live with and around wildlife; and various social characteristics of communities and individuals can affect how conflict happens (and what the aftermath looks like). Finally, the physical characteristics of a landscape, both manmade (i.e., zoning regulations and restrictions on fences) and natural (i.e., greenspaces that provide prime habitat for coyotes) play a large role in both direct and perceived human-coyote conflict.

**CHAPTER 5:**  
**SURVEY OF RESIDENTS OF CENTENNIAL AND GREENWOOD VILLAGE**

***Methodology***

Using variables discussed in chapters 2 and 3, I designed a survey questionnaire to test what attitudinal and demographic characteristics predicted respondents' level of support for lethal coyote control, as well as any differences between the two towns. In keeping with the grounded theory methodology that I used for the first part of this study, I did not design the survey instrument to examine an existing theory, but rather used variables that appeared to be important based on my analysis of the qualitative data.

I piloted the questionnaire with a selection of Washington, D.C., residents to ascertain clarity. In the fall of 2011, the revised survey was administered to Greenwood Village and Centennial, Colorado, residents via telephone. The survey was conducted by the George Mason University Center for Social Science Research, using the Computer-Assisted Telephone Interviewing system, *OnQ*. The telephone numbers were taken from a random sample obtained from a national vendor, and the interviewers verified that each respondent did live in one of the two towns. Respondents who did not meet that criteria were discarded. The survey was again piloted at this stage; those initial attempts were not included in this analysis.



In order to reduce non-response, each number was called a minimum of nine times if necessary, and survey interviewers followed established, standardized guidelines. All survey questions and interviewer cues were approved by George Mason University's Human Subjects Review Board, and all interviewers were trained in survey ethics, ensuring the confidentiality of all respondents. A total of 625 completed surveys were included in this analysis, with 324 from Greenwood Village and 301 from Centennial, for a response rate of 13.8%<sup>34</sup>

Results from the *OnQ* system were loaded into SPSS 20 for Mac OSX for analysis. The data file was checked for errors by examining the range of scores for each variable to ensure that each answer fell into the expected range. References to specific questions in the survey will be accompanied by the question number (Q#) in the survey, which can be found in Appendix Two.

### *Demographic Characteristics*

Respondents were asked a series of basic demographic questions (Q16-25), including how many (if any) children lived in the household, dog or a cat ownership, political affiliation, gender, age, racial identity, level of educational attainment, and income.

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<sup>34</sup> Based on the American Association for Public Opinion Research's Response Rate #4. For more information, see AAPOR.org.

### *Awareness of Coyotes*

Respondents were asked a series of four questions (Q4 and Q5a-5c) to determine their awareness of the local coyote population, as well as their interactions with it. An independent-samples t-test was performed to see if there was a significant difference between Greenwood Village respondents and Centennial respondents.

### *Role of Government*

Respondents were asked one question (Q6) about who they think holds the most responsibility for preventing human-coyote conflict: individuals or the local government. Responses were scored on a five-point Likert scale. An independent-samples t-test was performed to determine whether or not there was a significant difference between Greenwood Village and Centennial respondents.

### *Belief in Coyote Residency*

Respondents were asked one question (Q7) about whether or not they believe that coyotes belong in their neighborhood. Responses were scored on a five-point Likert scale. An independent-samples t-test was performed to see if there was a significant difference between Greenwood Village respondents and Centennial respondents.

### *Fear*

Respondents were asked a series of four questions (Q8a-8d) to determine their level of concern about the local coyote population in various scenarios, ranging from fear

of attack for humans and pets, to fear of private property damage (damage to landscaping was mentioned several times during the course of my interviews). Responses were scored on a five-point Likert scale.

A Fear Scale was created to measure the level of concern each respondent felt about coyotes by using the sum of the total scores for each question for each respondent. The scale was found to be internally reliable (Cronbach's alpha = 0.80), with a minimum score of one and a maximum score of twenty. There was no increase in reliability if any one of the items was removed. An independent-samples t-test was performed to determine whether or not there was a significant difference in the mean of this scale between Centennial and Greenwood Village respondents.

### *Willingness to Act*

Respondents were asked seven (Q9a-9g) questions to determine under what circumstances they would call animal control, the police, or another government official if they saw a coyote in a specific area or performing a specific behavior. Both active (i.e., witnessing a coyote attack a person) and passive (i.e., seeing a coyote near a road) scenarios were used in order to measure how likely respondents were to take this action.

A scale (the Act Scale) was created using the sum of the responses from the seven items. As each item was scored using a yes/no response, "no's" were assigned a zero and "yes's" were assigned a one. Therefore, the minimum score was zero and the maximum score was seven. The scale was internally reliable (Cronbach's alpha = 0.72), and there was no increase in reliability if any item was removed. An independent-samples t-test

was performed to determine whether or not there was a significant difference between Greenwood Village and Centennial respondents for this scale.

### *Support for Lethal Control*

Respondents were asked seven (Q10a-10g) questions to determine under what circumstances they would support killing a coyote if they saw a coyote in a specific area or performing a specific behavior. The scenarios used for this series of questions were identical to those used to create the Act Scale (above).

A scale (the Lethal Scale) was created using the sum of the responses from the seven items. As each item was scored using a yes/no response, “no’s” were assigned a zero and “yes’s” were assigned a one. Therefore, the minimum possible score was zero and the maximum possible score was seven. The scale was internally reliable (Cronbach’s alpha = 0.80), and there was no increase in reliability if any item was removed. An independent-samples t-test was performed to determine whether or not there was a significant difference between the two towns’ respondents for this scale.

### *Knowledge*

Respondents were asked a series of five questions (Q11a-11e) to determine their level of knowledge about coyote-human interactions and knowledge. The language of these true/false statements was taken directly from Colorado Division of Wildlife outreach materials about coyotes.

I attempted to create a Knowledge Scale using the sum of the correct responses from the five items, but the scale was not internally reliable (Cronbach's alpha = 0.20). The reliability of the scale was not improved by eliminating one or more of the items. I also attempted to improve the reliability of the scale by controlling for whether or not people knew coyotes lived in the area before they moved there (Q4), but this also did not improve the internal reliability of the scale. However, responses to individual items within this group were interesting and used as part of the analysis. A series of independent-samples t-tests were performed to compare the mean response from each of the two towns to see if there was a significant difference for any of the five items.

### *Fences*

A series of three questions (Q12-14) was asked about coyote-proof fences, a common tool used to prevent human-coyote conflict, but that is not allowed by many Home Owner's Associations in Greenwood Village and, to a lesser extent, Centennial. Respondents were asked on a five-point Likert scale how much they believed or did not believe that fences were an important tool to reduce human-coyote conflict (Q12), a yes/no question to determine whether or not they have a coyote-proof fence on their property (Q13), and a follow-up question where, if they answered "no" to Q13, they were prompted to answer why they did not have such a fence (the listed choices included "I do not live in a single-family house or townhouse;" "I do not want such a fence;" "I do not have the resources to build such a fence;" "My homeowner's association or neighborhood regulations do not allow for such a fence;" and "Other").

An independent-samples t-test was performed to determine whether or not there was a significant difference in response between the two towns for Q12, while Chi-square tests were run to compare the responses of the two towns for Q13-14.

### *Coexistence*

Respondents were asked one question (Q15) about whether or not they believe that humans and coyotes can coexist. The question was scored on a five-point Likert scale. An independent-samples t-test was performed to determine if there was a significant difference in mean response between Greenwood Village and Centennial respondents.

### *Willingness to Live with Coyotes (WLC)*

In order to improve the predictive value of the multiple regression model discussed below, a Willingness to Live with Coyotes (WLC) was created by using the sum of the total scores of two questions, Q7 (“To what extent do you agree or disagree with the following statement: ‘Coyotes belong in your neighborhood’”) and Q15 (“How much do you agree or disagree with the following statement: ‘I believe that people and coyotes can coexist’”). The scale was internally reliable (Cronbach’s Alpha = 0.73) and had a minimum possible score of one (indicating a strong willingness to live with coyotes) and a maximum possible score of ten (indicating no willingness to live with coyotes). An independent-samples t-test was performed to determine whether or not there was a significant difference between the two towns’ respondents for this scale.

### *Multiple Regression*

A two-stage standard multiple regression was performed to look at what variables best predicted the strength of respondents' support for lethal coyote control. In the first model, I used the independent attitudinal variables Q6 (belief in the role of government), the Act scale, the Fear scale, Q11e (a true-false knowledge question with the statement: "Coyote eradication programs in North American cities have proven to be effective"), and the WLC scale.

In the second model, I used the above attitudinal variables and added a series of demographic variables to determine how much predictive value demographic characteristics added to the model. The demographic variables included Q16a-c (number of children in the household), Q17a-b (if there were dogs or cats in the household), Q19 (political beliefs), Q20 (gender), Q24 (educational attainment), and Q25 (income).

## ***Results***

### *Demographic Information*

Respondents were asked if they had children in their household or not in three age categories, five years and younger, six to 12 years old, and 13 years and older (Table 8). The majority of respondents did not have children in any age group.

Respondents were asked whether or not they owned a cat or a dog (the two species most often involved with human-coyote conflict). Most respondents did not own a cat (78.1%), while slightly more than half of respondents did own a dog (57.7%).

**Table 8. Children in respondents' households.**

| No. of children | Age group (no. of years) |                 |                    |
|-----------------|--------------------------|-----------------|--------------------|
|                 | Five and younger         | Six to twelve   | Thirteen and older |
| Zero            | 91.6% (n = 478)          | 67.2% (n = 420) | 67.9% (n = 354)    |
| One             | 3.8% (n = 24)            | 10.9% (n = 57)  | 16.3% (n = 85)     |
| Two             | 1.6% (n =10)             | 6.3% (n = 33)   | 9.8% (n = 51)      |
| Three or More   | 1.6% (n =10)             | 2.3% (n = 12)   | 6.0% (n = 31)      |

A slight majority of respondents considered themselves to be Republicans (31.3%), while 25.7% called themselves Democrats, 29.4% called themselves Independents, 3.3% considered themselves Libertarians, 1.9% of respondents selected “other,” and 6.1% of respondents did not affiliate themselves with a party or were not interested in politics. A chi-square test was performed to determine whether or not there was a difference in party affiliation between Greenwood Village and Centennial residents; there was none ( $p = 0.498$ ). More respondents considered themselves moderates on the political spectrum from very liberal to very conservative than on either extreme (Table 9). An independent-samples t-test was performed to determine whether or not there was a difference in political identification between the two towns; there was no ( $p = 0.158$ ).

Most respondents were female (61.5%), most respondents were not Hispanic (97.5%), and most respondents were white (93.6%) (Table 10).

A majority of respondents had graduate or professional degrees (Table 11), and a majority of respondents' household incomes equaled \$150,000 or more a year (Table 12).



**Table 9. Respondents' political identification.**

|   | Very liberal     | Somewhat liberal  | Moderate, middle of the road | Somewhat conservative | Very conservative |
|---|------------------|-------------------|------------------------------|-----------------------|-------------------|
| In general, do you think of yourself as . . . ? | 8.8%<br>(n = 43) | 19.3%<br>(n = 95) | 34.4%<br>(n = 169)           | 26.5%<br>(n = 130)    | 11.0%<br>(n = 54) |

**Table 10. Respondents' racial identification.**

| Race                                   | Percentage      |
|--|-----------------|
| White                                  | 93.6% (n = 482) |
| Black/African American                 | 0.8% (n = 4)    |
| Asian                                  | 1.9% (n = 10)   |
| American Indian/Alaskan Native         | 0.8% (n = 4)    |
| Native Hawaiian/other Pacific Islander | 0.2% (n = 1)    |
| Other                                  | 2.7% (n = 14)   |

**Table 11. Respondents' educational attainment.**

| Educational attainment          | Percentage      |
|---------------------------------|-----------------|
| Less than 9th grade             | 0.2% (n = 1)    |
| Ninth to 12th grade             | 1.4% (n = 9)    |
| High school graduate or GED     | 4.8% (n = 30)   |
| Some college, no degree         | 9.3% (n = 58)   |
| Associate's degree              | 3.0% (n = 19)   |
| Bachelor's degree               | 29.4% (n = 184) |
| Graduate or professional degree | 35.0% (n = 219) |

**Table 12. Respondents' income levels.**

| Income level          | Percentage      |
|-----------------------|-----------------|
| Under \$15,000        | 2.0% (n = 7)    |
| \$15,000 - \$34,999   | 6.1% (n = 21)   |
| \$35,000 - \$49,999   | 4.0% (n = 14)   |
| \$50,000 - \$74,999   | 18.2% (n = 63)  |
| \$75,000 - \$99,999   | 12.4% (n = 43)  |
| \$100,000 - \$149,999 | 21.3% (n = 74)  |
| \$150,000 or more     | 36.0% (n = 125) |

A chi-square test was performed to determine whether or not there was a significant difference between the two towns in terms of income level. Greenwood Village income levels were higher than Centennial income levels ( $p < 0.01$ , Pearson Chi-Square = 61.41), as would be expected based on census data (see chapter 1) (Table 13).

**Table 13. Income levels split by town ( $p < 0.01$ , Pearson Chi-Square = 61.41)**

| Income level          | Town              |                |
|-----------------------|-------------------|----------------|
|                       | Greenwood Village | Centennial     |
| Under \$15,000        | 1.7% (n = 3)      | 2.4% (n = 4)   |
| \$15,000 - \$34,999   | 4.5% (n = 8)      | 7.6% (n = 13)  |
| \$35,000 - \$49,999   | 2.8% (n = 5)      | 5.3% (n = 9)   |
| \$50,000 - \$74,999   | 8.5% (n = 15)     | 28.2% (n = 48) |
| \$75,000 - \$99,999   | 9.0% (n = 16)     | 15.9% (n = 27) |
| \$100,000 - \$149,999 | 18.6% (n = 33)    | 24.1% (n = 41) |
| \$150,000 or more     | 54.8% (n = 97)    | 16.5% (n = 28) |

*Awareness of and Experience with Coyotes*

Most Greenwood Village and Centennial respondents knew that coyotes lived in the area a before they moved there, with about equal numbers in each town (Table 14).

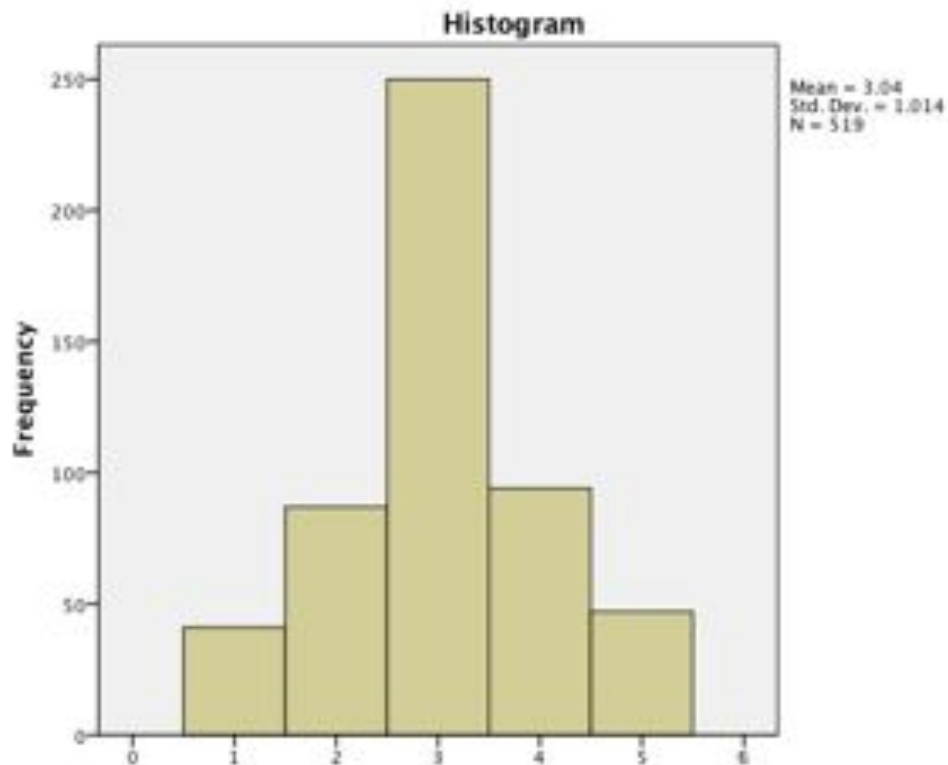
**Table 14. Responses to the question: “Did you know that coyotes lived in the area before you moved there?”**

| Response | Town              |                 |
|----------|-------------------|-----------------|
|          | Greenwood Village | Centennial      |
| Yes      | 63.6% (n = 189)   | 63.0% (n = 162) |
| No       | 36.4% (n = 108)   | 37.0% (n = 95)  |

**Table 15. Summary of responses to coyote awareness questions.**

| Town              | Response                         |                                   |   |
|-------------------|----------------------------------|-----------------------------------|---|
|                   | I’ve seen coyotes on my property | I’ve seen coyotes in my community | People in my neighborhood have had pets attacked by coyotes |
| Greenwood Village |                                  |                                   |   |
| Often             | 27.7% (n = 76)                   | 44.7% (n = 122)                   | 20.6% (n = 49)  |
| Occasionally      | 46.4% (n = 127)                  | 47.6% (n = 130)                   | 56.3% (n = 134)   |
| Never             | 25.9% (n = 71)                   | 7.7% (n = 21)                     | 23.1% (n = 55)  |
| Centennial        |                                  |                                   |   |
| Often             | 5.1% (n = 13)                    | 16.1% (n = 41)                    | 6.5% (n = 14)   |
| Occasionally      | 39.5% (n = 101)                  | 69.4% (n = 177)                   | 45.3% (n = 97)  |
| Never             | 55.5% (n = 142)                  | 14.5% (n = 37)                    | 48.1% (n = 103)   |

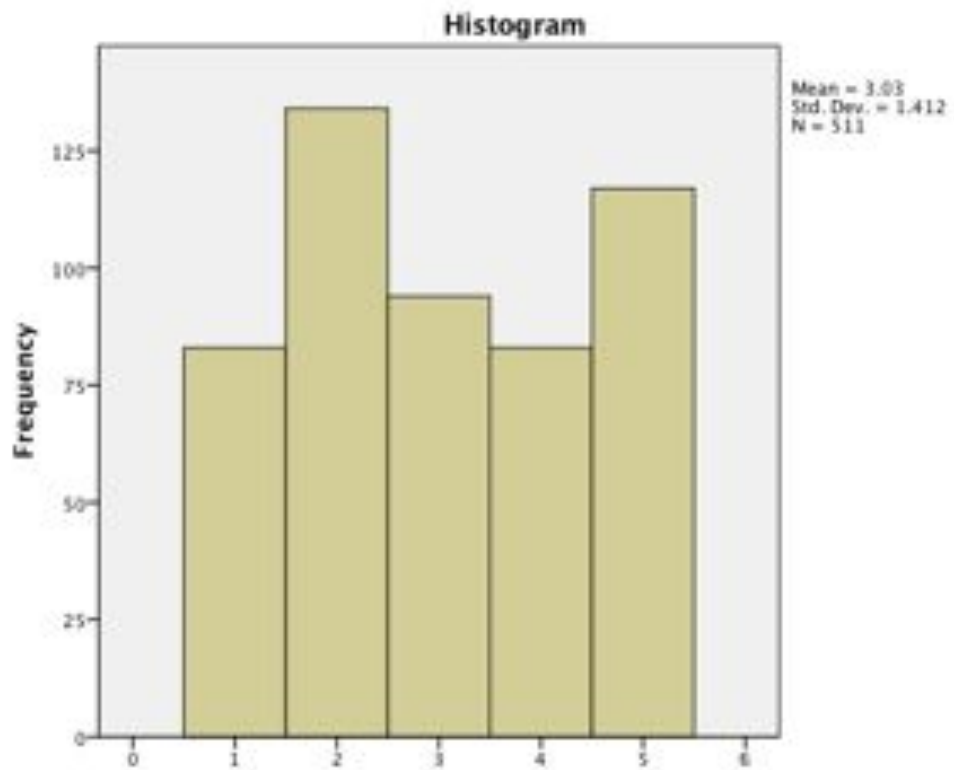
More Greenwood Village residents have seen coyotes on their property ( $t_{(517.7)} = -9.03, p < 0.01$ ), have seen coyotes in their community ( $t_{(526)} = -6.89, p < 0.01$ ), and stated that people in their neighborhood have had pets attacked by coyotes ( $t_{(450)} = -6.49, p < 0.01$ ) than Centennial residents (see Table 15).



**Figure 9. Responses to the question: “Who is responsible for addressing human-coyote conflict?” 1 = It is completely the responsibility of residents; 2 = It is mostly the responsibility of residents; 3 = It is equally the responsibility of your local government and residents; 4 = It is mostly the responsibility of your local government; 5 = It is completely the responsibility of your local government.**

*Role of Government*

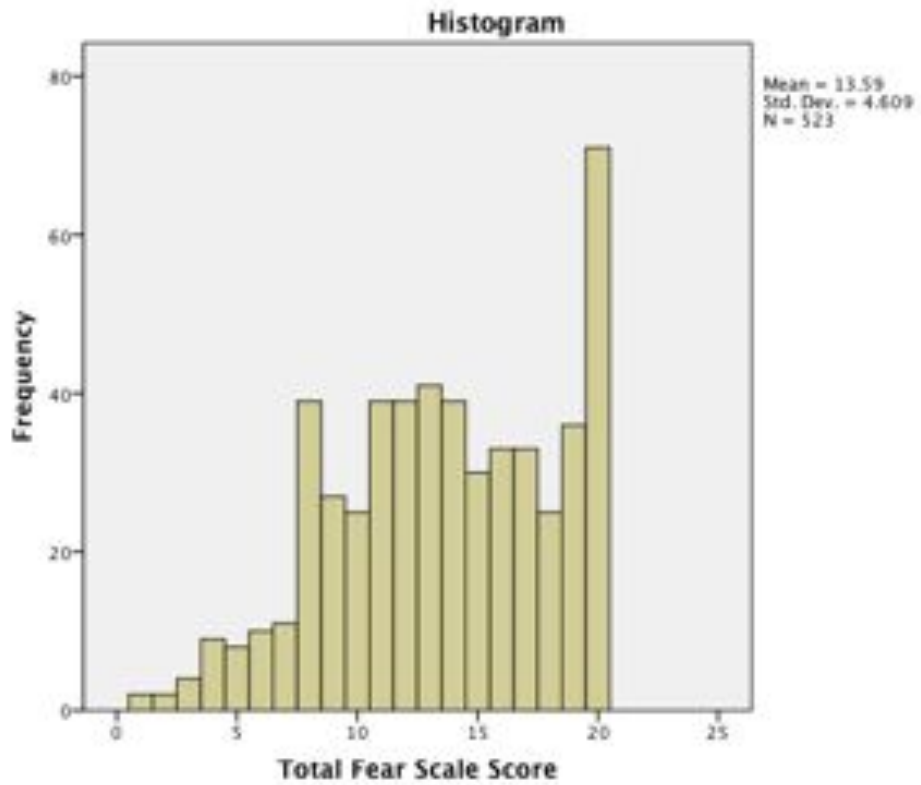
Most respondents felt that it was equally the responsibility of individual residents and the local government to address human-coyote conflict (Figure 9), and there was no significant difference in responses between Greenwood Village and Centennial ( $p = 0.22$ ).



**Figure 10. Responses to question: “Coyotes belong in your neighborhood.” 1 = Strongly Agree; 2 = Agree; 3 = Neither Agree Nor Disagree; 4 = Disagree; 5 = Strongly Disagree.**

*Belief in Coyote Residency*

Respondents had differing opinions about whether or not coyotes belonged in their neighborhood (Figure 10), and there was no significant difference in responses between the two towns ( $p = 0.49$ ).



**Figure 11. Range of respondents' Fear Scale scores. Lower scores indicate more worry about coyotes.**

*Fear*

The Fear Scale (Cronbach's Alpha = 0.80) had a minimum possible score of one (indicating a great amount of fear) and a maximum possible score of 20 (indicating little or no fear). The index had a mean of 13.59, a median of 14.00, and a skewness value of -.299 (SE = .107) (Figure 11).

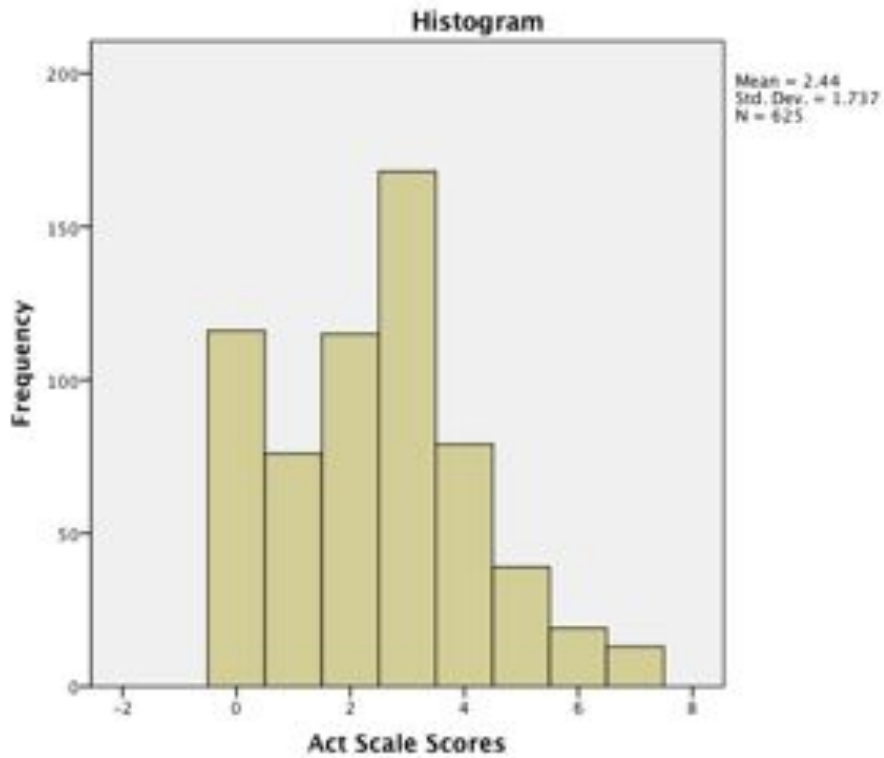
An independent-samples t-test was performed to determine whether or not the mean Fear Scale score of Centennial was significantly different from that of Greenwood Village; there was no significant difference ( $p = 0.14$ ).

**Table 16. Responses to Fear Scale items.**

| Prompt: I worry about a coyote . . . | Response           |                    |                            |                   |                    |
|--------------------------------------|--------------------|--------------------|----------------------------|-------------------|--------------------|
|                                      | Strongly agree     | Somewhat agree     | Neither agree nor disagree | Somewhat disagree | Strongly disagree  |
| attacking or harming a pet           | 30.9%<br>(n = 159) | 24.9%<br>(n = 128) | 8.4%<br>(n = 43)           | 12.5%<br>(n = 64) | 23.3%<br>(n = 120) |
| attacking or harming a child         | 31.7%<br>(n = 163) | 23.3%<br>(n = 120) | 5.1%<br>(n = 26)           | 18.3%<br>(n = 94) | 21.6%<br>(n = 111) |
| attacking or harming me              | 8.2%<br>(n = 42)   | 16.3%<br>(n = 84)  | 5.4%<br>(n = 28)           | 19.3%<br>(n = 99) | 50.8%<br>(n = 261) |
| damaging my property                 | 3.3%<br>(n = 17)   | 4.3%<br>(n = 22)   | 4.3%<br>(n = 22)           | 17.3%<br>(n = 89) | 70.8%<br>(n = 363) |

The Fear Scale was made up of four items; see Table 16 for the frequency distributions for each individual item. Respondents were most concerned about coyotes attacking pets (mean =  $2.72 \pm 1.57$ ), then concerned about coyotes attacking children

(mean =  $2.75 \pm 1.58$ ), then coyotes attacking themselves (mean =  $3.88 \pm 1.39$ ), and finally coyotes damaging personal property (mean =  $4.48 \pm 1.00$ ).



**Figure 12. Act Scale scores. Low scores indicate less willingness to act on a coyote sighting.**

### *Willingness to Act*

The Act Scale (Cronbach's Alpha = 0.72) had a minimum possible score of zero (indicating no willingness to contact government officials about coyotes) and a maximum possible score of seven (indicating much willingness to contact government officials about coyotes). The index had a mean of 2.44, a median of 3.00, and a skewness value of 0.35 (SE = 0.10) (Figure 12).



An independent-samples t-test was performed to determine whether or not the mean Act Scale score of Centennial was significantly different from that of Greenwood Village; there was no significant difference ( $p = 0.86$ ).

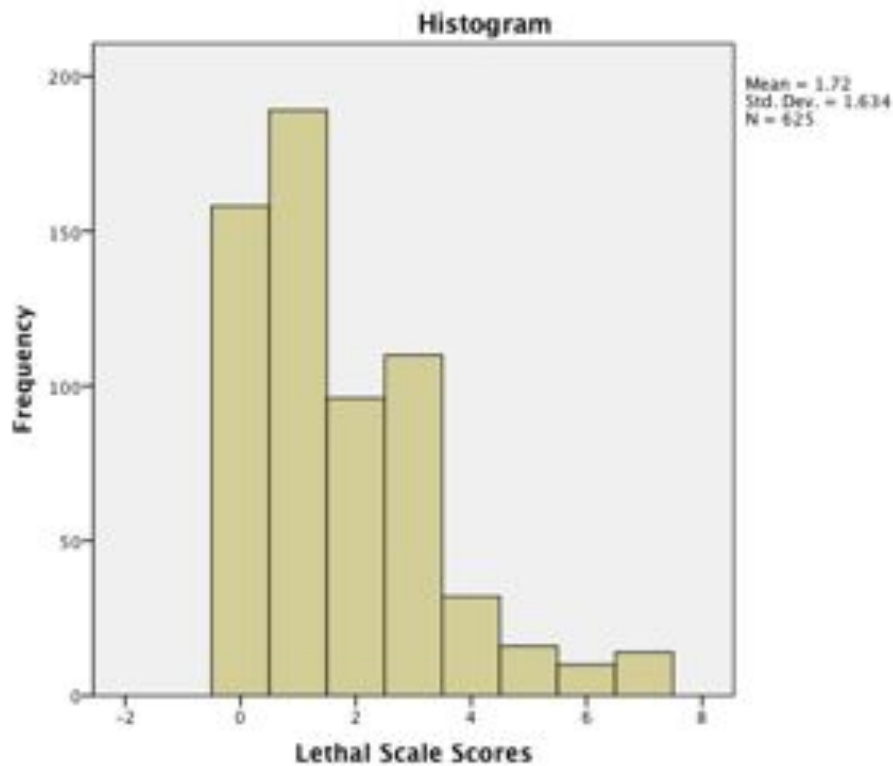
**Table 17. Responses to Act Scale items.**

| Prompt   | Response               |                        |
|--|------------------------|------------------------|
|  | Yes                    | No                     |
| I would call animal control, the police, or another government official if I . . . |                        |                        |
| heard a coyote howling at night  | 8.8% (n = 46)          | <b>91.2%</b> (n = 478) |
| saw a coyote on my property  | 30.9% (n = 161)        | <b>69.1%</b> (n = 360) |
| saw a coyote chasing a rabbit  | 7.4% (n = 39)          | <b>92.6%</b> (n = 488) |
| saw a coyote in an area where children are playing                                 | <b>79.8%</b> (n = 411) | 20.2% (n = 104)        |
| saw a coyote chasing a pet   | <b>62.3%</b> (n = 321) | 37.7% (n = 194)        |
| saw a coyote near a road   | 8.2% (n = 43)          | <b>91.8%</b> (n = 480) |
| saw a coyote biting a person   | <b>95.8%</b> (n = 505) | 4.2% (n = 22)          |

Bold = Most commonly cited response.

The Act Scale was composed of seven items; see Table 17 for frequency distributions of each item. The situation where the most people said that they would call the authorities was if they saw a coyote biting a person (mean =  $1.04 \pm 0.20$ ), followed by seeing a coyote in an area where children are playing (mean =  $1.20 \pm 0.40$ ), seeing a coyote chasing a pet (mean =  $1.38 \pm 0.49$ ), seeing a coyote on their property (mean =

1.69 ± 0.46), hearing a coyote howling at night (mean = 1.91 ± 0.28), seeing a coyote near a road (mean = 1.92 ± 0.28), and seeing a coyote chasing a rabbit (mean = 1.93 ± 0.26).



**Figure 13. Lethal Scale scores. Lower scores indicate less support for lethal control.**

#### *Support for Lethal Control*

The Lethal Scale (Cronbach's Alpha = 0.80) had a minimum possible score of zero (indicating no support for lethal control) and a maximum possible score of seven (indicating strong support for lethal control). The index had a mean of 1.72, a median of 1.00, and a skewness value of 1.16 (SE = 0.10) (Figure 13).

**Table 18. Responses to Lethal Scale items.**

| Prompt                                       | Response               |                        |
|--|------------------------|------------------------|
|  | Yes                    | No                     |
| I would support killing a coyote if I . . .  |                        |                        |
| heard it howling at night                    | 7.6% (n = 40)          | <b>92.4%</b> (n = 485) |
| saw it on my property                        | 14.1% (n = 73)         | <b>85.9%</b> (n = 444) |
| saw it chasing a rabbit                      | 4.6% (n = 24)          | <b>95.4%</b> (n = 499) |
| saw it in an area where children are playing | 48.1% (n = 240)        | <b>51.9%</b> (n = 259) |
| saw it chasing a pet                         | 42.1% (n = 213)        | <b>57.9%</b> (n = 293) |
| saw it near a road                           | 4.2% (n = 22)          | <b>95.8%</b> (n = 503) |
| saw it biting a person                       | <b>91.0%</b> (n = 465) | 9.0% (n = 46)          |

Bold = Most commonly cited response.

An independent-samples t-test was performed to determine whether or not the mean Lethal Scale score of Centennial was significantly different from that of Greenwood Village; there was a significant difference, with Greenwood Village residents demonstrating greater support for lethal control than Centennial residents ( $t_{(623)} = 2.25$ ,  $p = 0.03$ ).

The Lethal Scale was composed of seven items; see Table 18 for frequency distributions of each item. The situation where the most people said that they would support lethal control was if they saw a coyote biting a person (mean =  $1.10 \pm 0.29$ ), followed by seeing a coyote in an area where children are playing (mean =  $1.52 \pm 0.50$ ), seeing a coyote chasing a pet (mean =  $1.58 \pm 0.50$ ), seeing a coyote on their property

(mean = 1.86 ± 0.35), hearing a coyote howling at night (mean = 1.92 ± 0.27), seeing a coyote chasing a rabbit (1.95 ± 0.21) and seeing a coyote near a road (mean = 1.96 ± 0.20).

**Table 19. Responses to Knowledge questions.**

| Prompt   | Response                |                         |
|--|-------------------------|-------------------------|
|  | True                    | False                   |
| You can deter coyotes from entering your yard with a 4-foot privacy fence.                 | 21.1% (n = 109)         | <b>*78.9%</b> (n = 408) |
| Coyotes can be seen throughout the day, but are especially active at dawn and dusk.        | <b>*94.3%</b> (n = 483) | 5.7% (n = 29)           |
| If you see a coyote and feel threatened, you should turn and run away from it.             | 7.4% (n = 38)           | <b>*92.6%</b> (n = 477) |
| Coyote attacks on humans are very rare and can often be attributed to people feeding them. | <b>*81.7%</b> (n = 415) | 18.3% (n = 93)          |
| Coyote eradication programs in North American cities have proven to be effective.          | 27.4% (n = 119)         | <b>*72.6%</b> (n = 316) |

Bold = Most commonly cited response

\* = Correct response

### *Knowledge*

Attempts to create an internally reliable Knowledge Scale did not work (Cronbach's Alpha = 0.20). Responses to the five knowledge-oriented items can be found in Table 19. For each item, a majority of respondents answered the question correctly.

Independent-samples t-tests were performed to determine whether or not there was a significant difference in response between the two towns for any of the items. One item had significant results. More Greenwood Village respondents erroneously believed that coyote eradication programs in North American cities have proven to be effective than Centennial respondents ( $t_{(433)} = -1.99$ ,  $p = 0.05$ ).

### *Fences*

Respondents were asked if they felt that coyote-proof fences (described as a fence at least six-feet tall with no spaces large enough for a coyote to fit through) were important in reducing human-coyote conflict. About an equal number of respondents believed and did not believe that fences were an important tool (Table 20).

**Table 20. How much respondents' agreed or disagreed that fences are an important tool in reducing human-coyote conflict.**

| Strongly agree    | Somewhat agree     | Neither agree nor disagree | Somewhat disagree | Strongly disagree  |
|-------------------|--------------------|----------------------------|-------------------|--------------------|
| 14.6%<br>(n = 73) | 30.0%<br>(n = 150) | 12.0%<br>(n = 60)          | 18.0%<br>(n = 90) | 25.4%<br>(n = 127) |

An independent-samples t-test was performed to determine whether or not there was a significant difference in responses from Greenwood Village and Centennial; the test was not significant ( $p = 0.17$ ).

Respondents were also asked whether or not they had a coyote-proof fence at their place of residency. Most respondents (66.3%) did not have such a fence. A two-by-two chi-squares test was performed to determine whether or not there was a difference between the two towns in the number of respondents who had such a fence. The test was significant, and more Centennial respondents had such a fence ( $p < 0.00$ ) (Table 21).

**Table 21. Whether or not respondents have a coyote-proof fence. Results of a chi-square test for independence ( $p < 0.00$ , Pearson Chi-Square = 14.85).**

| Response | Town              |                 |
|----------|-------------------|-----------------|
|          | Greenwood Village | Centennial      |
| Yes      | 26.0% (n = 71)    | 41.9% (n = 177) |
| No       | 74.0% (n = 202)   | 58.1% (n = 147) |

**Table 22. Why respondents do not have coyote-proof fences.**

| Reason   | Percentage      |
|--|-----------------|
| I do not live in a single-family house or townhouse.                                 | 6.1% (n = 21)   |
| I do not want such a fence.  | 36.4% (n = 125) |
| I do not have the resources to build such a fence.                                   | 5.0% (n = 17)   |
| My homeowner's association or neighborhood regulations do not allow for such fences. | 30.9% (n = 106) |
| Other  | 11.8% (n = 74)  |

If they stated that they did not have a coyote-proof fence, respondents were then asked why that was the case (Table 22). A chi-square test demonstrated that there was no significant difference in responses between Greenwood Village and Centennial ( $p = 0.13$ ).

**Table 23. How much respondents agreed or disagreed that people and coyotes can coexist.**

| Strongly agree     | Somewhat agree     | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|--------------------|--------------------|----------------------------|-------------------|-------------------|
| 45.6%<br>(n = 233) | 31.7%<br>(n = 162) | 6.7%<br>(n = 34)           | 7.2%<br>(n = 37)  | 8.8%<br>(n = 45)  |

### *Coexistence*

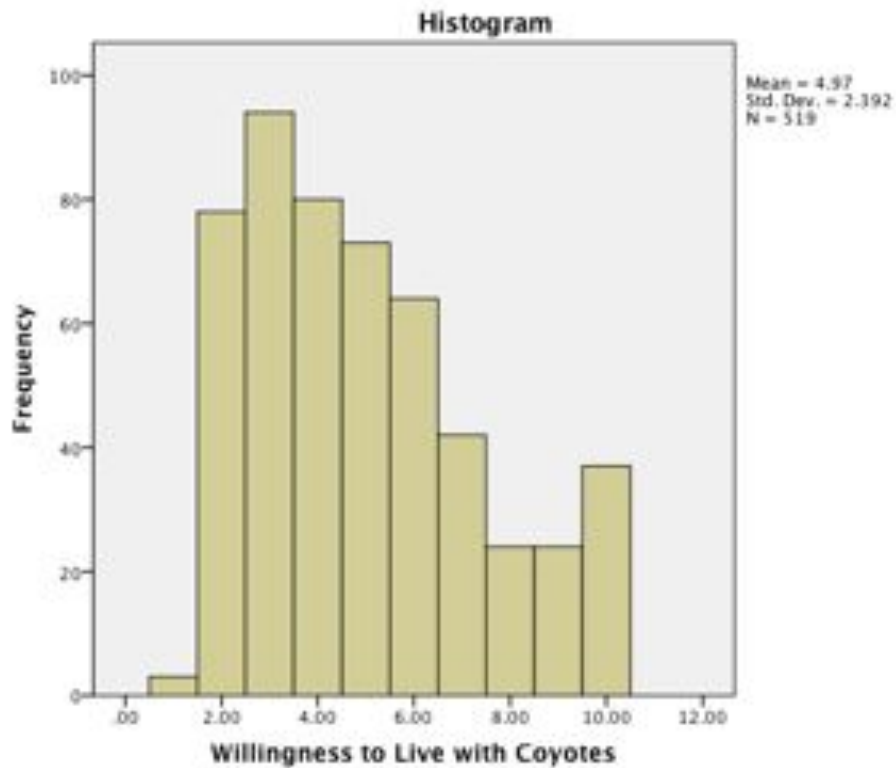
Respondents were asked whether they agreed or disagreed with the statement: “I believe that people and coyotes can coexist” (Table 23). An independent-samples t-test was performed to determine whether or not there was a significant difference between the two towns; there was not ( $p = 0.93$ ). Most respondents either strongly agreed or somewhat agreed that coexistence is possible.

### *Willingness to Live with Coyotes (WLC)*

The WLC scale (Cronbach’s Alpha = 0.73) had a minimum possible score of one (indicating a strong willingness to live with coyotes) and a maximum possible score of

ten (indicating no willingness to live with coyotes). The scale had a mean of  $4.98 \pm 2.39$ , a median of 5.00, and a skewness value of 0.61 (SE = 0.11) (Figure 14).

An independent-samples t-test was performed to determine whether or not the mean WLC Scale score of Centennial was significantly different from that of Greenwood Village; there was no significant difference ( $p = 0.71$ ).



**Figure 14. Respondents' WLC Scale scores. Lower scores indicate more willingness to live with coyotes.**



### *Multiple Regression Model*

A two-stage standard multiple regression was performed between the dependent variable (Lethal scale) and the independent variables (in the first model, belief in the role of government, Act scale, Fear scale, belief in the effectiveness of eradication programs, and the WLC scale; in the second model, the above attitudinal variables plus number of children in the household in three age categories, the presence of dogs and cats in the household, political beliefs, gender, educational attainment, and income). Regression assumptions were tested by examining normal probability plots of residuals versus predicted residuals. Only respondents who answered all items used in the model were used ( $n = 272$ ). No violations of normality, linearity, or homoscedasticity of residuals were detected. The independent variables' collinearity tolerance and VIF statistics were also examined in order to determine any multicollinearity problems with the model. The values for both the tolerance and VIF tests were well within expected ranges: the lowest tolerance statistic was 0.912, while the highest VIF statistic was 1.096, demonstrating that none of the independent variables were highly correlated with each other.

Regression analysis revealed that both of the models significantly predicted support for lethal control. The first model (attitudinal variables only) had values of  $F(5, 266) = 23.94$ ,  $p < 0.001$ .  $R^2$  for the model was 0.310, and the adjusted  $R^2$  was 0.297. The second model (attitudinal plus demographic variables) had values of  $F(9, 257) = 12.20$ ,  $p < 0.001$ .  $R^2$  for the model was 0.399, and the adjusted  $R^2$  was 0.367. Table 24 displays the unstandardized regression coefficients (B) and the standardized regression coefficients ( $\beta$ ) for each variable in model two (attitudinal plus demographic combined).

**Table 24. Standard regression predicting support for lethal control (n = 272).**

|  | <i>B</i> | <i>SE B</i> | <i>Beta</i> |
|--|----------|-------------|-------------|
| Role of Government (Q6)  | -.109    | .092        | -.065       |
| *Fear Scale Score  | *-.051   | .021        | -.141       |
| *Act Scale Score   | ** .281  | .072        | .242        |
| *WLC Scale Score   | ** .198  | .044        | .288        |
| Effectiveness of eradication programs<br>knowledge question (Q11e) | -.018    | .196        | -.005       |
| Children 5 and younger   | .182     | .106        | .091        |
| Children 6-12  | -.012    | .094        | -.007       |
| *Children 13 and older   | ** .251  | .077        | .171        |
| Cat  | .216     | .181        | .058        |
| Dog  | -.134    | .170        | -.041       |
| *Political beliefs   | *.199    | .077        | .132        |
| *Gender  | *-.525   | .170        | -.161       |
| Educational attainment   | .016     | .062        | .014        |
| Income   | .019     | .055        | .019        |

Total  $R^2 = 0.399$ ,  $F(9, 257) = 12.20$ ,  $p < 0.001$ .

\* :  $p > 0.05$ ; \*\* =  $p > 0.01$

In terms of individual relationships between the independent variables and the dependent variables, six of the 14 independent variables made a significant contribution to the model: Fear scale scores ( $t = -2.46$ ,  $p = 0.014$ ), Act scale scores ( $t = 3.91$ ,  $p < 0.001$ ), WLC scale scores ( $t = 4.55$ ,  $p < 0.001$ ), children 13 years old and older ( $t = 3.27$ ,  $p = 0.001$ ), political beliefs ( $t = 2.56$ ,  $p = 0.011$ ), and gender ( $t = -3.09$ ,  $p = 0.002$ ).

## *Discussion*

The results of the survey validated some of the qualitative findings discussed in chapters 2 and 3, but contradicted others. More people in Greenwood Village seemed to have an awareness of the presence of coyotes (had seen them on their property, in their community, and had heard of pet attacks in their neighborhoods) than in Centennial. Several respondents in the qualitative portion of this study wondered if coyotes might be more present in Greenwood Village, based on the relative amount of greenspace (and therefore the potential for conflict would be greater in Greenwood Village because of an increased proximity). On the other hand, the difference might be one of perception and not actuality; given the focus on Greenwood Village over the presence of coyotes, it might be that Greenwood Village residents are more sensitive to seeing a coyote or hearing about one. It might be useful to conduct population surveys in the Greenwood Village/Centennial area to determine whether or not coyotes are, in fact, more present in Greenwood Village. However, given the Village's current stance on lethal control, that might prove logistically challenging, and future research should address this point.

Belief in who holds responsibility for dealing with human-coyote conflict (individuals or the local government) was not significantly different between the two towns, and was not a significant predictor in the multiple regression model. This was surprising, based on the discussions I had with respondents in the qualitative portion of the project. Many (and perhaps even most) of those respondents listed this concept as one of the primary differences between those who supported lethal control and those who did

not. As this variable included only one item, it is possible that the question did not adequately capture the complexity of this idea.

Responses to whether or not participants believed that coyotes belonged in their neighborhood had no clear pattern, demonstrating that there were many who agreed, disagreed, and felt neutrally about this idea. This might be a useful concept for those creating outreach materials to target, especially as much of my qualitative data suggested that those who supported lethal control often saw coyotes as out-of-place pests, while others saw them as valued native wildlife. As so many people felt neutrally about this idea, it might be possible to move people's opinions about whether or not coyotes belong in suburban Denver, as those with less-extreme attitudes might be more open to persuasive arguments than those with extreme attitudes (Messmer *et al.* 2005).

Most people were not very worried about coyotes, and there was no difference in the level of fear between the two towns. However, fear did seem to be a strong predictor of support for lethal control, based on the regression model. Not surprisingly, the more situations a person was worried about coyotes, the more likely they were to support lethal control. Concern over pets was the most prevalent (not surprising given that much human-coyote conflict is over pets), with concern over children next. Continued outreach efforts that demonstrate how people can keep their pets and children safe (and that presents realistic information about children and coyotes) could continue to decrease support for lethal control in the area. Some of my respondents in the qualitative portion of this research told me about experiences they had with talking to individuals about their concerns, and many believed that this direct person-to-person interaction went a long

ways towards decreasing concerns over coyotes. However, this direct interaction is resource-intensive and therefore difficult to continue. The coyote expert technician position in Centennial has been defunded, and there has never been an equivalent wildlife expert in Greenwood Village. In many communities, animal control agencies have had an increasing number of calls about wildlife, adding to the responsibilities of their already taxed personnel. In addition, many animal control officers are not trained to deal with wildlife situations, leaving many to educate themselves when they are able (pers. obs.). The other option is for volunteers to continue their efforts and perhaps add more person-to-person communication; however, realistically it will be difficult for a volunteer force to stay on top of the requested person-to-person communications seen in many communities.

Many people seemed concerned over sightings of coyotes in areas where children are playing, based on Act scale and Lethal scale scores. In fact, 48.1% of respondents would support lethal control if they saw a coyote in such an area. This is a common fear, although not always warranted, as children often play in areas that are ideal coyote habitat and coyotes are known to be curious. This does not mean, of course, that bold coyotes should be tolerated near playgrounds; hazing efforts should be made to train coyotes to stay away. However, targeting this specific concern might prove useful in outreach efforts.

Participants' Act scale responses basically mirrored their Lethal scale responses, with people most likely to call the authorities or support lethal control if they saw a coyote biting a person, followed by seeing a coyote in an area where children are playing,

seeing a coyote chasing a pet, seeing a coyote on their property, and hearing a coyote howling at night. The only difference between the two scales was the last two items (seeing a coyote near a road and seeing a coyote chasing a rabbit); both of these items were there primarily as controls to see whether or not some people would support lethal control in all situations (more than 4% of participants responded that they would support lethal control under both of these situations).

A rather significant number of people (14.1%) would support lethal control if they saw a coyote on their property, without specifying what he or she was doing there. In addition, 42.1% of respondents would support killing a coyote if they saw one chasing a pet. As discussed previously in this dissertation, many coyote experts believe that such behavior is actually a natural behavior, as coyotes could easily see cats and small dogs as natural prey items. Based on their management plans, this would be grounds for lethal control in Greenwood Village, but not in Centennial. As discussed above, continued outreach efforts that target pet owners could be important; however, it should be noted that the presence of dogs or cats in the respondents' households was not a significant predictor in the regression model.

There was a significant difference in Lethal scale scores between Greenwood Village and Centennial residents, with Greenwood Village residents being more supportive of lethal control. From these data it is impossible to tell whether or not this support existed before Greenwood Village's management plan was enacted, or if support grew after the management plan was approved and residents became aware of that option. Future research into this question might prove interesting. Significantly more Greenwood

Village residents believed that coyote eradication programs in North American cities have proven to be effective than Centennial residents, which suggests that some Greenwood Village residents are supportive of lethal control because they believe that it works. As coyote eradication programs do not, in fact, work, outreach efforts to dispel this misconception might lower overall support for lethal control<sup>35</sup>.

Although most respondents did feel that coyote-proof fences could be an important tool to reduce human-coyote conflict, most respondents did not have such a fence. However, significantly more Centennial respondents had coyote-proof fences than Greenwood Village respondents; as coyotes in general seem to be of more concern in Greenwood Village than in Centennial, an increase in the number of coyote-proof fences in Greenwood Village might help to decrease conflict. Most people who did not have a coyote-proof fence did not want such a fence, although a significant number lived somewhere where their homeowner's associations or neighborhood regulations did not allow them to build coyote-proof fences. Changing these regulations is likely a difficult endeavor, but based on the results of this survey and of the qualitative portion of this research project, it could prove to be a valuable step in reducing human-coyote conflict. On the other hand, changing behaviors related to pets could reduce some of the types of conflict usually prevented by coyote-proof fences without the need to build the fence. For example, if small dogs and cats are not left outside unsupervised (especially at night),

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<sup>35</sup> Future research into how to best maintain reasonable expectations for urban wildlife management could also benefit the public's responses to other species, such as white-tailed deer, whose populations are difficult to control for a variety of reasons.

coyotes are not able to prey on them regardless of whether or not there is a coyote-proof fence in place.

Most respondents believed that people and coyotes can coexist, although coexistence was not defined in this questionnaire. It is possible that some people believe that coexistence is possible as long as problem coyotes are removed (generally through lethal control), but as discussed earlier in this dissertation, definitions of “problem coyotes” vary greatly. It is possible that additional survey items could take a more nuanced approach to this general question.

Demographic variables added an additional 8.9% predictive value to the regression model, demonstrating that overall attitudinal variables were more important contributors to the model. As discussed above, it is not surprising that the more situations in which a person was worried about coyotes, the greater support they had for lethal control. Likewise, the more situations in which a person would call the authorities, the greater support they had for lethal control, perhaps indicating that they are more sensitive to the presence of coyotes than others. It is also not surprising that the more a person was willing to live with coyotes, the less support they had for lethal control.

Having children 12 years old and younger did not increase support for lethal control, but having children 13 years and older did. This is an unexpected result, as it is generally thought that younger children might be more at-risk of negative encounters with coyotes (in part because they might be less likely to act appropriately in such situations). This might indicate that parents of older children are more worried because their children are more likely to be outside without parental supervision, and therefore



more likely to see a coyote without an adult nearby. In addition, a high-profile incident involving a teenage boy took place in Greenwood Village in early 2009.<sup>36</sup>

More conservative respondents were more likely to support lethal control, which is in keeping with much of what was reported to me by my qualitative respondents. In addition, men were more supportive of lethal control than women; this is a relatively common finding in the literature (e.g., Williams *et al.* 2002; Casey *et al.* 2005).

Pet ownership was not a significant predictor of the model; this is surprising, as some of the most commonly cited concerns in this study were coyote attacks on pets. In addition, there are many examples in the literature of pet ownership influencing attitudes towards urban wildlife (e.g., Bjerke *et al.* 2003, Draheim 2007). Income was often cited as an important variable in the first part of this project, but was not a significant predictor in the survey.

This study demonstrates that attitudinal variables are important predictors in determining the likelihood that someone will support lethal control. As such, some of these indicators would likely make good targets for outreach efforts. There were significant differences between Greenwood Village and Centennial in several measurements, indicating that there is probably support for the two towns' differing management plans by their respective citizens. While some of the results of this survey are in keeping with the results in the qualitative portion of this project, others contradict the earlier findings. In some cases, this might be explained by inadequate survey items

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<sup>36</sup> The Matthew Scheper case, described in chapter 2. Regardless of what actually happened, many residents of the area were aware of the case.

that did not fully capture the intended variable; future research should include addressing this concern.

## **CHAPTER 6:**

### **CONCLUSION**

In this dissertation I analyzed a conflict-laden situation involving both wildlife and people in two communities. My data suggests that the conflict is founded in a mixture of the political, social, and geographical characteristics of these communities. In this concluding chapter, I will examine these three major contributors to the conflict and point to areas of future research.

#### ***Political***

Most respondents strongly believed that it was the role of their local government to act on concerns of community members, although what those actions should consist of was the source of disagreement. Face-to-face communication with those who had experienced human-coyote conflict (or who were concerned about the presence of coyotes in their community) was often cited as being a productive way to allay fears and provide tools to residents to decrease the chances of human-coyote conflict. This makes the case that having a wildlife expert on the staff of local governments could be an important service that jurisdictions could provide to their residents (the wildlife expert could of course assist residents with species other than coyotes). Centennial's coyote expert position seemed to be very successful, although it has since been phased out.

Greenwood Village has never hired a wildlife expert, although several residents I spoke with felt it would be a good investment of town resources.

Other towns and cities have wildlife experts, although some of these positions have also been cut during the recent economic downturn. Animal Control Officers (ACOs) are dealing with a larger volume of wildlife calls than in the past, as human development has moved into once-rural areas, and as some species have become more adept at living closer to humans. ACOs do not necessarily have, however, formal training to deal with wildlife issues (as historically the job has focused on domestic animals), although many ACOs do go to great lengths to educate themselves. As with many other government agencies, many Animal Control departments are facing a lack of resources, both in terms of human resources and budgetary constraints. If cities are unable to hire wildlife specialists, it would still prove to be a good investment to find effective means of providing ACOs with information about urban/suburban wildlife.

In addition to providing outreach efforts to the public, dedicated wildlife experts might be able to conduct basic ecological studies in order to better understand the wildlife in their jurisdiction, perhaps enabling them to focus their efforts on potential human-wildlife conflict “hotspots.” For example, some respondents suggested that coyotes might be more likely to spend time in Greenwood Village than in Centennial, perhaps explaining what some see as increased levels of conflict in Greenwood Village. In my survey, Greenwood Village respondents reported having more encounters with coyotes than Centennial respondents; however, there have been no ecological studies in the area,

so we do not know whether or not coyotes actually spend more time in Greenwood Village than in Centennial.

Greenwood Village's police force is in charge of managing human-coyote conflict in the town. My Greenwood Village respondents were by and large very satisfied with their police department overall, finding them to be very responsive to residents' needs and service-oriented. Police officers in Greenwood Village do not undergo wildlife training, although they are overall a highly educated and trained force. Telling police officers (as opposed to a wildlife expert or an ACO) to satisfy residents' concerns about coyotes has two effects. First, the police officers are simply not well-versed in coyote behavior, leaving open the possibility for misinterpretations of situations. Second, asking police officers to deal with complaints about coyotes might be akin to the old adage: "If all you have is a hammer, everything looks like a nail." In other words, given law enforcement officers' focus on public safety and their carrying of sidearms, it may be only natural that a focus on lethal control results. Greenwood Village has predominately framed human-coyote conflict as a public safety issue, not as a wildlife issue, so when asked to respond, police officers would naturally treat this in a public safety and service context. Combined with a management plan that allows for lethal control in such situations as threats to pets and potential misunderstandings of coyote behavior, the situation seems ripe for lethal control. Funneling calls about coyotes to the police department and not animal control (or a wildlife-dedicated person) is an important difference between Centennial and Greenwood Village, and that alone might account for a great deal of the differences between the two towns.

## *Social*

Much of the social conflict caused by Centennial and Greenwood Village's differing coyote management strategies seems to stem from differing constructs of coyotes, differing constructs of human-coyote interactions, and differing constructs of each other. Some interpretations of coyote behavior can spark concern where there is actually little threat. Seeing coyotes during the daytime or in greenspaces near playgrounds are behaviors often discussed with concern, although coyote ecology can explain these behaviors as normal actions of coyotes living in urban and suburban areas. Some feel that preying on cats and small dogs who are outside without the company of humans is natural behavior, as these animals look and behave similarly to wild prey items. Others feel that this is an unacceptable encroachment on the human world, and not, in fact, natural behavior. In addition, coyotes themselves are thought about in different ways by different people. Some see them as a natural part of the local ecosystem, and so are animals that should be cherished and allowed to exist alongside their human neighbors. Others see them as invaders, as not belonging in the built environment. Attempting to get rid of coyotes, then, is a natural outcome of believing that they do not belong. Perhaps at the root of this disagreement is a distinction between what comprises "community:" a human-focused definition, or a more expansive vision that includes the entire biotic community.

Those who care deeply about the coyote issue, whether they are for or against lethal control, often construct the other side in negative ways. Anti-lethal control advocates often think of pro-lethal supporters as entitled, spoiled, and lacking empathy,

while pro-lethal advocates often think of anti-lethal supporters as irrationally emotional, caring more about animals than people, and being insensitive to the fears and experiences of those who do not want coyotes living near them. It seems as if there has been little communication between the two sides since the conflict sparked in 2008-2009, for a variety of reasons on both sides of the issue. This has likely exacerbated the tension over time, and perhaps has led Greenwood Village to further isolate itself from the surrounding region (for example, by not participating in the regional coyote management meetings). As the local coyote population does not respect human-imposed jurisdictional boundaries, approaching human-coyote interactions from a regional perspective is important, and likely the only effective way to ultimately reduce human-coyote conflict in the area.

Greenwood Village residents, who tended to be more supportive of lethal control than Centennial residents, more often believed that coyote eradication programs worked to remove coyote populations from urban and suburban areas. This basic misunderstanding, coupled with a belief that coyotes do not belong in the area (and so should be removed) might account for much of the community's support for lethal control. Outreach efforts that focus on correcting this confusion might help to decrease support for lethal control, and instead turn towards supporting policies that will decrease human-coyote conflict.

### ***Geographical***

A lack of coyote-proof fences in some of the areas where human-coyote conflict seemed prevalent was often cited as a cause of this conflict. However, Greenwood Village officials reported that they heard from residents with tall privacy fences who still found coyotes in their yards. Encouraging residents to install “coyote-rollers” on their fences would be a good next step in modifying the environment to discourage coyotes from entering their property. In general, Greenwood Village residents had fewer coyote-proof fences, often because their HOAs did not allow them. Although fences are not a guarantee that negative interactions will not occur, they do seem to substantially reduce the risk. Completely eliminating the possibility of human-coyote conflict is likely not realistic, but residents and governments should be encouraged to take steps to decrease the chances that this will happen.

Some of the human-coyote conflict in the area is a result of a lack of planning for wildlife. Coyotes will exist in suburban communities such as Centennial and Greenwood Village, given the rather ideal habitat it creates through greenspaces and abundant prey items such as rabbits (another result of the greenspaces and edge habitat created by humans). Given this, how people structure the built environment can either help or hinder efforts to prevent and reduce human-wildlife conflict in general, and human-coyote conflict in specific. Developers and government planners should work more closely with wildlife experts in order to keep wildlife in mind when constructing the built environment and creating regulations.



As is common in the Western world, some residents of the Denver area believe that there is a distinction between wilderness and the built environment. In this model, wilderness (and wildlife) exists only when it is untouched (or at least relatively untouched) by humans. As such, the built environment is separate—nature cannot (and maybe should not) exist in heavily modified landscapes. However, humans have modified their environment for thousands of years. Even so-called “pristine” environments (for example, rain forests in Latin America) are in fact heavily managed by local residents to serve human needs. Nature, then, has traditionally coexisted with humans almost everywhere. It is only in the modern world where this has become a point of contention. Given that wildlife will continue to thrive in suburban and urban communities, it is important to “make space” for these species, in order to reduce and prevent conflict.

### ***Future Research Needs***

Some of the variables that were important in the qualitative research did not prove to be important in the quantitative survey. For example, income came up often in the qualitative interviews and my analysis of the LTEs and op-eds, but was not a significant predictor of support for lethal control in the regression model. However, Greenwood Village residents in my sample were wealthier than Centennial residents, and there was higher degree of support for lethal control among Greenwood Village respondents.

Political beliefs were also mentioned and were a significant predictor in the regression model. As Greenwood Village is more affluent than Centennial, it is possible

that respondents were confusing the impact that political belief has with income levels, as many said that they believe Greenwood Village residents are more conservative politically. However, in my sample, there was no significant difference in political beliefs between the two towns (most people said that they were moderates), and no significant difference between party affiliation. Future research might be able to further specify the role that these demographic variables play in predicting whether or not someone would support lethal control.

In general, attitudinal variables seemed to be better predictors of support for lethal control than demographic variables. One attitudinal variable that often came up in the qualitative portion of this study, but that was not significant in the regression model, was a belief in whether people felt it was more the responsibility of their local government to handle human-coyote conflict, or their own responsibility as residents of the area. Only one item was created to examine this variable, however, so future research might further develop this idea to gain a better understanding of how (or whether) this plays a role in support for lethal control.

It would also be useful to explore the best ways to go about public outreach in areas where there is active human-coyote conflict. When face-to-face communication is not practical, what sorts of materials should be given to the public, and how best should they be disseminated?

Finally, one gap in this research was the lack of respondents who were supporters of lethal control in the qualitative portion of the study. Accessing this group was extremely difficult, although with more time some of the contacts might be developed

further. I am planning on continuing this research, if possible, and conducting more interviews with lethal supporters would be my priority.

**APPENDIX A:**  
**TESTIMONY TO THE GREENWOOD VILLAGE TOWN COUNCIL,**  
**JANUARY 26, 2009**

*Matthew Scheper:* “Um, I was looking for my friends in Westlands Park. And I, uh, I came along a trail and um, stopped to look back to see if my friends were by any chance over where I had just been. And um, when I turned back around, I saw a coyote about 40 feet from me. It, um, it hadn’t seen me yet—it may have when I was turned around. But as far as I could tell it hadn’t. So it, um, it had just pounced on a mouse and, uh was, chewing that, but then it . . . it let it down, and um, and then looked up at me. And then went back to its business and started sniffing the ground, and as if it was scavenging for food. And it made an uneven zigzag towards me. It didn’t seem threatening at all, but then when it was about 20 feet away, without any growling or other signs, it charged at me. And um, I crouched down just a little bit and was ready to swipe it away from my legs, because that’s were I thought it was going to, um, attack. But at the last second it, um, it jumped up, and I could . . . I couldn’t see down its throat, but its mouth was definitely open. And um, I guess my subconscious reflexes or instincts took over, and I elbowed it with my right arm, down to my left side. And um, it then, uh . . . caught itself with its um right front paw, and took off over to my left. It uh, it then disappeared behind a tree about a hundred, or you know, hundred feet out. And I then hurried home and told my parents.”

*Mayor Sharpe:* “Well thank you very much for being here. I know it took a lot to come and stand up here in front of us. It’s probably not something you’ve done before, and we really appreciate you coming and it . . . I think everybody up here and everybody in the room is, um, feeling very blessed that you were not hurt, not injured. And, um, we are going to, we’re going to go and have a presentation about what, um, the City Council can do. I mean, I think there is nothing more important than the safety of our residents. And, um, so particularly young people—you should be able to walk home from Westlands Park with your friends and not be afraid, so . . .”

*Matthew:* Well, I don’t mean to correct you, but I wasn’t with them, I was alone.”

*Councilmember Kramer:* “But you should still be able to walk in Westlands Park alone.”

*Mayor:* “Whether you are with your friends or not. Absolutely.”

## APPENDIX B:

### SURVEY

1. Do you live in:
  - 1 = Greenwood Village
  - 2 = Centennial
  - 3 = Other
  
2. What is your zip code?
  
3. How long (in years) have you lived in Greenwood Village/Centennial?
  
4. Did you know that coyotes lived in the area before you moved there?
  - 1 Yes
  - 2 No
  - 3 Don't Know
  - 4 Refusal
  
- 5a. "I've seen coyotes on my property."
  - 1 Often
  - 2 Occasionally
  - 3 Never
  - 4 Don't Know
  - 5 Refusal
  
- 5b. "I've seen coyotes in my community."
  - 1 Often
  - 2 Occasionally
  - 3 Never
  - 4 Don't Know
  - 5 Refusal
  
- 5c. "People in my neighborhood have had pets attacked by coyotes."
  - 1 Often
  - 2 Occasionally
  - 3 Never

- 4 Don't Know
- 5 Refusal

6. On a 5-point scale, with one meaning it is completely the responsibility of residents to address human-coyote conflict, two meaning it is mostly the responsibility of residents, three meaning it is equally the responsibility of your local government and residents, four meaning it is mostly the responsibility of your local government, and five meaning it is completely the responsibility of your local government to address human-coyote conflict, where do you fall?

- 1 It is completely the responsibility of residents.
- 2 It is mostly the responsibility of residents.
- 3 It is equally the responsibility of your local government and residents.
- 4 It is mostly the responsibility of your local government.
- 5 It is completely the responsibility of your local government.
- 6 Don't Know
- 7 Refusal

7. To what extent do you agree or disagree with the following statement, "Coyotes belong in your neighborhood?"

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

8a. To what extent do you agree or disagree with the following statement, "I worry about a coyote attacking or harming a pet."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

8b. To what extent do you agree or disagree with the following statement, "I worry about a coyote attacking or harming a child."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

8c. To what extent do you agree or disagree with the following statement, "I worry about a coyote attacking or harming me."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

8d. To what extent do you agree or disagree with the following statement, "I worry about a coyote damaging my property."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

9a. "I would call animal control, the police, or another government official if I heard a coyote howling at night."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

9b. "I would call animal control, the police, or another government official if I saw a coyote on my property."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

9c. "I would call animal control, the police, or another government official if I saw a coyote chasing a rabbit."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

9d. "I would call animal control, the police, or another government official if I saw a coyote in an area where children are playing."

- 1 Yes
- 2 No
- 3 Don't Know



4 Refusal

9e. "I would call animal control, the police, or another government official if I saw a coyote chasing a pet."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

9f. "I would call animal control, the police, or another government official if I saw a coyote near a road."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

9g. "I would call animal control, the police, or another government official if I saw a coyote biting a person."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10a. "I would support killing a coyote if I heard it howling at night."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10b. "I would support killing a coyote if I saw it on my property."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10c. "I would support killing a coyote if I saw it chasing a rabbit."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10d. "I would support killing a coyote if I saw it in an area where children are playing."

- 1 Yes

- 2 No
- 3 Don't Know
- 4 Refusal

10e. "I would support killing a coyote if I saw it chasing a pet."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10f. "I would support killing a coyote if I saw it near a road."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

10g. "I would support killing a coyote if I saw it biting a person."

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

11a. Please answer the following true/false questions to the best of your ability. You can deter coyotes from entering your yard with a 4-foot privacy fence.

- 1 True
- 2 False
- 3 Refusal

11b. Coyotes can be seen throughout the day, but are especially active at dawn and dusk.

- 1 True
- 2 False
- 3 Refusal

11c. If you see a coyote and feel threatened, you should turn and run away from it.

- 1 True
- 2 False
- 3 Refusal

11d. Coyote attacks on humans are very rare and can often be attributed to people feeding them.

- 1 True
- 2 False
- 3 Refusal

11e. Coyote eradication programs in North American cities have proven to be effective.

- 1 True
- 2 False
- 3 Refusal

12. To what extent do you agree or disagree with the following statement, "I believe that fences are an important tool in reducing human-coyote conflict."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

13. Do you have a 'coyote-proof' fence (in other words, a fence that is at least 6-feet tall with no spaces large enough for a coyote to fit through)?

- 1 Yes
- 2 No
- 3 Refusal

14. Which of the following best explains why you do not have a 'coyote-proof' fence:

- 1 I do not live in a single-family house or townhouse.
- 2 I do not want such a fence.
- 3 I do not have the resources to build such a fence.
- 4 My homeowner's association or neighborhood regulations do not allow for such a fence.
- 5 Other
- 6 Refusal

15. Now we have a question about the coexistence of humans. How much do you agree or disagree with the following statement, "I believe that people and coyotes can coexist."

- 1 Strongly Agree
- 2 Somewhat Agree
- 3 Neither Agree Nor Disagree
- 4 Somewhat Disagree
- 5 Strongly Disagree
- 6 Refusal

16a. How many children five years old and younger live in your household?

- 1 "0"
- 2 "1"

- 3 "2"
- 4 "3"
- 5 "4"
- 6 "5"
- 7 "6"
- 8 "7"
- 9 "8"
- 10 "9 or more"
- 11 "REFUSAL"

16b. How many children between the ages of 6 and 12 live in your household?

- 1 "0"
- 2 "1"
- 3 "2"
- 4 "3"
- 5 "4"
- 6 "5"
- 7 "6"
- 8 "7"
- 9 "8"
- 10 "9 or more"
- 11 "REFUSAL"

16c. How many children 13 years old and older live in your household?

- 1 "0"
- 2 "1"
- 3 "2"
- 4 "3"
- 5 "4"
- 6 "5"
- 7 "6"
- 8 "7"
- 9 "8"
- 10 "9 or more"
- 11 "REFUSAL"

17a. Does your household own a cat?

- 1 Yes
- 2 No
- 3 Refusal

17b. Does your household own a dog?

- 1 Yes
- 2 No

3 Refusal

18. Generally speaking, do you think of yourself as a . . .

- 1 Republican
- 2 Democrat
- 3 Independent
- 4 Libertarian
- 5 Other
- 6 No party/not interested in politics
- 7 Don't Know
- 8 Refusal

19. In general, do you think of yourself as . . .

- 1 Very liberal
- 2 Somewhat liberal
- 3 Moderate, middle of the road
- 4 Somewhat conservative
- 5 Very conservative
- 6 Don't Know
- 7 Refusal

20. Are you male or female?

- 1 Male
- 2 Female

21a. What is your age?

21b. [If 21a is refused] Could you tell me if you are between the ages of . . . ?

- 1 18 - 34 years
- 2 35 - 44 years
- 3 45 - 64 years
- 4 65 and above
- 5 Refusal

22. Are you Hispanic or Latino?

- 1 Yes
- 2 No
- 3 Don't Know
- 4 Refusal

23. Which of the following categories would you use to describe your race?

- 1 White
- 2 Black/African American
- 3 Asian

- 4 American Indian/Alaskan Native
- 5 Native Hawaiian/other Pacific Islander
- 6 Other
- 7 Don't Know
- 8 Refusal

24. What was the last grade of school you completed?

- 1 Less than 9th grade
- 2 9th to 12 grade (no diploma)
- 3 High school graduate (include GED)
- 4 Some college, no degree
- 5 Associate's degree
- 6 Bachelor's degree
- 7 Graduate or professional degree
- 8 Don't Know
- 9 Refusal

25. Which of the following categories best describes your total annual household income before taxes, from all sources? Your best estimate is fine.

- 1 Under \$15,000
- 2 \$15,000 - \$34,999
- 3 \$35,000 - \$49,999
- 4 \$50,000 - \$74,999
- 5 \$75,000 - \$99,999
- 6 \$100,000 - \$149,999
- 7 \$150,000 or more
- 8 Don't Know
- 9 Refusal

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## CURRICULUM VITAE

Megan M. Draheim received her Bachelor of Arts from George Washington University in 1999, where she majored in Fine Arts with a concentration in photography. After several years of working with domestic animals in different capacities and taking natural science and conservation-related coursework at the University of Maryland, she started her Masters program in Environmental Science and Policy at George Mason University in 2003 and made the switch to wild animals. She completed her Masters of Science program in 2007 and continued at George Mason for her doctorate in Environmental Science and Policy, which was awarded to her in 2012.