

From Conflict to Coexistence: A Study on the Impact of Cultural Norms on Human-Liminal  
Animal Relationships

By

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## **Abstract**

Humans and animals have complicated relationships. Nowhere is this as clear as in the case of liminal animals – animals who are neither fully domesticated nor wild. Although some liminal animals are welcomed by humans, many are not, and instead face the threat of being killed or expelled from their living spaces. Starting from the premise that liminal animals should have rights that protect them from this form of exclusion, this dissertation discusses the dominant factors underlying the exclusion of liminal animals. It focuses in particular on the cultural norms that people have about liminal animals – on how liminal animals are (mis)represented in the cultural imaginaries of different societies – and argues that these cultural norms around liminal animals must be studied to provide a necessary foundation for human-liminal animal coexistence. Based on a review of over 150 studies of human-liminal animal relationships, three broad categories of negative cultural norms are identified: liminal animals are excluded as being ‘out of place’, a ‘disruption’, or a ‘threat’. The review, however, also points to the existence of more positive cultural norms, often based on ideas of kinship, which can contribute to human-liminal animal coexistence. What this review shows is that the exclusionary treatment of liminal animals is not necessary, and that a change in norms around liminal animals is needed if liminal animals are to be treated differently. The dissertation concludes with a discussion of the Kingston Mountain Bike Club’s evolving relationship with beavers, and how this supports the possibility of moving from exclusion to coexistence.



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## Introduction

The lethal removal of animals from places by humans is nothing new and happens daily all around the world. Stark distinctions are made between the animals we like to have around us – such as pets – and those who we never even want to lay our eyes on – such as cockroaches. This distinction does not only come from physical features of attraction and cuteness but is primarily determined by the relationships we have with the animals. In many countries, for example, it is common to grow up with cats or dogs as pets and in recent decades these relationships have developed to a point that people refer to some animals as their family. That this is not the case everywhere became clear to me when one of my friends visited my house for the first time. As a refugee from Eritrea, Tesmafariam was shocked to see a dog, my service dog Jay, and immediately told me that the dog should be outside. In Eritrea, as it turns out, dogs are not kept as pets. Instead, dogs are treated as dangerous nuisances who bite children and are only good for guarding a property in return for being fed. I will need to let you know that with time, Tesmafariam has become the biggest fan of Jay, greeting Jay in the same way he greets me whenever we see each other, proudly showing off to others what tricks Jay can do.

Seeing the differences in how dogs are treated is not the only personal example that has inspired me to study the connection between norms and treatment of animals. As a kid I was already in love with all animals, watching tadpoles grow into frogs, playing with the dogs, and feeding ducks. Awareness of perceptions of animals only came later, but it all started with my grandparents and mice. With both parents working full-time, my grandparents would take my brother and me home from school during lunch time. As is common for Dutch food culture, we mainly ate bread with cheese for lunch, which you buy in large chunks cut in store and slice with a cheese slicer until you reach the rind – the natural rubbery shell on the outside of a cheese wheel which forms during the process of cheesemaking. If there is a little bit of cheese

left on the rind, most Dutch people will use a small knife to peel it off and eat it or to throw it into the compost. My grandfather, however, had a different destination for the cheese rind.

Cutting the leftover cheese into even smaller chunks, my grandfather would give half the stack of little cheese cubes to me, and we would bring it to the greenhouse in the backyard. Although the greenhouse was occasionally used for growing plants – my grandfather loved trying to grow lemons – the greenhouse was the main meeting spot for my grandfather and the mice living around his house. On his instruction, I would place the cheese on the plates that were strategically dispersed around the greenhouse, and my grandfather would add some seeds and nuts from a tin box. Initially we would not see the mice themselves – my brother and I were eager to check the ‘cheese plates’ to see if the mice had finished the food – but over time they would come out when we would be in the greenhouse putting the food on the plate. Over the course of five to six years, many generations of mice stopped by to eat the cheese and the relationship between the mice and us seemed to grow with it.

My grandmother was not as big of a fan of feeding mice as my brother and I were, and she made my grandfather promise that if a mouse would show up in the house, he would have to get rid of them as my grandmother argued that the mice would eat my grandparent’s food, destroy furniture for making nests, and leave their poop and possibly bring in diseases. As promised to his wife, whenever mice would show up at the house, my grandfather would use a live trap to catch them and release them in the forest that grows behind their backyard. Over time, however, my grandfather would wait for my grandmother to leave the kitchen and hide some cheese for the mice he knew were living in the walls and cupboards. It seemed that the mice had moved their welcome from the greenhouse to the house. My grandmother caught on rather quickly and although they had some arguments about it, she had to admit that the mice had not caused any damage and did not bring in any disease. From that point on we did not

only bring cheese to the greenhouse, but we also left some small pieces at the back of the cupboard in the kitchen.

Growing older, I learned that my grandfather's relationship with the mice was rather the exception than the norm. Mice are generally considered to be pests, who are adorable when they do not live too close to humans – and especially not come anywhere near human food. A quick search online on 'mice in the house' will tell you that they spread harmful bacteria and diseases, followed by a long list of suggestions on how to get rid of them. Yet, when searching for 'how many deaths caused by house mice' no cases are reported, and instead, you will once again see the same warnings that mice spread harmful bacteria and diseases. When expanding the search by looking for 'how many deaths caused by mice' cases pop up of deer mice killing humans by infecting them with the hantavirus – each article also simultaneously specifies that the hantavirus is a relatively rare disease. Deer mice live in rural areas and rarely invade residential homes, but they can be found in farming areas and homes located in or around wooded areas. With the sprawl of suburban areas, chances are thus likely that humans and deer mice will come in touch more often. Humans can contract the hantavirus through inhalation of respirable droplets of saliva or urine, or through the dust of feces from infected rats and/or mice.<sup>1</sup> The virus, however, does not remain active for long once outside of its host, and exposure to the hantavirus can be prevented through proper clean-up procedures, food storage, and maintenance of spaces – such as sealing any holes in structures where mice may enter.

Even though measures can be taken to prevent mice from entering homes, the number of households that find mice inside their house annually is high. Once mice have been detected, humans try to remove them from their home by either using kill-traps, glue-traps, poison, or live-traps. While the kill-traps often lead to a quick death, glue traps and poison death is slow

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<sup>1</sup> Canadian Centre for Occupational Health and Safety, "Hantavirus," Government of Canada (2020).

and agonizing. Poisons are also highly toxic to humans and pose risks to companion animals and non-target wildlife who come into contact with them or with the bodies of poisoned animals. When searching online for the ‘most effective way removing mice from home’ the first thing that pops up is to kill them with a kill-trap, as poison can be dangerous to use, and glue-traps not always work. The arguments given against live trapping is that people often forget to check their traps, leading to a slow death for the mouse, or that people release mice in an unsuitable habitat.<sup>2</sup> Still, live trapping seems to be much more humane than other methods suggested, and there are plenty of solutions – humane societies educate people on where best to release mice and apps that warn you on your phone if your live trap went off – countering the arguments against live trapping. Regardless of the arguments for humane methods, both glue traps and poison are still legal to use, and many humans resort to using kill-traps, glue-traps, and poison over live-traps. Aside from the different methods for removing mice from the house that humans can do themselves, there is also a growing body of experts in mouse/pest removal. These experts often charge more money for live trapping the animal.

Mice are only one of many animals that are removed from a place because they are considered dangerous and/or unwanted by humans. Think about raccoons, rats, squirrels, pigeons, foxes, possums, white tailed deer, boar, hedgehogs, monkeys, beavers, snakes, cockroaches, coyotes, cougars, rabbits and many more. What makes this groups of animals special is that they can be found living in places near humans, but we do not consider them to be domesticated. This category of animals is also referred to as liminal, and they are characterized by being neither domesticated nor fully wild. Their lives are intertwined with that of humans through the space they reside in, but their relationships are not as close to humans as that of domestic animals. In other words, liminal animals occupy the grey area between domesticated and wild. The boundary is not drawn between different animal species,

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<sup>2</sup> UFAW, “Guiding Principles in Humane Control of Rats and Mice,” 2014.

but rather between individual animals and their relationship to humans. It is, for example, possible for animals from the same species to fall into different categories. A cat could be a pet or feral. Whereas the former lives with humans in a shared home with a close caretaking relationship, feral cats live near humans, without direct relationships to them. Some feral cats eat food left out by humans, but they do not reside in the same home, and have a more distanced relationship to humans than domesticated cats have. A feral cat, for that matter, can be considered liminal.

On the note of a feral cat being a liminal animal; it is possible for a feral cat to become domesticated or wild. And vice versa. The boundaries of domestication, liminality, and wild are fluid, and can alter throughout an animal's life. Most often, changes take place because they are forced upon animals. Humans either move into their habitat, or, even worse, destroy the habitat for resources. Some animals may cross spatial boundaries rather frequently, and as such, it must be noted that not all animals are liminal when found near humans. Many animals, for example, migrate, and will stay in a place for a short period of time. And sometimes, animals accidentally wind up in an area inhabited by humans. In 2021, a young moose found themselves in a Saskatoon elementary school after they had crashed through a window in a disoriented state.<sup>3</sup> The moose was tranquilized and successfully released outside the city. With so many animals moving through human settlements, the focus of liminal animals is not only on animals who have direct contact humans, but who also reside amongst them. Many liminal animals have successfully adapted to living near humans, with some even thriving. They seek out to live near humans for shelter and food, safety from predators, or because these places simply provide the best living spaces. As a result, forms of dependency and vulnerability from humans have formed with time.<sup>4</sup>

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<sup>3</sup> David Shield, "Moose crashes through window of Sylvia Fedoruk School in Saskatoon," *CBC News*, published November 4, 2021, accessed January 11<sup>th</sup>, 2023.

<sup>4</sup> Sue Donaldson and Will Kymlicka, *Zoopolis: A Political Theory of Animal Rights* (Oxford: Oxford University Press, 2011), 217.

The sense of exclusion for liminal animals is nowhere as obvious – and kept out of sight – as in the urban environment. When looking at urban depictions, the parameters of diversity are limited to the composition of the human population.<sup>5</sup> Cities are often described as multicultural, being known for their high numbers of residents who have moved in from rural areas, other cities, and even foreign countries. Animals, however, are often left out of the urban demography, even though they make up a large percentage of the urban population. Instead, the foundational story of cities is that they are cultured spaces from which nature has been removed.<sup>6</sup> This is not to say that nature does not exist within cities: rather ‘wild’ nature has been replaced by human controlled and condemned nature – such as city parks and animals in zoos.<sup>7</sup>

Human controlled and condemned or not, humans and liminal animals are strongly interconnected in urban environments. Although humans may not be able to literally ‘think like a bat’<sup>8</sup>, some humans recognize that both humans and animals are embedded in social relations and networks with others (both humans and animals) upon which their social welfare depends.<sup>9</sup> Recognizing this spatial, bodily and emotional entanglement of humans and animals requires emphasizing that animals can be active and resourceful urban agents.<sup>10</sup> The current relation between humans and liminal animals in public spaces is, however, highly

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<sup>5</sup> David Hulka, “The Posthuman City: San Diego’s Dead Animal Removal Program,” *Urban Geography* 34, no. 8 (2013): 1119.

<sup>6</sup> Steve Hinchcliffe, “Cities and natures: intimate strangers,” in *Unsettling Cities*, ed. John Allen, Doreen Massey and Michael Pryke (London: Routledge, 1999): 56-70.

<sup>7</sup> David Wachsmuth and Hillary Angelo, “Green and gray: new ideologies of nature in urban sustainability policy,” *Annals of the American Association of Geographers* 108, no. 4 (2018): 1038-1056.

<sup>8</sup> This is a reference to Thomas Nagel’s famous – and now much-criticized – claim that humans have no way of knowing what it is like to be a bat (Nagel 1974).

<sup>9</sup> Jennifer Wolch, “Zoöpolis,” *Capitalism Nature Socialism* 7, no. 2 (1996): 21-47; Jennifer Wolch, “Zoopolis,” in *Animal geographies, place, politics and identity in the nature-culture borderlands*, ed. Jennifer Wolch and Jody Emel (London: Verso, 1998), 119-138.

<sup>10</sup> Sarah Whatmore, *Hybrid Geographies* (London: Sage, 2002); Sarah Whatmore, “Materialist returns: practicing cultural geographies in and for a more-than-human world,” *Cultural Geographies* 13, no. 4 (2006): 600-610; Maan Barua and Anindya Sinha, “Animating the urban: an ethological and geographical conversation,” *Social & Cultural Geography* 20, no.8 (2019): 1160-1180; Archie Davies and Andrew Brooks, “Interpellation and urban transformation: Lisbon’s sardine subjects,” *Social & Cultural Geography* 20 (2019): 1-23; Timothy Hodgetts and Jamie Lorimer, “Animals’ mobilities,” *Progress in Human Geography* 44, no. 1 (2020): 4-26.

asymmetrical. Liminal animals are often removed or killed because of the asymmetrical relation – many animals die in urban settings as roadkill, through poisoning, in traps, or other ways of deadly removal by humans.<sup>11</sup>

Oftentimes people admire liminal animals from a distance – when they encounter them on a walk through a park or on tv – but when they are in their immediate surrounding, humans tend to not want to share their living spaces and try to find ways to remove the unwanted animal(s) from their living areas. Many times, people are simply not aware of the animals in their immediate surrounding. Most urban animals, for example, are considered liminal, and they reside around humans daily. It is when they are perceived in a negative way, or when they are thought of as coming too close to humans, that we want them to be removed.<sup>12</sup> What is less obvious, however, is what causes these negative perceptions of liminal animals and whether our treatment of liminal animals is warranted. Are liminal animals really as dangerous to our health and society as they are portrayed to be? What is making us believe these things? Are they imbedded in us genetically, have we come to believe them by experience, or have humans perhaps constructed narratives of fear that do not hold true? And if it were not for these fears, would it be possible for humans and liminal animals to coexist?

### Why the Treatment of Liminal Animals Matters

Before starting to answer these questions, it is important to explain why we must care about how liminal animals are treated in the first place. Traveling around the world, visiting countries such as India, Russia, and Mexico, I learned that my grandfather was not alone in his connection to animals. Rather than removing liminal animals, I saw people encourage direct

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<sup>11</sup> Lulka, “The Posthuman City,” 1126.

<sup>12</sup> Tressa Thompson and Joel Mintzes, “Cognitive structure and the affective domain: On knowing and feeling in Biology,” *International Journal of Science Education* 24, no. 6 (2002): 645-660; Nurettin Yorek, “The Only Good Snake is a Dead Snake: Secondary School Students’ Attitudes Toward Snakes,” *Biotechnology & Biotechnological Equipment* 23, no. 1 (2009): 31.

interactions through actions such as sharing food with them or simply accepting that liminal animals belong just as much to a space as humans. As when feeding the mice with my grandfather, it is clear to me that coexistence with liminal animals is inherently better than removing them from society. When removing liminal animals, we do not only disrupt ecosystems, but we also cause unnecessary harm to beings that are entitled to certain rights – which will be more discussed shortly. Humans often believe themselves to be superior to animals, claiming to have higher cognitive capacities, justifying a form of dominance that primarily harms animals. During colonial times, this mindset spread around the world, and is reinforced in many societies until this day. In colonial narratives, animals are brute beasts in need of domination and control. An example of this is the beaver fur trade which basically launched the colonization of Canada. European colonizers came to Canada to dominate beavers to take their pelts for trade, resulting in the near demise of beavers. Within this narrative, animals only serve a purpose to humans with their bodies, whether it is as provision for food and clothing, or to provide company. Even as pets, many animals are seen as lesser beings without personhood.

Although changes have taken place in recent decades – with pets gaining the status of family member and scientists recognizing the abilities of animals – the dominant mindset holds that animals are lesser beings. Intuitively, this understanding of animals is wrong to me. When interacting with animals, there is nothing in the relationship that indicates that they are lesser beings in any way. On the contrary, animals can form intricate relationships with other sentient beings, and show remarkable intelligence and resilience through the oppressions they face. Moreover, it seems that the limits humans place on animals complicate the way that people understand them. If we start off with the presumption that animals are unable to have emotions, we are less likely to recognize any emotions in animals. The negative presumption of animals

being mere automata, as argued by scholars for centuries<sup>13</sup>, still allows for many people to argue that animals merely act on instinct and biological responses. As such, animals are considered not to have personhood, and therefore not entitled to any rights.

Many others have ably defended why this understanding of animals is wrong, and that animals, just as humans, are subjects of justice and bearers of inviolable rights.<sup>14</sup> Additionally, as the primary focus of my dissertation is not showcasing the rights of liminal animals, I will not go more into this argument. Nonetheless, I do support the fundamental belief that animals are sentient beings and as such are able to flourish and have rights in need of protection. At the core of their rights, liminal animals must be able to live their life in a way that makes their life flourish. This does not mean that liminal animals must get anything they want in life, but that they must not be prevented from seeking to accomplish the things that allow a liminal animal to flourish. Removal through lethal means inherently disables a liminal animal from flourishing. In addition, less volatile actions, such as the removal of living habitat of animals may not directly remove liminal animals through lethal means, but still limits their ability to flourish drastically.

In addition to access to a safe habitat, another aspect of a flourishing life is the right to establish meaningful relationships, and to have flexibility within doing so. This is especially important for liminal animals, as their relationship with others often fluctuates. Think for example of a crow. When healthy, the crow may like to be left alone by others, doing their own thing without having any relation with humans. If injured and rescued, however, the crow

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<sup>13</sup>Rene Descartes, *Discourse on Method* (New York: Macmillan, 1986); Raymond Frey, "Animal Rights," *Analysis* 37, no. 4 (1977): 186-189; Douglas Linder, "Animal Rights Debate: Peter Singer vs. Richard Posner," *Famous Trials*, published June 2001, <https://famous-trials.com/animalrights/2601-animal-rights-debate-peter-singer-vs-richard-posner>.

<sup>14</sup> Donaldson and Kymlicka, *Zoopolis*, 19; Paola Cavalieri, *The Animal Question: Why Nonhuman Animals Deserve Human Rights* (Oxford: Oxford University Press, 2001); Gary Francione, *Animals as Persons: Essays on the Abolition of Animal Exploitation* (New York: Columbia University Press, 2008); Tom Regan, *Animal Rights, Human Wrongs: An Introduction to Moral Philosophy* (Lanham: Rowman & Littlefield, 2003); Gary Steiner, *Animals and the Moral Community: Mental Life, Moral Status, and Kindship* (New York: Columbia University Press, 2008).

might wish to become closer to humans who care for them. Or they might not. Either way, the right to establish meaningful relationships allows for the crows wish to be respected.

As relationships between humans and liminal animals primarily consist of a dependency created through encroachment by humans, with little opportunities for liminal animals to reside elsewhere, an important right of liminal animals is that of secure residency. This right entails not to be treated as aliens or foreigners who belong somewhere else, but as residents belonging in the same space as humans.<sup>15</sup> While it is acceptable to discourage the initial entry of opportunist or exotic liminal animals<sup>16</sup>, over time they come to acquire the right to stay.<sup>17</sup> Regardless of how individuals come to take up residence in a community (wanted or unwanted), their right to stay increases over time and as opportunities to reside elsewhere diminish.<sup>18</sup> So, when animals are residing within a community for a longer period, they have the right to stay there and not be removed. As said before, others have made strong claims for the basic rights of liminal animals, but it is important to highlight some of these rights as it is the humans that prevent these rights from being respected; examples of how these obstacles are absent or overcome in other societies will be explored in this dissertation. In any case, regardless of which aspects of a liminal animal's life are being discussed, their rights are an inalienable part of their life.

People often ask why I study liminal animals. Well, that is not fully true. The more common question is 'what are liminal animals?' When I explain to them what they are, most people comment that it is important to study them, frequently followed by a story or anecdote of an animal the person recently encountered. Sometimes people ask for advice on what to do

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<sup>15</sup> Donaldson and Kymlicka, *Zoopolis*, 241.

<sup>16</sup> This can be imagined as liminal animals that are being brought in by illegal smugglers or who are released by humans who kept the animal as a pet. The discouragement would not be a forceful removal of the life of the animal, but by making the habitat less attractive to the animal species. An example of this is the creation of bear-safe garbage cans.

<sup>17</sup> Scholars have made similar arguments for human migrants, arguing that migrants' right to stay and become citizens increases with the duration of time. See for example Joseph Carens, *Immigrants and the Right to Stay* (Cambridge: MIT Press, 2010).

<sup>18</sup> *Idem*.

with certain animals, but more often we finish the conversation with ‘good for *you* to be working on this’. Although the support is appreciated, the implied notion that others, and not them, should deal with liminal animals reflects the way we treat them.

If I do get to answer the question as to why I study liminal animals, my answer is that I hope that one day we can live in a world where animals would not suffer to benefit humans. Non-suffering entails that animals get to live a full life without constraints, in which humans and animals coexist together. This idea of coexistence does not border on a fairy tale. I do not imagine a world in which beavers chop wood and bring it to humans, or birds fly around tying ribbons in children’s hair. Coexistence is not a Disney concept. Instead, coexistence is messy, it does not remove conflict, and it does not prevent suffering altogether. It is unrealistic to want a world without pain, as pain shapes the world as much as happiness.

Coexistence requires a sense of awareness of those who are around us: of their needs of others, of their daily habits, and their relationships with others.<sup>19</sup> Many people are out of tune with the animals living around them.<sup>20</sup> We may notice the squirrels jumping around trees, hedgehogs snoring in shrubs, or seagulls trying to get an extra snack, but modernization has numbed us to many other animals.<sup>21</sup> People do not recognize the sounds of different birds, or the differences among songs of a bird species. They do not know which chirps are sent out as warnings, and which ones are for expressing love. We are even more blind to those animals we often do not directly encounter. Aquatic animals are regularly forgotten about unless it is for the purpose of catching them for sport or meals. And this forgetting is a problem, because it is easy to cause suffering when you do not even think of someone in the first place.

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<sup>19</sup> Coexistence as a theoretical concept will be discussed more throughout chapter 1, 3 and 4.

<sup>20</sup> Selin Kesebir and Pelin Kesebir, “A Growing Disconnection From Nature is Evident in Cultural Products,” *Perspectives on Psychological Science* 12, no. 2 (2017): 258-269; Peter Kahn, *Technological Nature: Adaptation and the Future of Human Life* (Cambridge: MIT Press, 2011).

<sup>21</sup> George Bumann, “Why you should start tuning in to animal language,” *A Yellowstone Life*, accessed May 21, 2023, <https://www.ayellowstonelife.com/why-listen-to-animals/>.

Aside from awareness, coexistence requires humans to adjust their lifestyles, while accepting that liminal animals may not be able to make compromises to the same extent. Part of the reason for this is that humans are at the root of conflict situations with liminal animals. Many liminal animals try to live their lives without intentionally disturbing humans. Although this could be a consequence of their behaviour – such as damage to trees from chewing marks or fecal droppings – there are easy adjustments humans can make that would minimize the negative consequences that currently results in the removal of liminal animals. Importantly, human behaviour is often at the root of conflict, through expansion of cities, existing buildings, construction projects and behaviours that require liminal animals to adjust in ways that humans perceive as problematic.<sup>22</sup> Settlement expansion from humans removes living spaces for animals, thereby forcing animals to either adjust to living near humans or to remain in the smaller space left in which there is no human occupation yet. Smaller living spaces create fewer resources for animals, and this results in more territorial conflict and animals seeking food sources from humans – by raiding crops or digging through garbage. When this happens, liminal animals are blamed for posing a threat or by being in places where they do not belong. Nevertheless, it is humans who move into animals' spaces, and humans must therefore take responsibility of the conflict they cause, rather than putting the blame on others.

Many of the human behaviours that cause conflict do not stem from a sense of survival, but rather an improvement of lifestyles. Changes required for coexistence do not drastically alter human's lives, whereas liminal animals' lives depend on such changes, as the consequence for their lives is often drastic. Examples of a change that humans can make is the construction of wildlife fencing around highways – something which already happens currently – or the improvement of recycling systems so that liminal animals such as squirrels and

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<sup>22</sup> Jim Sterba, *Nature Wars: The Incredible Story of How Wildlife Comebacks Turned Backyards into Battlegrounds* (New York: Broadway Books, 2012); Sefi Mekonen, "Coexistence between human and wildlife: the nature, causes and mitigations of human wildlife conflict around Bale Mountains National Park, Southeast Ethiopia," *BMC Ecology* 20, no. 1 (2020): 1-51

raccoons can no longer get access to the garbage inside and make a mess. These changes are relatively small, and people are often not even aware of the changes that take place. Many people are happy to buy a better garbage can if this prevents them from having to clean garbage, and the wildlife fencing blends in with the environment, with people not noticing a drastic change as encounters with animals on highways are not common enough for people to notice when animals are no longer crossing. Many of these changes are advocated for by small groups, eventually implemented by local governments, or produced and sold in local stores.

If coexistence is possible through changes that do not drastically impact the lives of humans, why is it that so many humans do not coexist with liminal animals? More importantly, why do some humans go out of their way to ensure that liminal animals are unable to exist around them?

### Cultural Norms and the Treatment of Liminal Animals

The main argument of this dissertation is that human-liminal animal relationships are inherently impacted by the cultural norms that people have around liminal animals, and that, for this reason, cultural norms around liminal animals must be studied to provide a necessary foundation for human-liminal animal coexistence. To defend this position, I will share case studies of human-liminal animal relationships in different cultural communities. Through these case studies, I will argue that liminal animals are often wrongfully perceived as a threat or thought of as not belonging, but that liminal animals can also be seen as kin with personhood and are significant for the cultural community. The notion of culture, cultural communities, and cultural norms thus play an important role in the argument that I present. Yet, culture is not easily defined, and there have been many disagreements about how to define culture and about what role (if any) it should have within research. In the past, culture was often seen as a separate domain of social life – what we might now call ‘high culture’ – and a ‘cultured’

individual was someone who was intimately familiar with literature and the arts. Today, however, culture is typically understood in a much broader sense, and is the set of norms and practices that the members of a community are socialized into.<sup>23</sup> Hence, all humans are ‘acculturated’ as a result of socialization, and all domains of social life have cultural dimensions (politics, economics, civil society, family), not just ‘high culture’.

What is key for my argument is that culture in this sense creates normative expectations about how the members of a community should behave, and to which norms members hold each other accountable. Socialization is thus in large part socialization into these normative expectations and their associated forms of accountability. Evidence suggests that human beings are very aware of these norms and most humans have a strong tendency to comply with them (and to hold other members accountable to them).<sup>24</sup> Humans orient themselves to social norms. For this reason, many people argue that culture – and cultural norms in particular – often plays an essential role in understanding social phenomenon, and in particular, in understanding differences between societies.<sup>25</sup> People in different societies are socialized or acculturated into different normative expectations. Throughout this dissertation, I will argue that this is also true in the case of humans’ relations to liminal animals; people in different cultural communities are socialized to have different normative expectations about their relationship with liminal

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<sup>23</sup> During the shift from culture as “high culture” to culture as “acculturation”, it becomes clear that culture is not uniquely human. Ethological evidence shows that many animals too are acculturated and are oriented to learned social norms. This means that while “culture” is different from hardwired “instinct” (since it is socially learned), culture should not be seen as the opposite of “nature” - on the contrary, culture has emerged widely in evolution. Carl Safina, *Becoming Wild: How Animal Cultures Raise Families, Create Beauty, and Achieve Peace* (New York: Henry Holt and Company, 2021); Simon Fitzpatrick and Kristin Andrews, “Animal Culture and Animal Welfare,” *Philosophy of Science* 89, no. 5 (2022): 1-21; Andrew Whiten, “The Psychological Reach of Culture in Animals’ Lives,” *Current Directions in Psychological Science* 30, no. 3 (2021): 211-217.

<sup>24</sup> Peter Katzenstein, *The Culture of National Security: Norms and Identity in World Politics* (New York: Columbia University Press, 1996); Martha Finnemore, *National Interests in international society* (Ithaca: Cornell University Press, 1996); Martha Finnemore and Kathryn Sikkink, “International Norm Dynamics and Political Change,” *International Organization* 52, no. 4 (1998): 887-917; Christine Horne and Stefanie Mollborn, “Norms: An Integrated Framework,” *Annual Review of Sociology* 46, no. 1 (2020): 467-487.

<sup>25</sup> Michele Gelfand, *Rule Makers, Rule Breakers: how culture wires our minds* (New York: Scribner, 2018); Clifford Geertz, *The Interpretation of Cultures* (New York: Basic Books, 1973); Barbara Culiberg and Leila Elgaaied-Gambier, “Going green to fit in – understanding the impact of social norms on pro-environmental behaviour, a cross-cultural approach,” *International Journal of Consumer Studies* 40, no. 2 (2016): 179-185;

animals, and understanding these cultural norms is central to understanding (and changing) the treatment of liminal animals.

Invoking cultural norms has often been used in simplistic and misleading ways, and so must be done cautiously. Before developing my argument on how we can use culture – and specifically cultural norms – to get a better understanding of our treatment of liminal animals, I want to address two concerns with using a cultural norms framework. The first of this is the idea of cultural automatism, which is the idea that people just act on all cultural/social influences. Franz Boas, for example, argues that cultures grow independently, each based on its own peculiar set of contexts such as geography, climate, environment, resources and particular cultural borrowing which in turn shaped the human life of that particular region.<sup>26</sup> Building on this notion of culture, the belief is that it is the interaction with one's own culture that determines what one believes and how one acts, without the possibility of individuals to question the truth or rightfulness of these beliefs. This is not how culture is applied throughout this dissertation, however, and I am of the firm belief that humans have the ability to question the cultural norms that they grow up with. This, however, does not mean that cultural norms do not influence people's behaviour, and as the case studies will show, the treatment of liminal animals by humans is influenced by cultural norms. Nonetheless, not every member of a cultural community is simply taking in the cultural norms without external factors or the ability to question them.

This brings me to the second concern with using a cultural framework: the idea that culture is homogenous. Often when talking about culture, arguments are phrased presenting culture as a singular cohesive force, in which all people share the same beliefs and practices. Culture, however, is a site of contestation and power dynamics. Rather than all sharing the

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<sup>26</sup> Franz Boas, *The Mind of the Primitive Man* (New York: The Macmillan Company, 1911); Franz Boas, *Race, Language and Culture* (New York: The Macmillan Company, 1940).

same beliefs and practices, cultural communities consist of people who constantly negotiate what beliefs and practices are dominant. This means that culture is not fixed and can change over time. Additionally, not everyone within a cultural community must agree with all practices and beliefs, and it is thus important to recognize when discussing cultural norms that there are people who contest them.

Using a cultural framework and focusing on cultural norms inherently poses the risk of falling into the concerns of cultural determinism and homogeneity. Being aware of these risks, however, I will point out the contestations and problems within case studies and have carefully considered each case study before using them. That said, there will be times in which descriptions are used that might indicate cultural determinism or homogeneity. The reason for this is not that I believe in either of these, but that for linguistic purposes it is better at times to use more generalized descriptions. An example of this is when referring to how mice are perceived in Dutch culture. The use of Dutch culture here is not to indicate that the Dutch culture unanimously agrees about how to perceive mice, that there are no Dutch people who contest the perception of mice, or that the Dutch culture is not influenced by external cultural and natural influences. Instead, the overarching grouping is used to discuss the dominant cultural norms which influence the perceptions of mice. For each reference to a culture, I am thus of the belief that determinism and homogeneity should not be applied, and this will be implied throughout usages of an overarching cultural reference.

Aware of the concerns, I do believe that a cultural framework presents opportunities for understanding why there are differences in how liminal animals are treated. Key to this understanding of human's perception and treatment of liminal animals are cultural norms. Cultural norms are a set of dominant values and beliefs about how things should be within a cultural community. This can range from how one is supposed to dress to how one is supposed to act. Whenever someone or something does not fit within these cultural norms, they can face

a form of exclusion. As said before, not everyone within a community needs to have similar understandings towards their surroundings, but every community member is perceptible to the influence of the cultural norms. An example of this is Dutch cultural norms regarding dinner. A typical Dutch dinner is only eaten with direct family members and at a pre-set time. If you have guests visiting it is normal for them to be told indirectly to leave, which normally goes with one of the members of the household stating ‘het is bijna tijd voor het avondeten’<sup>27</sup>. Guests will not be offered to join dinner and the family will be very offended if the guests do not leave immediately after the comment is made. Of course, not all Dutch families practice this cultural belief, but all Dutch people are familiar with the cultural norms around dinner and will adjust their behaviour accordingly. What the example of the Dutch dinner practices show, is that cultural norms are related to ideas of what is good/bad and who belongs/does not belong. The Dutch value of punctuality makes it a good thing for Dutch people to eat at a set time, and it is only those for whom the food is cooked who are expected to stay and eat. This allows for guests to be invited over for dinner, but guests cannot expect a meal if this was not discussed.

Cultural norms do not only influence who is thought to belong in cultural practices but also who belongs within a cultural community. Through cultural norms, certain values and beliefs are closely related to who is and who is not accepted within society. As a result of this positioning of others, cultural norms also influence how people treat others. Two people from different cultural communities can perceive an individual different based on their cultural norms. Whereas the individual is perceived as a threat to one, the other may see them in a neutral or positive way. What makes the two people see the individual as different is based on whether the individual meets the values and beliefs that the two people have through their cultural norms. If, for example, someone grows up with the cultural value that someone with an addiction is a bad and dangerous person, they are more likely to avoid interacting with that

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<sup>27</sup> This translates to “it’s almost dinner time”.

person. Additionally, it is likely that if this cultural norm is applied on a larger scale within the community, those who are addicted are treated as lesser beings based on this cultural perception.

Cultural norms are thus intertwined with our perceptions, and these perceptions have been taught to us through our upbringing. Again, this does not mean that everyone from a cultural community shares the same perceptions, but it does mean that all members have been exposed to the values and beliefs of the cultural norms. How cultural norms are created in the first place can vary depending on the values and context. In some cases, cultural norms develop through storytelling, sharing beliefs about how to interact with the world. In other cases, cultural norms are influenced by trade and economic systems. Regardless of the origin, however, cultural norms influence how others are treated and as such offer a great tool for understanding the power dynamics involved in why we accept some and remove others.

To demonstrate the power of cultural norms let me give you another example, but this time more closely related to the story of the mice. Humans are constantly surrounded by animals, but not all these animals are removed. Among many European and North American settler communities, mice, as discussed before, are frequently removed because they are considered to damage human's property, eat human's food, or pose a health risk for humans.<sup>28</sup> Mice, however, are not the only animals who (are believed to) do all this, and we intentionally bring animals into our house that do the exact same. My husband and I recently adopted a puppy and as is common with young dogs, her teeth went into everything. Whenever we discussed this with other people, we would always hear stories of other dogs who destroyed furniture, floorboards, clothes, etc. Adding to that, dogs roam kitchen counters, try to eat whatever human food they can find, and are known to have attacked humans (specifically

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<sup>28</sup> Sandra Baker, et al., "Not in My Backyard: public perceptions of wildlife and 'pest control' in and around UK homes," *Animals* 10, no. 2 (2020): 222.

children) numerous times to the extent that people died. In fact, more people have been harmed by dogs than by mice. Nonetheless, dogs are welcomed into the house, beloved and perceived by some as family. Mice, however, are lethally removed.

The reason that mice are removed, and dogs are welcome is because of the cultural norms that many people in European and North American settler communities hold around these species. Whereas dogs are believed to be part of the family – whether this is to perform a job or out of a relationship – mice are seen as disruptive threats that do not and cannot belong in the house or close to people.<sup>29</sup> As such, it is okay for people to remove them. As mice are believed to be of such a low status, this removal does not need to be done in a humane way<sup>30</sup>, and there are no consequences to the lethal removal of mice.

The use of culture and cultural norms as a guideline for analyzing human-liminal animal relationships is thus not to say that here are homogenous cultures. No society can be described as such, but that does not take away the importance of values and beliefs shared amongst each other. Many people share similar beliefs and values regardless of their culture, but it is undeniable that these beliefs and values guide us in how we treat others. Other concepts and words have been used to describe these beliefs and values. Interests, for example, allow for a wide scope in influences and factors contributing to our treatment. The problem with using interests, however, is that it implies to me that it can be created in a vacuum. Yet, our treatment of others is inherently created in relationship to our surroundings. If I think of my interests, they seem internal and personal, yet when I think of my cultural norms, they are negotiated with others. Whereas interests can thus be created by our own, cultural norms are always in standing with others. Cultural norms hold us accountable and hold others accountable. Accountability is important when it comes to how others are treated, as it allows

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<sup>29</sup> Kate Marx, “Transgressive Little Pests: Hiker Descriptions of “Shelter Mice” on the Appalachian Trail,” *Anthrozoös* 32, no. 1 (2019): 103-115.

<sup>30</sup> Baker, “Not in My Backyard,” 222.

for rectifying wrongdoings and creating a just way of treating others. How someone ought to be treated never occurs from the rights of one, but through the rights of all involved. As such, studying the cultural norms around liminal animals forces a sense of accountability on humans for wrongful treatment when and if it occurs. Recognizing this accountability is important for changing exclusionary behaviour towards that of coexistence – something which is the fundamental aspiration of this dissertation.

Culture and cultural norms may thus not be a perfect concept to use, but it is one with potential as long as I am thoughtful and cautious about the problems that come with it as well. With so many different cultures around the world, recognizing that the exclusion and inclusion of liminal animals is based on cultural norms allows for the possibility to change how liminal animals are treated. There are many cultures that do not exclude liminal animals based on cultural norms, and it is within the stories and beliefs displayed within these cultures that core aspects of human-liminal animal coexistence can be found. I believe that we can learn from societies that hold cultural norms aiding coexistence with liminal animals. This does not require one society to entirely adopt the culture of another society, which in any event is impossible. Instead, it encourages us to open our minds to the idea that liminal animals are not the enemy we make them out to be, and perhaps that living with them, even if it requires compromises to our current lifestyles, is worth it.

#### From Negative to Positive Cultural Norms around Liminal Animals

The main argument that human-liminal animal relationships are inherently impacted by the cultural norms that people hold around liminal animals forms a binding thread throughout the chapters of this dissertation, presenting different aspects necessary to fully support the argument. Although each chapter presents an argument on its own, they are intimately

connected in a way that they should be read together for a complete understanding of the importance of studying cultural norms for human-liminal animal coexistence.

The first chapter gives an overview of the literature written about human-liminal animal relationships and provides an overview of the cultural framework that is applied to analyse human-liminal relationships in chapter two and three. Throughout this literature review, three primary frameworks used for studying human-animal relationships will be discussed. These frameworks are the socio-cultural framework, the economic framework, and the psychological framework. I will argue that the economic and psychological framework each present shortcomings for studying human-liminal animal relationships specifically, and that a social-cultural framework is best suited for this research.

Following my argument in favour of the socio-cultural framework, I present an overview of how the cultural framework thus far has been applied to studies of human-liminal animal relationships. As becomes clear, the current literature contains dozens of case studies exploring how cultural norms impact the treatment of liminal animals, but to date, there have been few attempts to identify broader patterns across cultures in these dynamics. Excellent studies have been published about relationships between humans and individual animal species or segments of cultural norms. Yet, when reading these case studies, it becomes clear that there may be underlying similarities that could help us to understand why liminal animals are lethally removed because of negative cultural norms. The literary overview thus raises the question as to whether there are similarities in the treatment of liminal animals across different cultural societies, and if so, whether a framework could be created which offers a better understanding of the treatment of liminal animals. And if so, could this framework help us understand how to move from negative cultural norms to human-liminal animal coexistence?

The second chapter will address some of these questions by introducing the concept of exclusionary cultural norms. Through exclusionary cultural norms, negative cultural norms

towards liminal animals are analyzed as cultural narratives and beliefs about an animal species that justifies their removal from society. Exclusionary cultural norms can take place in different settings, such as politics or economics, but the inherent factors allowing for the removal are based in cultural norms. Think for example about the cultural belief that women have inferior leadership skills to men. A ridiculous idea, and yet, it has allowed for men to have most leadership positions in workplaces, even with science backing up the argument that women are just as good – and perhaps even better in certain scenarios – as men in being leaders.<sup>31</sup> Although some would argue that this is a form of economical exclusion, the inherent motive for the exclusion lies in cultural beliefs about the power structure of men and women. The same applies to case studies of liminal animals. Even if the setting seems to imply an economic or psychological background, there are underlying cultural ideas that influence the behaviours of humans towards the animal. This does not mean that economic and psychological factors do not play an important role in how humans treat liminal animals. As such, these factors will never be set aside as trivial, but emphasis will be placed on cultural norms to get a better idea of why it is that we treat liminal animals so poorly.

Using the discourse of exclusionary cultural norms, chapter two presents a cultural framework of liminal animal inclusion based on an analysis of more than 100 publications about different case studies relating to human-liminal animal relationship. This framework shows that there are indeed similarities to be found in the negative cultural norms around liminal animals, and that these similarities could be divided over three categories of exclusionary cultural norms: the views that liminal animals are out of place, disruptive, or a threat to humans and/or pets. Each category is elaborated and illustrated using case studies

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<sup>31</sup> Lynn Offerman and Kira Foley, “Is There a Female Leadership Advantage?” in *Oxford Research Encyclopedia of Business and Management*, ed. Donald Bergh and Ramon Aldag (Oxford: Oxford University Press, 2020).

from the literature to explain what the categories entail and how they result in the removal of liminal animals from society.

Throughout my search for case studies on human-liminal animal relationships, exclusionary cultural norms were not the only thing that I found. As for negative cultural norms, positive cultural norms around liminal animals seem to be embedded in cultural practices and beliefs. In the third chapter, I take a closer look at what these positive cultural norms entail and what key factors there are to human-liminal animal coexistence. Through case studies of different cultural communities and their positive cultural norms around liminal animals, it becomes clear that coexistence with liminal animals is possible. Key to human-liminal animal coexistence is recognizing animals as persons, sharing space and knowledge with and about liminal animals, and respecting the spiritual and religious significance of liminal animal species. Acknowledging these factors as key to human-liminal animal coexistence does not mean that all cultures must adapt all these factors to establish coexistence. Instead, some of these factors may inherently clash with the dominant pre-existing cultural beliefs of a society. This follows the same argument that cultures should not be assimilated to those where human-liminal coexistence takes place. Differences in cultures must be valued and are important for a sense of belonging and community. As such, the cultural factors aiding human-liminal animal coexistence that are discussed in chapter three, are primarily set up to look for guidelines on how human-liminal animal coexistence can be accomplished. How, and whether, these guidelines are implemented depends on a multitude of factors such as what conflict is taking place, what forms of exclusionary cultural norms exist, and what cultural factors of coexistence can be applied.

The final chapter explores whether a switch from exclusionary cultural norms to human-liminal animal coexistence is possible. Combining the knowledge gained in the second and third chapters, I will discuss my own project on improving human-beaver relationships at

the Kingston Mountain Bike Club (MTB). Beavers had been lethally removed from the area for the past twenty years, as they were thought of as problematic for the trails and a danger to the mountain bikers. With no success of stopping the beavers, the board of MTB asked for my advice and together we started to work finding non-lethal methods to conflict situations. Throughout my time at MTB, conflict mitigation strategies such as building beaver-friendly bridges over flooded trails and water level control devices such as beaver bafflers were constructed. Equally important, by sharing knowledge about the beavers living in the shared space, members of MTB became more aware of the importance of beavers, starting to express a sense of the beaver belonging to the landscape and be a part of the club. Analyzing Facebook, the main platform of communication for the almost three thousand MTB members, a clear change in cultural norms around beavers can be witnessed. This stands in contrast to the dominant settler perception of beavers in Canada, which allows for a positive treatment when beavers are in a symbolic position, but a negative one when beavers are physically close to humans, often resulting in the lethal removal of beavers from human occupied areas.

What chapter four shows is that it is possible to move from exclusionary cultural norms to human-liminal animal coexistence. This does not mean conflict no longer happens, but that conflict can be mitigated in ways that does not require the lethal removal or suffering of liminal animals. Instead, many conflict situations can easily be prevented in the first place by humans making minor adjustments to buildings and practices. By no longer perceiving liminal animals through cultural negative cultural norms, humans can perhaps begin to coexist with liminal animals and prevent the world from further damage.

## Chapter 1: Understanding Liminal Animals through a Cultural Lens

In my first years as an immigrant in Canada, I learned that it does not matter how much I dressed the same as my colleagues, whether I ate the same food, speak the same language, or made meaningful relationships. I was always that Dutch woman. This othering is not always done consciously, but there are mechanisms in place that make it abundantly clear that I do not belong. Going to a hospital for surgery, for example, I was told that I would have to pay upfront because I was not Canadian, even though I have Canadian health insurance. It took intervention from my Canadian husband and have the insurance company call the hospital to explain that they would pay before I finally was treated. While this can be dismissed as a misunderstanding, it was not the only time encountering exclusionary treatment for not being Canadian. I have been told to go back to my own country, to stop stealing jobs, forced to pay more money for basic needs, left out during a pandemic, and misunderstood countless times for cultural differences. And while all this was upsetting at the time, I am not a visible minority, and the exclusionary forces experienced by those who are, are tenfold.

Whether we want to or not, there are clear demarcations set up for who belongs to a society, and who does not. Those who belong were either born in the society or have been accepted as members after passing tests demonstrating the individual's willingness to be part of the society. Yet, there are many beings who have lived in a place their whole life, or who have lived there for so long that they have contributed in every way that would be considered sufficient for membership. And yet, they are not considered as belonging. Undocumented immigrants, for example, often work, raise children, and have strong connections to members of society. Nonetheless, these individuals are not seen as part of society, and their undetermined position leaves them in a grey area with the potential of removal.

It is in the grey area between inclusion and exclusion that the parameters of membership are constructed. It is obvious when someone does not belong, but it becomes murky when someone is crossing the boundaries of exclusion while neither accepted as a full member. Most people would agree that a tourist, for example, is not a member of society. Tourists stay in another place is time limited, and tourists do not contribute to society aside by spending their money. So, part of belonging seems to be the time spent in a place. Yet, there are many people who live in a place for a long time, and who are not considered members. I have been in Canada for 8 years, have worked the whole time, I am raising a family, pay taxes, and volunteer. Yet, I still do not fully belong. This in-between state – neither belonging nor excluded – can also be described as liminal.

Liminal membership boundaries are not solely a human feature and can be extended to animals as well. Liminal animals are also not recognized as belonging to a place, even though they share physical spaces with humans. Some liminal animals exclude themselves on purpose as members from human-animal societies, but more often they are forcefully excluded by humans, having their ties removed from society not only physically but also relationally. Through this position of not belonging, liminal animals do not receive the same treatment as those who are thought of as belonging, and, as I already mentioned in the introduction, the consequences of these treatments are often severe. Although it can be acceptable for those who do not belong to not be treated in the same way as those who belong, the severity of the consequences for liminal animals needs to be understood better. In the case of animals, the failure to be recognized as members does not simply result in being denied the vote (as with human tourists) but can lead to lethal forms of removal.

Some may argue that humans and animals are very different, and as such justify the actions taken against liminal animals. It seems to me, however, that most humans use similar forms of justifications for both humans and animals when it comes to their exclusion from

society. In each case, what plays a role in the removal of the individual is how they are perceived. What is less clear, however, is where these perceptions come from. Is it that we biologically fear certain individuals over others through physical characteristics or scents? Or is it that we are taught to fear someone by the people who raise us? Or perhaps it is capitalism that make us treat others different?

To answer these questions, we must take a step back and see what has been written thus far about what influences human perceptions of animals. Once this has been done, it is necessary to see how cultural norms around liminal animals fit in, and whether there is a framework that is best for studying human-liminal animal relationships. In the next sections, I will argue that there is indeed one framework that is particularly appropriate, and this is the social-cultural framework. Other scholars have applied this framework as well to the study of human-liminal animal relationships. When going over the main arguments and works related to this topic however, it becomes clear that there is a gap in the literature that needs to be addressed.

### Frameworks for Studying Human-Animal Relationships

Within the field of human-animal studies there is broad agreement that humans are currently treating animals wrongly, and for the current treatment to change, humans need to overcome their various negative beliefs and practices regarding animals. To do so, scholars have presented a variety of theoretical frameworks, within and across the disciplines discussed above, for how to explain these prejudicial cultural norms: (a) psychological processes; (b) political-economic functionality; (c) socio-cultural narratives. Each of these frameworks have their own advantages for analyzing human-animal relationships, but I argue that the social-cultural framework is best suited for liminal animals. This is not to say that the other frameworks do not present valid tools and arguments for analyzing human-liminal animal

relationships, but that the primary focus will be on the social-cultural framework. As the other frameworks should not be excluded, each framework is discussed, and an argument is presented as to why the social-cultural framework is best for studying human-liminal animal relationships.

### *Psychological and Political-Economic Frameworks*

The foundational claim of psychological frameworks for understanding norms around animals starts off with the premise that variations in individuals' norms around liminal animals are not just mysterious and inexplicable beliefs, but have a predictable structure, and arise through familiar psychological processes. In other words, individuals' perception of liminal animals can be explained by underlying individual perceptions and beliefs – e.g., perceptions about utility, affect, warmth, competence. Although using different models, some psychologists agree that the same basic psychological processes underpin stereotyping/prejudice against humans and against animals.<sup>32</sup> Moreover, the same personality and contextual facts that explain stereotyping/prejudice against humans also explain stereotyping/prejudice against animals.<sup>33</sup>

Sevillano and Fiske, for example, expand models and typologies of stereotypes of human groups to see whether people apply similar stereotypes to animals as well (and if so, whether this has similar behavioural implications). Initially designed to explain stereotypes about human groups, Sevillano and Fiske expand their framework to look at an individuals' notions of 'warmth' – the perceived intent of an animals' action – and 'competence' – the

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<sup>32</sup> James Serpell, "Factors influencing human attitudes to animals and their welfare," *Animal Welfare* 13 (2004): 145-151; Veronica Sevillano and Susan Fiske, "Warmth and competence in animals," *Journal of Applied Social Psychology* 46 (2016): 276-293.

<sup>33</sup> Kristof Dhont, Gordon Hodson, and Ana Leite, "Common Ideological Roots of Speciesism and Generalized Ethnic Prejudice: The Social Dominance Human-Animal Relations Model (SD-HARM)," *European Journal of Personality* 30, no. 6 (2016): 507-522; Kristof Dhont and Gordon Hodson, *Why we love and exploit animals: Bridging insights from academia and advocacy* (London: Routledge, 2020).

ability and general capacity for the animal to accomplish their intent.<sup>34</sup> Animals that are considered to have low-warmth/low-competence – such as mice – are seen as having no positive function in society by an individual. Others – such as rabbits – are perceived as pursuing an unthreatening goal but with no capacity to attain it. In both cases – mice and rabbits – the animal is perceived as having low cognitive capacities, but whereas rabbits are considered to have inoffensive intentions, mice are perceived as a threat based on their harmful characteristic of carriers of illness.

A different approach within the psychological framework focuses more on evolutionary psychology. Kasperbauer, for example, argues that human psychology towards animals has biases that make our norms around animals difficult to modify by culture due to peculiar evolutionary processes that have assigned to animals the status of inferior otherness.<sup>35</sup> To maintain this notion of animals' inferiority, Kasperbauer suggests that humans have evolutionarily developed to perceive other animals as a threat to their humanness.<sup>36</sup> This evolutionary concern of humans to ensure animals' inferiority affects both human's kindness and cruelty to animals.<sup>37</sup>

Others have supported the argument that evolution plays a role in our norms around animals, but do not necessarily link it to inferiority. Instead, they argue, negative norms around animals come from our early interactions with animals because the ancient parts of the brain evolved under pressure from predators on our mammalian ancestors.<sup>38</sup> Preferences of animals' physical appearance ultimately evolved by favouring harmless animals over dangerous ones.<sup>39</sup>

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<sup>34</sup> Sevillano and Fiske, "Warmth and competence in animals," 276-277.

<sup>35</sup> T.J. Kasperbauer, *Subhuman: The Moral Psychology of Human Attitudes to Animals* (Oxford: Oxford University Press, 2018), 13-38.

<sup>36</sup> Idem.

<sup>37</sup> Idem.

<sup>38</sup> Pavol Prokop and Christoph Randler, "Biological Predispositions and Individual Differences in Human Attitudes Toward Animals," in *Ethnozoology: Animals in Our Lives*, ed. Romulo Alves and Ulysses de Albuquerque (London: Academic Press, 2018), 447-466; Stephen Kellert, "How Animals are Perceived in America," paper presented at *Perception of Animals in American Culture*, Washington DC, 1983.

<sup>39</sup> Prokop and Randler, "Biological Predispositions," 447-466.

As a result, people are more prone to consider harmful animals as disgusting and/or ugly, thereby reducing the risk of a threat.<sup>40</sup> This line of thought is frequently applied to snakes, with fear of snakes being one of the most common phobias among people. Even if humans live in a society where snakes do not exist or do not pose a threat to humans, people express fears of them. Evolutionary psychologists argue that this fear stems from our ancestors, as they could not easily decide whether a snake was poisonous and therefore all snakes inherently became a threat.<sup>41</sup>

Contrary to psychological frameworks, scholars working within political-economy frameworks argue that perceptions of animals are imbedded in discourses entwined and reinforced by the functional requirements and power relations of capitalism. Addressing the hidden mechanisms of capitalist exploitation is therefore one of the major goals of scholars working with political-economic frameworks.<sup>42</sup> To end the systemic oppression of animals and humans, requires the abolition of capitalism and its oppressive discourses and practises. One of the leading scholars using such a political-economy framework for analysing human-animal relations is David Nibert, who examines recurring patterns of the oppression of significant numbers of large animals for food and resources. This form of oppression and the accompanying process of domestication, Nibert argues, causes large-scale violence, destruction and disease epidemics.<sup>43</sup> A primary assumption within Nibert's analysis is that oppression – of both humans and animals – is profoundly entangled with, and motivated by, the desire for material gain.<sup>44</sup> In other words, animal domestication is deeply imbedded in the

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<sup>40</sup> Idem.

<sup>41</sup> Harold Herzog and Gordon Burghardt, "Attitudes Towards Animals: Origins and Diversity," *Anthrozoös* 1, no. 4 (2015): 215.

<sup>42</sup> Amy J. Fitzgerald and Nik Taylor, "The cultural hegemony and the animal industrial complex," in *The Rise of Critical Animal Studies: From the Margins to the Centre*, ed. Nik Taylor and Richard Twine (London: Routledge, 2014); Erika Cudworth, "Beyond Speciesism: Intersectionality, critical sociology and the human domination of other animals," in *The Rise of Critical Animal Studies: From the Margins to the Centre*, ed. Nik Taylor and Richard Twine (London: Routledge, 2014), 19-34.

<sup>43</sup> David Nibert, *Animal Oppression and Human Violence: Domeseccration, Capitalism, and Global Conflict* (New York: Columbia University Press, 2013), 4-5.

<sup>44</sup> Nibert, *Animal Oppression and Human Violence*, 5.

development and expansion of the capitalist system.<sup>45</sup> Building on this assumption, Nibert seeks to show that it is the capitalist system that creates obstacles to achieving a just and nonviolent world, as it naturalizes oppressive arrangements, making them seem to be normal and innate elements of worldly existence.<sup>46</sup> To reduce, if not eliminate, this oppression, Nibert continues, the opportunities and possibilities available within the capitalist system – such as the use of existing media – must be used to create a system in which oppression is not naturalized and rationalized but becomes visible and gradually can lead to change.<sup>47</sup>

Some defenders of the political-economic framework make the additional argument that the framework helps explain the intersection of race and species, as global capitalism has similar interests in commodifying and exploiting Indigenous people, territories, and African and Asian labour through ideologies that intertwine animalization and racialization. Arguments given to defend this stance come from ideas of power relations, property, and autonomy. An argument made by scholars working with the power relation thesis is that speciesism leads to a human/animal dualism deployed to target humans and animals along axes of racism, sexism and colonialism.<sup>48</sup> Discourses of ‘animality’ and ‘civilization’, for example, have often been used for processes of human self-definition in Western thought and methods of exclusion through white normativity in Europe and its settler colonies abroad.<sup>49</sup> Colonists sometimes go as far as explicitly associating Indigenous peoples with animals that are considered pests or vermin.<sup>50</sup>

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<sup>45</sup> *Idem.*

<sup>46</sup> Nibert, *Animal Oppression and Human Violence*, 7, 266-273; David Nibert, *Animal Rights/Human Rights: Entanglements of Oppression and Liberation* (Lanham: Rowman & Littlefield Publishers, 2002).

<sup>47</sup> Nibert, *Animal Rights/Human Rights*, 236-256; André Gorz, *Capitalism, Socialism Ecology* (London: Verso, 1994); Gary Francione, “Animal Rights: An Incremental Approach,” in *Animal Rights*, ed. Robert Gardner (London: Palgrave Macmillan, 1996), 42-60.

<sup>48</sup> See Derrida 2008, Wolfe 2003, Adams and Gruen 2014, Fraiman 2012, Struthers Montford 2016, Struthers Montford and Taylor 2020.

<sup>49</sup> Kay Anderson, “The Nature of ‘Race’,” in *Social Nature: Theory, Practice and Politics*, ed. Noel Castree and Bruce Braun (New Jersey: Wiley-Blackwell, 2001), 64-83; Clare, “Animals, colonization and urbanization,” *Philosophy and Geography* 6, no. 1 (2003): 47-58.

<sup>50</sup> Alec Bronlow, “A wolf in the garden: ideology and change in the Adirondack landscape,” in *Animal Spaces, Beastly Places*, ed. Chris Philo and Chris Wilbert (New York: Routledge, 2000), 143-160.

Critical race theorists discuss the interaction of processes of racialization and animalization, concluding that processes of animalization are also linked to racial issues and that we need to solve one to solve the other because they feed off each other.<sup>51</sup> In other words, critical animal studies and critical race theory should be looked at together, not separately. Power relations are not only used to discuss the interaction of processes of racialization and animalization, but also to illustrate that norms around the treatment of animals often reflect class/racial biases – these norms may be shaped to suit the needs/circumstances of the well-off, and then are used to criticize the disadvantaged who may not be able to live up to those norms.<sup>52</sup>

### *The Social-Cultural Framework*

Instead of placing norms around liminal animals at either the level of individual minds or at the level of political-economic systems such as capitalism, social-cultural frameworks look at norms around liminal animals as something that is embedded in the specific histories and cultures of communities. While individuals within communities exhibit variations in the sort of prejudices they express – as psychologists emphasize – there are nonetheless deeply embedded cultural tropes regarding liminal animals that shape how humans treat them.<sup>53</sup> Moreover – contrary to the political economists – these cultural tropes may vary considerably between communities who share a similar political economy (e.g., capitalism).

Individuals acquire cultural values and practises from their communities, and cultural behaviour is often shared and passed on from one generation to the next. Within the social-

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<sup>51</sup> Claire Jean Kim, *Dangerous Crossings: Race, Species, and Nature in a Multicultural Age* (Cambridge: Cambridge University Press, 2015); Kathryn Gillespie and Rosemary-Claire Collard, *Critical Animal Geographies: Politics, intersections, and hierarchies in a multispecies world* (New York: Routledge, 2015).

<sup>52</sup> Glen Elder, Jennifer Wolch, and Jody Emel, “Le pratique sauvage: race, place, and the human-animal divide,” in *Animal Geographies: Place, politics, and identity in the Nature-Culture Borderlands*, ed. Jennifer Wolch and Jody Emel (London: Verso, 1998), 72-90.

<sup>53</sup> Psychological and anthropological research points out that individuals are shaped by both their own personal experiences and broader cultural expectations – see Samantha Hurn, *Humans and Other Animals: Cross-Cultural Perspectives on Human-Animal Interactions* (Chicago: Pluto Press, 2012), 4.

cultural framework, culture refers to the acquired, cognitive and symbolic aspects of existence, whereas society refers to the social organisations of human life, patterns of interaction and power relationships.<sup>54</sup> Important for social-cultural frameworks is that an individual is somewhat constrained by culture as culture acts upon them.<sup>55</sup> Culture, however, is dialectical in its nature, and while there is an inescapable impact of culture on individuals, people act upon culture as well. So, even though people's norms are influenced by culture, culture can be changed, and new cultural meanings can become the norm.

Individual cultures have varying ideas about the concept 'animal', treat animals differently, and perceive individual animal species in contrasting ways. While in some cultural narratives personhood as a state of being is not a possibility for animals, other cultural communities do not share this unease about recognizing animals as persons.<sup>56</sup> One of the societies that views animals as non-human persons, for example, are the Yup'ik Eskimo of Alaska, to whom the ongoing relationship between animals and humans is central to their worldview.<sup>57</sup> This relationship is seen as one of reciprocity, with animals only giving themselves to those hunters who have respect for them as persons in their own right.<sup>58</sup>

To understand how liminal animals are perceived by various cultures – and how to improve their treatment – a social-cultural framework argues that researchers must not only look at other cultures, but also at their own. In Western cultural societies, for example, people's understandings of liminal animals are often shaped by representations of them rather than through direct experiences with them – with many people encountering liminal animals through

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<sup>54</sup> Thomas Hylland Eriksen, *Small Places, Large Issues: An Introduction to Social and Cultural Anthropology* (New York: Plute Press, 2001), 4.

<sup>55</sup> Kay Peggs, *Animals and Sociology* (London: Palgrave Macmillan, 2012), 111.

<sup>56</sup> Hurn, *Humans and Other Animals*, 30; Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (New York: Routledge, 2000), 48.

<sup>57</sup> John Grim, *Indigenous Traditions and Ecology: The Interbeing of Cosmology and Community*. (Cambridge: Harvard Press for the Center for the Study of World Religions, 2001).

<sup>58</sup> Idem.

media sources.<sup>59</sup> Even if an individual has a direct encounter with a liminal animal, this encounter is indirectly influenced by social and cultural factors, as there is no non-social or non-cultural starting point from which a human encounters an animal.<sup>60</sup> For this reason, it is important to study social and cultural perspectives when looking at encounters between humans and liminal animals.

Social constructions play an important role in the exclusion of liminal animals, as liminal animals become excluded because they are constructed as problematic to humans in societies. Claims of animals as problematic occur within a social-cultural context. To be convincing, claims must be consistent with the cultural beliefs and assumptions of those the claim-makers hope to persuade. Claim-makers themselves vary in wealth, power, and status, and these resources influence the effectiveness of claims.<sup>61</sup> Claims about problematic animal species can come from a range of stakeholders, including claims about protecting one's personal property (e.g. a farmer trying to protect their livestock from infectious diseases, or a homeowner trying to protect their garbage being raided); about protecting a community's stake in nature (e.g. a wildlife official trying to protect an endangered species); or about the rights of some species (e.g. an activist opposing policies that might harm a species).<sup>62</sup> For people to act – or react – to a problem claim, the claim-maker must not only be considered reliable, the claims themselves must be legitimized and dramatized.<sup>63</sup> Claims may thus include some empirical support, for people to act – or react – to a problem claim, but must also rely heavily on the social construction of the problem itself and the participation of actors who can legitimately make claims.<sup>64</sup>

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<sup>59</sup> Steve Baker, "Animals, representation and reality," *Society and Animals* 9, no. 3 (2001): 190; Akira Lippit, *Electric animals: Toward a rhetoric of wildlife* (Minneapolis: University of Minnesota Press, 2000).

<sup>60</sup> Garry Marvin, "Seeing, Looking, Watching, Observing Nonhuman Animals," *Society & Animals* 13, no. 1 (2005): 6.

<sup>61</sup> Joel Best, "Constructing animal species as social problems," *Sociology Compass* 12 (2018): 1.

<sup>62</sup> Best, "Constructing animal species," 2.

<sup>63</sup> John Hannigan, *Environmental sociology: A social constructionist perspective* (New York: Routledge, 1995).

<sup>64</sup> Dave Harker and Diane Bates, "The Black Bear Hunt in New Jersey: A Constructionist Analysis of an Intractable Conflict," *Society and Animals* 15 (2007): 332.

Claims about problematic animals need not gain global acceptance for animals to be removed. Some claims may be restricted to individual cultural communities, such as farmers characterizing an animal as a pest – a claim unlikely to attract attention beyond the agricultural sector.<sup>65</sup> In other cases, governments can influence cultural communities through broad-based campaigns against liminal animals, such as China’s Great Leap Forward campaign against sparrows as one of the nation’s ‘four pests’.<sup>66</sup> Sparrows were blamed for eating all the grain from the people, and as such were targeted as a pest that needed to be removed from society. Millions of people organized into groups, making noise by hitting pots and pans to prevent sparrows from resting in their nests, with the goal of having the sparrows drop dead from exhaustion.<sup>67</sup> In addition to these tactics, citizens also simply shot the birds down from the sky. The campaign depleted the sparrow population, pushing it to near extinction within China. Two years after the start of the campaign, the Chinese government realized that the removal of sparrows did not lead to an increase in grain yields, but a decrease, and the campaign against sparrows was ended.<sup>68</sup>

Once in contact with humans, animals are given a social-cultural identity as people try to make sense of them, understand them, use them, or communicate with them. They are brought into human society and transformed accordingly as their meaning is socially constructed. When animals do not fit the social construction of a ‘civilized’ animal and attempts to ‘civilize’ the animal is deemed unsuccessful by those people in charge, the dominant response is to remove the animal from society. To say that people’s images and beliefs about animals are social constructions therefore means that we must look beyond what

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<sup>65</sup> Best, “Constructing animal species,” 5.

<sup>66</sup> Rebecca Kreston, “Paved with good intentions: Mao Tse-Tung’s “four pests disaster,” *Discover magazine*, last modified February 26, 2014, <https://www.discovermagazine.com/health/paved-with-good-intentions-mao-tse-tungs-four-pests-disaster>.

<sup>67</sup> George Dvorsky, “China’s Worst Self-Inflicted Environmental Disaster,” *Gizmodo*, August 22, 2012, <https://gizmodo.com/china-s-worst-self-inflicted-environmental-disaster-th-5927112>.

<sup>68</sup> *Idem*.

is regarded as innate in animals – beyond their physical appearance, observable behaviour, and cognitive abilities – if we want to understand how humans think about and interact with them.<sup>69</sup> ‘Being’ an animal in modern societies is at times thus less a matter of biology than it is an issue of human culture and consciousness.<sup>70</sup>

As social constructions, the meanings attached to animals vary from culture to culture, but at any given time and place, these meanings are relatively fixed and not easily changed.<sup>71</sup> The tenacious persistence and widespread acceptance of these meanings suggests that they are cultural phenomena – part of the normative order of the society in which they occur.<sup>72</sup> Much like other cultural phenomena, the meanings attached to animals are passed from generation to generation. Consider which animals are regarded as wild and which as tame. At an early age, humans learn by watching Disney movies, reading fairy tales, visiting zoos, and listening to their parents and grandparents that a ‘wild animal’ can be a tiger in the jungle, a squirrel living in the park, or an ownerless dog roaming the neighbourhood. As social designations, ‘wildness’ comes to mean distance and danger.<sup>73</sup> The result is that children view what constitutes a wild animal as a hard fact whose meaning is a given.<sup>74</sup> Additionally, negative meanings – even when based on myths and lies – attributed to animals are imprinted onto children, influencing their cultural norms around these animals.<sup>75</sup> That norms around animals are social-culturally constructed can be seen in the change in children’s norms around animals over the course of their school years; students were found to have primarily affective or positive emotional

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<sup>69</sup> Anton Arluke and Clinton Sanders, *Regarding Animals* (Philadelphia: Temple University, 1996), 9.

<sup>70</sup> *Idem.*

<sup>71</sup> Arluke and Sanders, *Regarding Animals*, 10.

<sup>72</sup> *Idem.*

<sup>73</sup> *Idem.*

<sup>74</sup> *Idem.*

<sup>75</sup> Pavol Prokop and Sue Dale Tunnicliffe, ““Disgusting” Animals: Primary School Children’s Attitudes and Myths of Bats and Spiders,” *Eurasia Journal of Mathematics, Science & Technology Education* 4, no.2 (2008): 87-89.

relationships with animals between the ages of 6 to 9, but this changed to one focusing on cognitive and taught negative understandings between the ages of 10 to 13.<sup>76</sup>

Case studies show that there is not always universal agreement on social constructions and norms around animals between or in a cultural community.<sup>77</sup> Marginalized residents of impoverished neighbourhoods who are themselves struggling for resources and recognition, for example, may be notably less tolerant of wildlife than residents of wealthier neighbourhoods for whom living alongside wildlife tends to be an amenity rather than a symbol of political and economic abandonment.<sup>78</sup> Yet on the other hand, there is the idea that higher income dwellers are quicker to report animal ‘pests’, with municipal bylaws and regulations allowing authorities to displace animals that appear to pose a threat to middle-class residential norms.<sup>79</sup> Although these political-economic factors can influence norms around liminal animals, cultural perspectives are not mute in these situations, and often play a detrimental role. Even though political-economic factors reduce people’s willingness to coexist with other animals, this unwillingness would not take place without the negative cultural perceptions of liminal animals. Instead, if the animal species was culturally considered to be unproblematic, chances are that they would be less likely to be perceived as a problem regardless of the political-economic status of people.

Social definitions are not open to all possible interpretations, as they are constituted in and through historical, social interaction between humans and non-humans. In other words, social constructions are anchored in larger, cultural realms and connected to specific physical

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<sup>76</sup> Stephen Kellert, *The Value of Life: Biological Diversity and Human Society* (Washington DC: Island Press, 1996), 280.

<sup>77</sup> See Harker and Bates, “The black bear hunt in New Jersey”; Rik Scarce, “More than mere wolves at the door: Reconstructing community amidst a wildlife controversy,” in *Mad about wildlife: Looking at social conflict over wildlife*, ed. Ann Herda-Rapp and Theresa Goedeke (Leiden: Brill, 2005), 123-146; Mark McBeth, et al., “Buffalo tales: Interest group policy stories in greater Yellowstone,” *Policy Sciences* 43, nr. 4 (2010): 391-409.

<sup>78</sup> Christian Hunold and Teresa Iloro, “There goes the neighborhood: urban coyotes and the politics of wildlife,” *Journal of Urban Affairs* (2019): 2.

<sup>79</sup> Andrea Gaynor, “Regulation, resistance and the residential area: the keeping of productive animals in twentieth-century Perth, Western Australia,” *Urban Policy and Research* 17, no.1 (1999): 7-16.

places.<sup>80</sup> Cultural groups transform the physical world into meaningful, but (inter) subjective phenomena.<sup>81</sup> As such, it is clear that cultural groups socially construct landscapes and their interactions with animals as reflections of themselves.<sup>82</sup> So, the social constructions of animals say as much about the way that the animal is perceived as about how the cultural community constructing the image sees itself. For this reason, it is important to not only look at the social construction of liminal animals, but also the cultural, historical, and geographical context in which these meanings are formed.

### Why Use the Social-Cultural Framework

Social-cultural perceptions play an important role in the way humans perceive animals. While individuals can have different opinions, they are all influenced by their external environment. Psychological approaches are useful for explaining these variations in individual opinions and norms, but they offer less opportunities for analyzing the external environment. Fear of certain animal species, for example, may result in part from a genetic predisposition associated with the risk experienced by humans during their evolution, but on a closer look it seems to be that large numbers of myths, stories and misconceptions are mainly responsible for the persecution of these animals.<sup>83</sup> In Portugal, for example, researchers showed that negative cultural norms based on myths and local folklore increased the chance of getting hit by a car for reptiles and amphibians.<sup>84</sup> This case study supports the idea that the presence of

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<sup>80</sup> Adrian Ivakhiv, "Orchestrating sacred space: Beyond the social construction of nature," *Ecotheology* 8, no. 1 (2003): 11-29.

<sup>81</sup> Harker and Bates, "The Black Bear Hunt in New Jersey," 331.

<sup>82</sup> Thomas Greider and Lorraine Garkovich, "Landscapes: The social construction of nature and the environment," *Rural Sociology* 59, nr. 1 (1994): 8.

<sup>83</sup> Stephen Kellert, et al. "Human culture and large carnivore conservation in North America," *Conservation Biology* 10 (1996): 977-990; Roger Ulrich, "Biophilia, biophobia, and natural landscapes," in *The Biophilia Hypothesis*, ed. Stephen Kellert and Edward Wilson (Washington, Island Press, 1993), 73-138.

<sup>84</sup> Ceríaco, "Human attitudes towards herpetofauna," 5; Brian Crawford and Kimberley Andrews, "Drivers' attitudes toward wildlife-vehicle collisions with reptiles and other taxa," *Animal Conservation* 19, no. 5 (2016): 444-450. Helio Secco, et al. "Intentional Snake Road-Kill: A Case Study Using Fake Snakes on a Brazilian Road," *Tropical Conservation Science* 7, no. 3 (2014): 561-571.

negative cultural norms repeated in myths and stories directly influence persecution and anti-conservation attitudes. Social-cultural frameworks are thus needed for looking beyond individual psychology to map out the bigger picture of human-liminal animal relations.

The Marxian political-economic approach suffers from similar limitations in analyzing negative norms around liminal animals. Fruitfully applied to certain kinds of human-animal relations, the Marxian approach emphasizes the role of property and commodification in explaining norms relating to animals. This is indeed very important in explaining our treatment of those animals who are part of the ‘animal industrial complex’, such as farmed animals who are most intensely commodified. Liminal animals, however, are largely peripheral to the economy, indeed are not considered ‘property’ and are not part of commodity chains.<sup>85</sup> While liminal animals can be understood as causing damage to property, this is not the only factor contributing to how most humans treat them. As such, the political-economic approach is not removed completely, but also does not offer the best approach for studying human norms around liminal animals.

Perhaps because liminal animals are to some extent less central to the mode of economic production, there is considerable cultural variation in norms around liminal animals. Rather than a single capitalist imperative to instrumentalize and commodify liminal animals, there are diverse cultural traditions even across capitalist societies. To be sure, there are broad commonalities across many societies in cultural norms to liminal animals. For example, there is a general tendency for the worth of animals to be judged largely on their usefulness for humans. And useless animals are subsequently often seen as ‘pests’, especially if they are viewed as scavengers, are not deemed to be charismatic or particularly attractive, are perceived to wreak havoc on human settlements or property, or if they are perceived to be a threat to

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<sup>85</sup> It is interesting in this respect to note that Marxian political economy analysis, such as David Nibert and Jonathan Clark, have focused on animals who are owned and integrated into production systems, while saying little if anything about liminal animals

humans through predation or the spread of disease.<sup>86</sup> Nevertheless, beneath these very broad generalities, we see enormous variation. The social-cultural context strongly influences, for example, who is perceived as a charismatic or attractive animal. And there are also striking differences in how societies respond to animals who are perceived as pests or threats<sup>87</sup>. Additionally, the systematic depiction of animals as ‘the other’ in Western societies can be seen as a cultural construct that is not necessarily shared by human cultures and societies around the world.<sup>88</sup> The cultural community people live in thus constitutes the physical, social, and cultural settings in which opinions about animals are formed, and these factors are critical for an appropriate understanding of public acceptance of liminal animals.<sup>89</sup>

Using social-cultural frameworks as the primary way of understanding and questioning negative norms around liminal animals does not mean that the other frameworks are excluded completely. Instead, each of these frameworks is interwoven in human and animal lives and relationships, and for this reason a combined approach is necessary. Much can be learned from the psychological study of individual norms around liminal animals, and it is also important to reflect on the capitalist power relations that are at play within each case of exclusion. In exploring specific cultural narratives about liminal animals, therefore, one should not examine how these narratives express the obvious power imbalances between humans and animals, but

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<sup>86</sup> Herda Rapp and Theresa Goedeke, *Mad About Wildlife: Looking at social conflict over Wildlife* (Leiden: Brill, 2005); Mike Michael, “Roadkill: Between Humans, Nonhuman Animals, and Technologies,” *Society and Animals* 12, no. 4 (2004): 278-298; Jennifer Wolch, “Changing Attitudes towards California Cougars,” *Society and Animals* 5, no. 2 (1997): 95-116; Simon Bronner, “Contesting Tradition: The Deep Play and Protest of Pigeon Shoots,” *Journal of American Folklore* 118, no. 470 (2005): 409-452; Lynda Birke, “Who-or What-are the Rats (and Mice) in the Laboratory,” *Society and Animals* 11, no. 3 (2003): 207-224.

<sup>87</sup> There is a well-known traditional story relating to the ancestors of the Oneida nation of upstate New York which tells of human-wolf conflict and its resolution. The Oneida population grew to such an extent that they had to move from their ancestral lands, but the location of their new settlement was right in the middle of wolf territory. After numerous wolf attacks the Oneida council met and discussed their options; they could either hunt the wolves to extinction to resolve the problem or move. They opted for the latter and nominated someone to always ‘speak for wolf’ during council meetings to ensure that in future the interests of nonhuman others would be considered, and such conflict could therefore be avoided; Paula Underwood, *Three Native American Learning Stories* (Bayfield: A Tribe of Two Press, 2002).

<sup>88</sup> Hurn, *Humans and Other Animals*, 2.

<sup>89</sup> Louise Eriksson et al. “The public and geese: a conflict on the rise?” *Human Dimensions of Wildlife* 25, no. 5 (2020): 423.

also how they may embody and express power relations amongst humans along the lines of class, gender, or race.

An example that illustrates the importance of a combined approach is the negative cultural norms faced by the urban rat, who is for various reasons considered by Western cultures to be out of place and in need of removal to signal the restoration of order.<sup>90</sup> As a result of the removal of urban rats, there is, however, a loss of everyday encounters with rats that has produced a loss of tolerance for them.<sup>91</sup> Additionally, negative cultural norms around urban rats are often used as a link to negatively perceive urban human residents. Urban rats are, for example, used as the symbol for both the impoverished conditions and potential transgressive abilities of African Americans living in cities.<sup>92</sup> Moreover, changing negative cultural norms around urban rats is not something that can exclude the political-economic positions of humans. Urban rats and humans may live in close proximity to another in ways that pit the well-being of unhoused or poor people and urban rats against each other – e.g. food and housing conflicts – which may lead to dilemmas and burdens not faced by those living under safe, clean and food-secure circumstances.<sup>93</sup> Negative cultural norms around urban rats thus seem to imply that not only cultural notions of space and place, but also social-economic positions of other negatively perceived urban residents are at play when it comes to the exclusion of liminal animals.

So, a combined approach is needed and where appropriate I will draw on psychological and political-economic factors. Nonetheless, my main focus is on social-cultural aspects of human-liminal animal relationships. Throughout the chapters I will show that this

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<sup>90</sup> Colin Jerolmack, “How Pigeons Became Rats: The Cultural-Spatial Logic of Problem Animals,” *Social Problems* 55, no. 1 (2008): 88.

<sup>91</sup> Chris Philo, “Animals, Geography, and the City: Notes on Inclusions and Exclusions,” *Environment and Planning D: Society and Space* 13 (1995): 677.

<sup>92</sup> Matthew Lambert, “‘That sonofabitch could cut your throat’: Bigger and the Black Rat in Richard Wright’s ‘Native Son,’” *The Journal of the Midwest Modern Language Association* 49, no.1 (2016): 76.

<sup>93</sup> Lambert, “‘That sonofabitch could cut your throat,’” 75.

framework not only allows us to explain important variations in cultural norms, but also helps identify avenues for potential change.

### Literature Review on Culture and Human-Liminal Animal Relations

Although the argument that social-cultural frameworks are beneficial for examining human-animal relations is not new, the recognition of the importance of cultural factors in human-animal relations is still emerging. As such, social-cultural frameworks have only become more widely applied to studies of human-animal conflict and coexistence in the past decades. This increasing use of a social-cultural framework regarding human-liminal animal relationships is not limited to a single academic discipline. Instead, a cultural lens is becoming more prominent across the interdisciplinary field of animal studies, including in disciplines that did not originally centre around culture such as conservation science. The following overview will give some insight into the main developments and arguments that have come from various disciplines related to the study of the social-cultural dimensions of human-liminal animal relationships. What this overview shows is that social-cultural frameworks can be applied to a wide range of case studies, but that there is still a gap in the literature when it comes to human-liminal animal relationships.

In the twentieth century, anthropologists started to focus on studying why people act as they do. By looking at people's own conceptual worlds, anthropologists presented the analytical assumption that human beings have an impact on their environments, as well as that they are affected by environmental forces.<sup>94</sup> The sheer diversity of ways in which people's perceptions and interpretations of the world are influenced by culture was revealed.<sup>95</sup> When it

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<sup>94</sup> Kay Milton, "Ecologies: anthropology, culture and the environment," *International Social Science Journal* 49, no. 4 (1997): 481-483. Franz Boas argued in his 1911 publication of *The Mind of Primitive Man* that cultural traits involve both cultural and non-cultural forces, and this research field got expanded to cultural perceptions of animals in the second half of the twentieth century.

<sup>95</sup> Milton, "Ecologies," 485.

comes to animals, anthropologists argued, some societies perceive animals as much as ‘persons’ as humans, whereas in others they are the living embodiments of ancestral spirits or animals are reduced to mere material resources for human benefit. On the assumption that there is just one real world in which all societies live, such diversity could only be explained as a product of people’s different personal and social experiences.<sup>96</sup> The argument was thus made that worldviews are constructs, built up through social interactions.

One of these worldview constructions was the dichotomy between nature and culture. Whereas nature is seen as an uncivilized place where no human intervention has taken place, culture is man-made civilization. Some scholars are convinced that the opposition between nature and culture is absent from the worldviews of some societies.<sup>97</sup> Although no consensus has been reached on the topic, scholars agree that the ways in which people understand their environment also shape how they interact with it.<sup>98</sup> Cultural perspectives thus provide the knowledge, assumptions, values, goals, and rationales which guide human activity. This activity, in turn, yields experiences and perceptions which shape people’s understanding of the world.

With a growing interest in the role of culture on human-nature interactions in the academic world, interdisciplinary fields emerged at the end of the 20<sup>th</sup> century seeking ways to study human-animal relations. During the 1980s and early 1990s, the development of anthrozoology, also known as human-animal studies, as an academic discipline was spurred by reports that there were health and psychological benefits for humans interacting with animals, and by the establishment of the academic journals *Anthrozöos* in 1987 and *Society & Animals* in 1993. Two major works that had a big impact on kickstarting the field of human-animal

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<sup>96</sup> Idem.

<sup>97</sup> Tim Ingold, “Hunting and gathering as ways of perceiving the environment,” in *Redefining Nature: Ecology, Culture and Domestication*, ed. R.F. Ellen and Katsuyoshi Fukui (Oxford: Berg, 1996), 40-60; Peter Dwyer, “The Invention of Nature,” in *Redefining Nature: Ecology, Culture and Domestication*, ed. R.F. Ellen and Katsuyoshi Fukui (Oxford: Berg, 1996), 157-186.

<sup>98</sup> Milton, “Ecologies,” 491.

studies were Yi-Fu Tuan's 1984 classic *Dominance and Affection: The Making of Pets*, which examines the power relations inherent in the human-pet relationship, and Donna Haraway's 1989 work *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, which examines how the prevailing narratives about human origins – based on the work of primatologists – reflected and maintained ideologies of class, nationality, gender and race.<sup>99</sup>

Human-animal studies explores the spaces that animals occupy in human social and cultural worlds and the interactions humans have with them.<sup>100</sup> It is an interdisciplinary discipline, combining psychology, anthropology, ethnology, history, zoology, sociology, cultural studies, and geography. An important understanding that came out of the early works of human-animal studies is that while there are animals exploited by human societies for a variety of products and uses, human relations with animals are not simply utilitarian in character but can also be understood in broader symbolic terms.<sup>101</sup> Much of the initial work approaches animals as 'windows' or 'mirrors' that offer scholars insight into human society or culture.<sup>102</sup> These studies of animal symbols in different cultures show that animals inhabit the human mind or imagination as well as the physical environment, and that human beings draw on animals to think about themselves.<sup>103</sup> However, recent human-animal scholars complain that these studies still treat animals as passive objects of human activity rather than as active subjects or agents in their own right.<sup>104</sup>

Throughout the 1990s, the field of human-animal studies began to grow rapidly. Aubrey Manning and James Serpell's edited collection *Animals and Human Society: Changing*

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<sup>99</sup> Yi-Fu Tuan, *Dominance and Affection: The Making of Pets* (New Haven: Yale University Press, 1984); Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge, 1989).

<sup>100</sup> Margo De Mello, *Animals and society: an introduction to human-animal studies* (New York: Columbia University Press, 2012).

<sup>101</sup> John Knight, *Animals in Person: Cultural Perspectives on Human-Animal Intimacies* (New York: Routledge, 2020), 1.

<sup>102</sup> Molly Mullin, "Mirrors and Windows: Sociocultural Studies of Human-Animal Relationships," *Annual Review of Anthropology* 28, no. 1 (1999): 201-224.

<sup>103</sup> Knight, *Animals in Person*, 1.

<sup>104</sup> Idem.

*Perspectives* (1994) looks at the role animals play in human societies, with chapters ranging from images of animals in medieval times to nineteenth-century norms around animals.<sup>105</sup> That same year, feminists Carol Evans and Josephine Donovan's edited collection *Animals and Women: Feminist Theoretical Explanations* became the first major work to consider the issue of feminism and animals.<sup>106</sup> Published two years later in 1996, Arnold Arluke and Clinton Sander's *Regarding Animals* is considered a classic in the field of human-animal studies. Looking at what makes it possible for people in Western societies to express great affection to animals as sentient creatures while simultaneously turning a blind eye to the most callous treatment of animals, Arnold and Arluke discuss with people who work with animals their strategies for coping with the stress of the job.<sup>107</sup> In 1997, geographers Jennifer Wolch and Jody Emel's *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands* was the first book to approach human-animal relationships from a cultural geography perspective and looks at those geographies where humans and animals meet (and conflict).<sup>108</sup> Yet, the study of animals was already long considered a key part of geography, and over the past millennia geographers have reveled in noting strange species and documenting the behaviours of different cultures toward animals.<sup>109</sup> While most of these works take animals as natural objects (not subjects), unquestionably under human control, they are rich sources for considering the length of time that geographers have been intrigued by animals and human-animal relationships.

Animal geographers play an important role in researching human-liminal animal relations. One of the primary reasons for this is that geography is about the relations in and

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<sup>105</sup> Aubrey Manning and James Serpell, *Animals and Human Society: Changing Perspectives* (London: Routledge, 1994).

<sup>106</sup> Carol Evans and Josephine Donovan, *Animals and Women: Feminist Theoretical Explanations* (Durham, Duke University Press, 1994).

<sup>107</sup> Arluke and Sanders, *Regarding Animals*.

<sup>108</sup> Jennifer Wolch and Jody Emel, *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands* (London: Verso, 1998).

<sup>109</sup> Julie Urbanik, *Placing Animals: An Introduction to the Geography of Human-Animal Relations* (Lanham: Rowman & Littlefield Publishers, 2012), 23.

between places and across space.<sup>110</sup> It is simultaneously about the specific and the general patterns of human and natural life. For animal geographers, the focus is on where, how, and why we have the relations that we do with other species, both historically and in the present day.<sup>111</sup> This is important for studying human-liminal animal relations as an animal only becomes liminal through the place they occupy and the relationship they have with those in that place. To get a better understanding of the connection between a place and why a relationship is happening as it is, animal geographers seek to get a grasp of the specific locations and their relationships to more general spatial patterns.<sup>112</sup>

As geography became formally institutionalized in the academy in the late nineteenth century, the study of animals was considered a key part of the discipline and came to be known as zoogeography.<sup>113</sup> Now seen as the first wave of the field of animal geography, zoogeography was defined as ‘the scientific study of animal life with reference to the distribution of animals on the earth and the mutual influence of environment and animals upon each other’.<sup>114</sup> The animal life referred to did not include humans. Much of this work regarded animals as natural objects to be studied separately from humans with a goal to ‘establish general laws of how animals arranged themselves across the earth’.<sup>115</sup> Zoogeographers cataloged species and their current and historical distributions and studied how the environment influenced species’ adaptations. Looking at this work it becomes clear that the field was heavily influenced by the work of Charles Darwin and Alfred Russel Wallace, and their theories of natural selection and evolution.<sup>116</sup>

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<sup>110</sup> Julie Urbanik and Connie Johnston, *Humans and Animals: A Geography of Coexistence* (Santa Barbara: ABC-CLIO, 2017), xii.

<sup>111</sup> *Idem.*

<sup>112</sup> *Idem.*

<sup>113</sup> Urbanik, *Placing Animals*, 27-28.

<sup>114</sup> W.C. Allee and Karl Schmidt, *Ecological Animal Geography: An Authorized, Rewritten Edition Based on Tiergeographie auf oekologischer Grundlage by Richard Hesse* (New York: John Wiley & Sons, 1937).

<sup>115</sup> Jennifer Wolch, Jody Emel, and Chris Wilbert, “Reanimating Cultural Geography,” in *Handbook of Cultural Geography*, ed. Kay Anderson, et al. (Thousand Oaks: Sage, 2003): 185.

<sup>116</sup> Philip Darlington, *Zoogeography: The Geographical Distribution of Animals* (New York: John Wiley & Sons, 1966).

By the middle of the twentieth century, fields such as biology and zoology began taking on more and more of the traditional cataloging of animal species, their distributions, and their ecologies. This development left geographers with an interest in animals to begin to focus more on human-animal relations in place and space. This second wave of animal geography, while not entirely relinquishing zoogeography, saw a rising interest in the impact of humans on wild animals and in human relations with livestock.<sup>117</sup> During the second wave, geographers interested in animals also turned to the ‘Berkeley School’ in California led by Carl Sauer. For Sauer, understanding how humans transformed the environment from ‘natural landscapes’ to ‘cultural landscapes’ was what constituted geography.<sup>118</sup> This study of the cultural landscape as cultural ecology – how human cultures shape and are shaped by their environment – necessarily involved addressing the issue of human-animal relations primarily through studying domestication.<sup>119</sup> Sauer, for example, examined how animal domestication helped create cultural landscapes because the use of animals necessitated grazing areas, holding pens, livestock feed, and so on, and did cause humans to significantly alter local environments.<sup>120</sup> This new cultural ecology approach was helpful in introducing the idea that human culture has a huge role to play in terms of human-animal relations.

In 1960, Charles Bennett called for a ‘cultural animal geography’ and a renewed interest in teaching about animals as part of the geography curriculum. Important here was Bennett’s claim that students needed appreciation of the importance of animals as an element in the landscape as well as an awareness that humans themselves are animals.<sup>121</sup> The next three decades of geographic research on animals did delve into cultural animal geography, yet it was not specifically called cultural animal geography but instead cultural ecology or cultural

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<sup>117</sup> Urbanik, *Placing Animals*, 32.

<sup>118</sup> Urbanik, *Placing Animals*, 33.

<sup>119</sup> *Idem.*

<sup>120</sup> Carl Sauer, *Seeds, Spades, Hearths and Herds* (New York: American Geographical Society, 1952).

<sup>121</sup> Charles Bennett, “Cultural Animal Geography: An Inviting Field of Research,” *Professional Geographer* 12, no. 5 (1960): 14.

history.<sup>122</sup> This cultural ecology approach emphasized domesticated animals and landscape changes. Building on complex cultural connections between humans and animals, Grossman, for example, documents how cultural variables like values and local practices can be crucial forces shaping present-day animal-related livestock practices.<sup>123</sup> And Daniel Gade explains that the guinea pig is one of the very few mammals to have been domesticated in the Andes, by documenting the variety of ways people in this part of the world have used guinea pigs.<sup>124</sup>

The third wave of animal geography began in the mid-1990s as a response to the intersection of events in the world, an academic reassessment of culture and subjectivity, and a desire to unpack the ethical treatment of animals.<sup>125</sup> Philo and Wilbert define this new animal geography as a subfield that ‘focuses squarely on the complex entanglings of human-animal relations with space, place, location, environment and landscape’.<sup>126</sup> Within these entanglements, the symbolic place of animals in human culture has come to greater prominence. Two features distinguish the ‘new’ animal geography from the first two waves: (1) an expanded notion of human-animal relations beyond the domesticated livestock to include all locations of human-animal encounters and (2) attempts to bring in the animals themselves as subjects of their own lives – whether part of ours or not – instead of just as objects of human control.<sup>127</sup> One of the fundamental realizations within the third wave of animal geography is that practices on animal bodies are used to police relations between different human groups in different places. That what is an accepted animal practice depends on the dominant human group in a particular place, and third wave animal geographers study how actions (1) reinforce human-to-human power relations and (2) reinforce boundaries between humans and other

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<sup>122</sup> Urbanik, *Placing Animals*, 35

<sup>123</sup> Lawrence Grossman, “Sheep, Coffee Prices, and Ceremonial Exchange in Papua New Guinea,” *Geographical Review* 74, no.3 (1984): 315-330.

<sup>124</sup> Daniel Gade, “The Guinea Pig in Andean Folk Culture,” *Geographical Review* 57, no. 2 (1967): 213-224.

<sup>125</sup> Wolch and Emel, *Animal Geographies*.

<sup>126</sup> Chris Philo and Chris Wilbert, *Animal Spaces, Beastly Places: New Geographies of Human-Animal Relations* (New York: Routledge, 2000), 4.

<sup>127</sup> Urbanik, *Placing Animals*, 38.

species.<sup>128</sup> One example given by Elder, Wolch, and Emel is the predominantly Hispanic practice of horse-tripping, a sport where riders on horseback lasso the legs of a running horse thereby ‘tripping’ it.<sup>129</sup> In some cases this can cause harm to the horses, but in Hispanic cultures the ability to do this is seen as a great skill.<sup>130</sup> In the United States, this practice has been constructed as largely unacceptable by the dominant Anglo culture, which has an affinity for horses.<sup>131</sup> Those who practice horse tripping argue that the Anglo culture is being hypocritical because horses are often horrifically hurt in any number of ‘acceptable’ horse sports in the United States such as racing, steeplechasing, barrel racing, or cross-country events.<sup>132</sup> Elder, Wolch, and Emel give this example so that the reader understands that animals ‘appear to be one site of struggle (power) over the protection of national identity (place) and the production of cultural difference (culture)’.<sup>133</sup> Furthermore, cultural norms about legitimate animal practice are neither consistent nor universal.<sup>134</sup>

We can also consider the relationship between culture, place, and power with human-animal relations in a more symbolic manner. Lesley Instone points out that even animal symbolism is place based: for example, the coyote, constructed as a trickster figure in North American Indigenous traditions and in modern social theory, does not translate as such around the world to places where people do not know this animal.<sup>135</sup> Coming from an Australian context, Instone argues that the symbolism of the dingo – the Australian wild dog – makes more sense within her worldview because she knows that species of dog.<sup>136</sup> Regardless of what the animal symbol is being used for, Instone argues that it needs to have a place affiliation to

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<sup>128</sup> Idem.

<sup>129</sup> Elder, Wolch, and Emel, “Le Pratique Sauvage,” 70-72.

<sup>130</sup> Idem.

<sup>131</sup> Idem.

<sup>132</sup> Idem.

<sup>133</sup> Elder, Wolch, and Emel, “Le Pratique Sauvage,” 72.

<sup>134</sup> Elder, Wolch, and Emel, “Le Pratique Sauvage,” 73.

<sup>135</sup> Lesley Instone, “The Coyote’s at the Door: Revisioning Human-Environment Relations in the Australian Context,” *Ecumene* 5, no. 4 (1998): 452-467.

<sup>136</sup> Idem.

be properly understood and worked with.<sup>137</sup> Therefore, we must understand that not only are humans working out relations with animals, but human groups are also competing, confronting, and conforming with each other about animals in addition to having relations to them.<sup>138</sup>

The last major foundational concept of the third animal geography is that of hybridity. Having moved into a period of posthumanism where the notion of the human as the only subject that matters has been shown to be false by fields such as biology and ethology, animal geographers now recognize that human identities are created not in isolation but in relation to other living beings and inanimate things.<sup>139</sup> This idea has come into animal geography from actor-network theory. Actor-network theorists argue that humans react and respond to the animate and inanimate world around them, much more intimately than had been realized previously.<sup>140</sup> As such, the world cannot be separated into dualisms such as human/animal, society/nature, because the actors that make up the world include much more than humans. The concept of hybridity emerged from actor-network theory and has been used in animal geography to understand the ways humans, animals, and human-animal relationships are cocreated.<sup>141</sup> Hybridity, like actor-network theory, recognizes that agency is multidirectional and does not belong to humans alone. Hybridity adds to actor-network theory by emphasizing that individuals are never really pure, separable entities – that everything and everyone is engaged in relations. In essence, we are all hybrids, entities that are some kind of mix between

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<sup>137</sup> Idem.

<sup>138</sup> Urbanik, *Placing Animals*, 39.

<sup>139</sup> Noel Castree and Catherine Nash, "Posthuman Geographies," *Social and Cultural Geography* 7, no. 4 (2006): 501-504.

<sup>140</sup> Jonathan Murdoch, "Inhuman/Nonhuman/Human: Actor-Network Theory and the Prospects for a Nondualistic and Symmetrical Perspective on Nature and Society," *Environment and Planning D: Society and Space* 15 (1997): 731-756; Bruno Latour and Steve Woolgar, *Laboratory Life: the construction of scientific facts* (Princeton: Princeton University Press, 1986); Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005); Michel Callon, "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Briec Bay," *The Sociological Review* 32, no. 1 (1984): 196-223; John Law and Peter Lodge, *Science for Social Scientists* (London: Macmillan Press, 1984); Bruno Latour, *Science in action: how to follow scientists and engineers through society* (Cambridge: Harvard University Press, 1987).

<sup>141</sup> Whatmore, *Hybrid Geographies*.

seemingly separate categories. From an animal geography perspective, the specific geographies of hybrids are of most interest. For example, Sarah Whatmore points out that a human-animal relationship with a captive zoo elephant differs from a human-animal relationship with a free-roaming wild elephant and differs still again from one with a circus elephant.<sup>142</sup> In all cases, *which* humans and *which* elephants *where* matter because the humans and elephants morph and shift with each encounter. Hybridity thus helps animal geographers to see that (1) individual beings exist in and of themselves, and (2) a constellation of identity relations forms when different human, human-animal, and animal-animal configurations appear in specific places.<sup>143</sup>

Geographers have long neglected the role of nature in shaping the urban experience. In a response to this, Jennifer Wolch writes that the *anima urbis* – the breath, life, soul, and spirit of the city – is embodied in its animal as well as human life forms.<sup>144</sup> Recent work in urban geographies reveals a flourishing of animal life in the city. This work not only recognizes that cities have been built on the exploitation of animals, but also that city spaces are viable habitats for all kinds of animal life.<sup>145</sup> Van Dooren and Rose have categorised urban animals into two groups: animals who choose to move into city spaces, and animals who find themselves overtaken or displaced by cities.<sup>146</sup> While some species are new to the city, many others predate human settlement and are the descendants of the original inhabitants of these spaces. Attending to life in multispecies cities thus demands constant renegotiation and consideration of human and animal urban ecologies, recognizing that interspecies mingling is fundamental to city life.<sup>147</sup>

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<sup>142</sup> Idem.

<sup>143</sup> David Lulka, “The Residual Humanism of Hybridity: Retaining a Sense of the Earth,” *Transactions of the Institute of British Geographers* 34 (2009): 378-393.

<sup>144</sup> Jennifer Wolch, “Anima Urbis,” *Progress in Human Geography* 26, no. 6 (2002): 721.

<sup>145</sup> Nigel Thrift, *Killer Cities* (Los Angeles: Sage, 2021); Philo, “Animals, Geography, and the City,” 655-681; Andrew Robichaud, *Animal City: the domestication of America* (Cambridge: Harvard University Press, 2019).

<sup>146</sup> Tom Van Dooren and Deborah Rose, “Storied places in a multispecies city,” *Humanimalia* 3, no. 2 (2012): 1.

<sup>147</sup> Alice Hovorka, “Transspecies urban theory: Chickens in an African city,” *Cultural Geographies* 15, no. 1 (2008): 96.

Animal geographers also focus on the position of liminal animals within urban societies, and what forces play a role in determining whether an animal belongs or not. Griffiths, Poulter and Sibley, for example, cast the city of Hull's feral cats as a marginalized social grouping existing within the urban realm. Their analysis revealed how some human residents saw wild places associated with feral cats as sites of anxiety and aversion, while others viewed them as refuges for an otherwise lost nature.<sup>148</sup> Responses to feral cat colonies among residents were affected by their social-cultural constructions of the built environment.<sup>149</sup> The feral cats in Griffiths, Poulter and Sibley's case study thus occupy multiple unique intersections of identities as they live very public lives.<sup>150</sup> The authors see feral cats as occupying an elusive zone somewhere along the domestic-wild spectrum and note that 'those animals which transgress the boundary between civilization and nature, or between public and private, which do not stay in their allotted space are commonly sources of abjection, engendering feelings of discomfort or even nausea which we try to distance from the self, the group, and associated spaces (but which we can never banish from the psyche)'.<sup>151</sup> Supporting this notion of categorizing urban wildlife as occupying multiple unique intersections of identities, Hunold's research shows that there are strong categorical distinctions about what is considered proper for cities in Western cultures, as these cultural narratives have trained people to think very exclusively about what belongs in the city, and what is civilized and pleasing to the eyes.<sup>152</sup>

There is one more argument that has recently come to the forefront in animal geography. Policy responses to urban wildlife have often been aimed at delineating specific

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<sup>148</sup> Huw Griffiths, Ingrid Poulter, and David Sibley, "Feral Cats in the City," in *Animal spaces, beastly places: new geographies of human-animal relations*, ed. Chris Philo and Chris Wilbert (New York: Routledge, 2000), 56-70.

<sup>149</sup> Idem.

<sup>150</sup> Idem.

<sup>151</sup> Griffiths, Poulter, and Sibley, "Feral Cats in the City," 60.

<sup>152</sup> Christian Hunold, "Why Not the City? Urban Hawk Watching and the end of Nature," *Nature and Culture* 12, no. 2 (2017): 115-136; Hunold and Lloro, "There goes the neighbourhood," 156-173.

social and ecological spaces and addressing problem animals through exclusion or extermination.<sup>153</sup> Countering these practices, animal geographers are advocating for more inclusive visions of the city by recognizing the agentic and social qualities of urban animals in how they interact and respond to the activities of humans, other animals, and processes of urbanization.<sup>154</sup> This re-imagining of cities has included proposals of how cities might be re-envisioned as spaces of kinship, care, conviviality, and connections with plant and animal life.<sup>155</sup> An example of geographers studying forms of human-animal inclusivity is the recent publication about Toronto's Coyote Response Strategy, which acknowledges that coyotes are fellow urban dwellers with their own legitimate claims to shared urban space.<sup>156</sup>

Policy responses and human-animal conflict scenarios in urban environments are not only discussed by animal geographers, and the field of human-wildlife conflict studies has long played a role in examining how humans and animals share space. In contrast to most disciplines in human-animal studies, the field of conservation research does not come from the humanities but is primarily driven by natural scientists concentrating on the biology and behaviour of animals. As such, conservationists have a reasonably full toolkit for the practical mitigation of conservation conflicts, and in recent years arguments have been made in favour of the inclusion of cultural and social dimensions in their work.<sup>157</sup> Some conservation theorists argue that the diverse ways in which particular societies, communities, or individuals think about and

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<sup>153</sup> Donna Houston et al., "Make kin, not cities! Multispecies entanglements and 'becoming-world' in planning theory," *Planning Theory* 17, no. 2 (2018): 190-212.

<sup>154</sup> Barua and Sinha, "Animating the urban," 1160-1180; Steve Hinchcliffe and Sarah Whatmore, "Living Cities: Towards a politics of conviviality," *Science as Culture* 15, no. 2 (2006): 123-138; Erin Luther, "Tales of cruelty and belonging: In search of an ethic for urban human-wildlife relations," *Animal Studies Journal* 2, no. 1 (2013): 35-54; Cecily Maller, *Healthy urban environments: More-than-human theories* (Abingdon: Routledge, 2018).

<sup>155</sup> Erin Luther, "Between Bios and Philia: inside the politics of life-loving cities," *Urban Geography* (2020): 1-18.

<sup>156</sup> Bronwyn Clement and Susannah Bunce, "Coyotes and more-than-human commons: exploring co-existence through Toronto's Coyote Response Strategy," *Urban Geography* (2022): 1-19.

<sup>157</sup> David Macdonald, Andrew Loveridge, and Alan Rabinowitz, "Felid futures: crossing disciplines, borders, and generations," in *The Biology and conservation of wild felids*, ed. David Macdonald and Andrew Loveridge (Oxford: Oxford University Press, 2010), 600-649.

respond to culturally important animals cannot be explained solely through quantitative social science approaches focusing on measuring attitudes and behaviour. These approaches, they argue, typically disaggregate people into socioeconomic groups such as commercial farmers, communal farmers, and other livelihood-oriented descriptions.<sup>158</sup> This lumping by livelihood group results in analyses that miss some striking cultural differences, for example between people from different ethnic groups.<sup>159</sup> As such, a wider scope of cultural norms need to be included in human-animal conflict studies.

Conflict between humans and animals is one of the most widespread and intractable issues facing conservation biologists today. On the face of it, conflict resolution should be a relatively simple endeavour, with the expectation that once the appropriate strategies have been put in place to deal with the reported issue, animosity towards the species concerned should abate. Unfortunately, evidence indicates that complete long-term conflict resolution is rare, even where such strategies have been implemented.<sup>160</sup> This suggests that despite most people citing direct wildlife damage as the reason for their antagonism towards animals, the causes of conflict are often complex and deep-seated, and a broader approach must be utilized in order to ameliorate such conflict fully in the long term.<sup>161</sup> Conservation biologists often make important assumptions about human norms and behaviour when deciding how to tackle conflict, but the mismatch between assumed and actual behaviour is startling.<sup>162</sup> There is, for

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<sup>158</sup> Simon Pooley et al., “An interdisciplinary review of current and future approaches to improving human-predator relations,” *Conservation Biology* 31, no. 3 (2017): 517.

<sup>159</sup> Ruth Kansky and Andrew Knight, “Key factors driving attitudes towards large mammals in conflict with humans,” *Biological Conservation* 179 (2014): 93-105; Alexandra Zimmermann, “Jaguars and people: a range-wide analysis of human-wildlife conflict,” (PhD diss., Oxford University, 2014); Amy Dickman and Leela Hazzah, “Money, myths and man-eaters: complexities of human-wildlife conflict,” in *Problematic Wildlife: a cross-disciplinary approach*, ed. Francesco Agelici (London: Springer, 2016), 339-356.

<sup>160</sup> Laurie Marker, *Aspects of cheetah (Acinonyx jubatus) biology, ecology and conservation strategies on Namibian farmlands* (Oxford: Oxford University Press, 2002); Amanda Webber, Catherine Hill, and Vernon Reynolds, “Assessing the failure of a community-based human-wildlife conflict mitigation project in Budongo Forest Reserve, Uganda,” *Oryx* 41, no. 2 (2007): 177-184.

<sup>161</sup> Claudio Sillero-Zubiri and Karen Laurenson, “Interactions between carnivores and local communities: conflict or co-existence?” in *Carnivore Conservation*, ed. John Gittleman, et al. (Cambridge: Cambridge University Press, 2001), 282-312; Amy Dickman, “Complexities of conflict: the importance of considering social factors for effectively resolving human-wildlife conflict,” *Animal Conservation* 13, no. 5 (2010): 459.

<sup>162</sup> Dickman, “Complexities of conflict,” 459.

example, much evidence for a significant mismatch between perceptions of risk and actual degree of risk in many human-wildlife conflicts.<sup>163</sup> Amy Dickman argues that people base their perceptions and norms not only upon facts and personal experiences, but also upon a myriad of factors such as wider societal experiences, cultural norms, expectations and beliefs.<sup>164</sup> It is the complex interaction of cultural, social, and personal factors that ultimately determines how costly conflict-causing species are perceived to be, and therefore the level of hostility felt towards them. For this reason, Dickman argues that effective conflict resolution will require a broad, multifaceted, and truly interdisciplinary approach, and conservation biologists must move beyond examining species-based conflicts towards considering the wider socio-economic, ecological, and cultural conditions under which intense conflicts arise.<sup>165</sup>

An example of the inclusion of a social-cultural lens in the study of human-animal conflict is the research project studying the relationship between rural people living adjacent to the protected Kruger National Park in South Africa and predators ranging from the park onto communal land. People's perceptions are often negative when it relates to damage-causing predators and are often even worse in the case of large carnivores due to the additional concern for human safety.<sup>166</sup> In the surrounding areas of the Kruger National Park, negative views were particularly due to fear of human and livestock losses, especially to lions.<sup>167</sup> Lions were thought to be the most abundant predator both within and outside the reserve.<sup>168</sup> Lions were also the best known predator and were most often held responsible for killing livestock.<sup>169</sup> Despite these

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<sup>163</sup> Richard Reading et al., "Understanding and resolving the black-tailed prairie dog conservation challenge," in *People and wildlife: conflict or coexistence?* ed. Rosie Woodroffe, Simon Thirgood and Alan Rabinowitz (Cambridge: Cambridge University Press, 2005), 209-223; Kristen Harrison and Joanne Cantor, "Tales from the screen: enduring fright reactions to scary media," *Media Psychology* 1, no. 2 (1999): 97-116; Jonny Loe and Eivin Roskaft, "Large carnivores and human safety – a review," *Ambio* 33, no. 6 (2004): 283-288.

<sup>164</sup> Dickman, "Complexities of conflict," 462.

<sup>165</sup> Dickman, "Complexities of conflict," 464-465.

<sup>166</sup> Sillero-Zubiri and Laurenson, "Interactions between carnivores and local communities," 283-288.

<sup>167</sup> DD Georgette Lagendijk and Markus Gussett, "Human-Carnivore Coexistence on Communal Land Bordering the Greater Kruger Area, South Africa," *Environmental Management* 42, no. 6 (2008): 972.

<sup>168</sup> Lagendijk and Gussett, "Human-Carnivore Coexistence," 973.

<sup>169</sup> Lagendijk and Gussett, "Human-Carnivore Coexistence," 974.

livestock losses and a lack of conservation education, most of the communal residents voiced favourable opinions about large carnivore conservation, as predators were considered an integral part of the residents' natural heritage.<sup>170</sup> Thanks to this cultural tolerance, large carnivores and people can coexist in the vicinity of Kruger National Park.

Aside from establishing the need to take cultural frameworks into account when studying human-animal conflict, the field of conflict studies also contributes to determining what human-coexistence is. Primarily due to the difficulty in defining, studying and implementing its various facets, researchers and practitioners often end up defining it by what it is not – for example, the absence of violence or retaliation.<sup>171</sup> Pooley et al. describe coexistence as ‘a sustainable though dynamic state, where humans and wildlife co-adapt to sharing landscapes and human interactions with wildlife are effectively governed to ensure wildlife populations persist in socially legitimate ways that ensure tolerable risk levels’.<sup>172</sup> Saloni Bhatia has recently added to this that coexistence can have both negative and positive dimensions.<sup>173</sup> Negative coexistence can here be defined as a state in which people do not engage in any form of retaliatory killing or harm to animals though their cultural norms may not necessarily be pro-conservation/pro-animal species.<sup>174</sup> Positive coexistence, on the other hand, focuses on the inclusionary cultural and structural dimensions. It needs an environment in which people feel emotionally and socially supported, and thus consider supporting animal conservation despite the costs.<sup>175</sup> So, whereas coexistence is taking place in both cases, there are vastly different cultural norms and emotions related to the forms of coexistence, and they are important for establishing and analyzing human-animal coexistence.

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<sup>170</sup> Legendijk and Gussett, “Human-Carnivore Coexistence,” 974-975.

<sup>171</sup> Philip Nyhus, “Human-wildlife conflict and coexistence,” *Annual Review of Environment and Resources* 41 (2016): 143-171.

<sup>172</sup> Simon Pooley, Saloni Bhatia, and Anirudhkumar Vasava, “Rethinking the study of human-wildlife coexistence,” *Conservation Biology* 35, no. 3 (2021): 785.

<sup>173</sup> Saloni Bhatia, “More Than Just No Conflict: Examining Two Sides of the Coexistence Coin,” *Frontiers in Conservation Science* 2 (2021).

<sup>174</sup> Idem.

<sup>175</sup> Idem.

A term often used by human-animal conflict scholars is cultural carrying capacity. What this means is the number and type of a given species that people will tolerate over time.<sup>176</sup> The cultural carrying capacity is dynamic and can change from season to season and from year to year. In areas where external factors – such as predators or the implementation of conflict mitigation tools – do not fluctuate, however, change does not occur frequently, and people’s cultural carrying capacity remains the same. Cultural carrying capacity is not only used to understand the number of animals humans are willing to live with, but also the reasons as to why they want to live with more individuals from one species than another. Using the cultural carrying capacity, researchers in Illinois, for example, discovered that the reason people lowered the number of white-tailed deer they were willing to share space with not because of an increase in vehicle collisions with deer, but because of the damage deer did to plants.<sup>177</sup> Although the general solution to reaching the cultural carrying capacity for white-tailed deer is bringing in hunters, knowing the reasons for hitting a cultural carrying capacity can help set up non-lethal means for humans and liminal animals to coexist.

### The Gap in the Literature: Why We Need to Look at the Bigger Picture

This literature review shows that large steps have been made in researching human-liminal animal relations from a social-cultural perspective. Whereas human-animal studies allows for analyzing human-animal relationships, geography allows us to recognize both our conceptual understanding of space and belonging. Conflict studies, on the other hand, provides the tools to incorporate the biology and ecology of humans and animals into the social-cultural analysis, creating an understanding of not only the physical but also the metaphysical aspects of human-animal relations. Moreover, the current development in examining coexistence adds

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<sup>176</sup> Len Carpenter, Daniel Decker, and James Lipscomb, “Stakeholder Acceptance Capacity in Wildlife Management,” *Human Dimensions of Wildlife* 5, no. 3 (2000): 8.

<sup>177</sup> Daniel Storm, et al., “Deer-Human Conflict and Hunter Access in an Exurban Landscape,” *Human Wildlife Interactions* 1, no. 1 (2007): 53-59.

a new dimension to the field, allowing researchers to focus on ways forward rather than focusing on the notion of humans and liminal animals as beings in need of separation from one another.

Although these developments are positive, and should most definitely be encouraged, there remains a tendency within the literature on narrowing down the research. What I mean with this is that each discipline has the tendency to analyse human-liminal animal relations from an individual species or location-based perspective, rather than adopting a broader comparative perspective. An example of this is the excellent study done on human-manatee relations in Florida by Theresa Goedeke. Studying the social-cultural perspectives of Floridians about manatees, Goedeke discovered that the image of the manatee has undergone a dramatic reinvention throughout the twentieth century.<sup>178</sup> Manatees were at the brink of extinction in the early 20<sup>th</sup> century, initially highly valued as game species until a ban was adopted, and were negatively described through folklore as creatures who would eat all the fish in the rivers and purposely lunging out of the water to bite people.<sup>179</sup> The result of such beliefs was a general disregard for the welfare of manatees and, even worse, malicious harassment and vandalism, with people even purposely injuring manatees for amusement by dropping cement blocks on them, shooting their eyes out, and even poking rakes in them.<sup>180</sup> In the 1980s, public education efforts were made to improve the image of the manatee and to create awareness of the animal as social and vegetarian. Through these efforts, the image of the manatee underwent a transformation, and the social and cultural reinvention of the Florida manatees improved their chances for protection.<sup>181</sup>

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<sup>178</sup> Theresa Goedeke, "In the Eye of the Beholder: Changing Social Perceptions of the Florida Manatee," *Society & Animals* 12, no. 2 (2004): 99-116.

<sup>179</sup> Goedeke, "In the Eye of the Beholder," 103-104.

<sup>180</sup> Goedeke, "In the Eye of the Beholder," 104.

<sup>181</sup> Goedeke, "In the Eye of the Beholder," 110-111.

The social-cultural perspectives of the Florida manatee is a good example of showing how these perspectives not only negatively impact liminal animals, but it also shows how negative social-cultural norms can be changed. Although the case study of the Florida manatee is not unique, with plenty of research on the social-cultural perspective of human-liminal animal relations indicating that it is important to look at the role that social-cultural perspectives play in human-animal relations, not many scholars attempt to synthesize or to identify broader patterns. This is not to say that each liminal animal species experiences the same cultural norms from humans, or that each context is the same, but that there may be underlying social-cultural factors that can be used as a framework for studying human-liminal animal relations. So, the current literature on human-animal relations provides detailed accounts of specific liminal species relations with humans, but studies do not look at whether there is a bigger picture of human cultural norms around liminal animals. Are there, for example, similar perceptual categories of all liminal animals in Western society<sup>182</sup> that contribute to their exclusion in these societies? And can these similarities be extended to other societies as well? If not, what differences are there in human-liminal animal relations, and what factors influence these differences? Could these factors contribute to the process of positive coexistence between humans and liminal animals in Western societies?

To find answers to these questions it is necessary to analyze the existing literature on human-liminal animal relations. Yet, simply looking at individual case studies alone will not suffice, and instead we will need to take a step back. Analyzing many case studies involving human-liminal animal relations can demonstrate whether there are certain factors at play in both the negative and positive cultural norms around liminal animals. As defended above, the

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<sup>182</sup> By “Western society” I refer to those cultures originated or associated with Europe, but I am aware that this terminology is potentially misleading. The use of the term Western society is thus not meant to indicate that these are the only cultures present in these places, or that these cultures are not influenced by or influence other cultures, but it is used as a simplified term to indicate the heritage of social norms, ethical values, traditional customs, belief systems, political systems, artifact and technologies originated in or associated with Europe.

social-cultural framework will be the primary starting point for analyzing these relations, but entanglements with the psychological and political-economic frameworks will be addressed as well. Through this large scale analysis, insights can be gained on commonalities and differences in cultural norms around liminal animals, how these cultural norms are based on cultural perceptions, how these perceptions contribute to the way that liminal animals are treated, if these perceptions are misleading, and if so, whether liminal animals are perhaps wrongfully excluded – how they are being excluded and what the impact of the negative perceptions are on their exclusion – and if there are ways to eliminate these negative perceptions.

Throughout the next chapters, answers to these questions will be provided through an extensive analysis of existing case studies. As liminal animals face a lot of negative cultural norms – which is what inspired me to study cultural norms around them in the first place – the next chapter will focus on the negative perceptions of liminal animals through a social-cultural framework. This chapter will show that there are similarities in the exclusionary cultural norms around liminal animals, and that social-cultural categories can be established for understanding similarities within the exclusion of liminal animals around the world. The subsequent chapter will then turn to what we can learn from contexts where more positive cultural norms exist and how these contribute to human-liminal animal coexistence.

## Chapter 2: Exclusionary Cultural Norms around Liminal Animals

In 2015, something interesting happened in the Netherlands that has spurred a lot of debate: the wolf returned. After 150 years of absence, the wolf is slowly migrating back. As of 1982 – 33 years before returning – the wolf has had protected status in the Netherlands. Ever since, people sporadically sighted wolves and news media were happy to pick up on these stories, but they all seemed one-off visits from the wolves. Attitudes were so relaxed that locals even joked that the wolves were just additional German tourists.<sup>183</sup> All this has changed in the last five years, and as of 2023, the Netherlands is inhabited by 34 individual wolves.<sup>184</sup> Whereas people were excited or neutral at first, a heated debate is rising as to whether the Dutch should be happy that the wolf has returned. The wolves primarily live in the Mid-East of the Netherlands, away from the bigger cities in the West. The Netherlands, however, is very densely populated, and wolves and humans constantly cross paths. A recent video that made headlines shows a wolf following a cyclist through a small park, speeding up when the cyclist tries to get away, but never attacking.<sup>185</sup> The cyclist is clearly in distress, and more people came forward afterwards, indicating that this is not the first time that wolves have come close to humans.<sup>186</sup> Some people report wolves walking through their backyard, sheep farmers report sheep killed by wolves – although DNA research often contradicts this – and a security camera even shows a wolf visiting a patio.<sup>187</sup> The increase in frequency of interactions seems to spur more negative

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<sup>183</sup> This was a running joke on one of the Dutch national radio channels NPO Radio2.

<sup>184</sup> “Stand van zaken van de wolf: ‘Mogelijk verdubbeling van roedels’,” NOS Nieuws, last modified January 5<sup>th</sup> 2023, <https://nos.nl/regio/gelderland/artikel/343096-stand-van-zaken-van-de-wolf-mogelijk-verdubbeling-van-roedels>.

<sup>185</sup> “Wolf rent achter fietser aan op de Hoge Veluwe,” NOS Nieuws, last modified November 4<sup>th</sup>, 2022, <https://nos.nl/artikel/2451096-wolf-rent-achter-fietser-aan-op-de-hoge-veluwe>.

<sup>186</sup> Idem.

<sup>187</sup> “Uit nieuwe dna-analyse van doodgebeten schepen blijkt: de wolf was weer mondjasmaat in Utrecht,” RTV Utrecht, last modified April 14<sup>th</sup>, 2023, <https://www.rtvutrecht.nl/nieuws/3566230/uit-nieuwe-dna-analyse-van-doodgebeten-schapen-blijkt-de-wolf-was-weer-mondjesmaat-in-utrecht>; Erik van Dam, “Wandelt er een wolf in je straat? Dit is waarom je niet bang hoeft te zijn,” Omroep Gelderland, last modified March 1<sup>st</sup>, 2022, <https://www.gld.nl/nieuws/7580287/wandelt-er-een-wolf-in-je-straat-dit-is-waarom-je-niet-bang-hoeft-te->

attitudes through the sharing of negative stories. Although the return of the wolf has been too short for research about cultural norms to take place, media stories are increasingly reporting about ‘problem’ wolves in need of exclusion.<sup>188</sup>

Even with the increasingly negative attitude towards wolves from the public, the Dutch government is maintaining their stance on the wolves as protected animals. Foresters and others specialized in wolves are providing education to people about the natural behaviours of wolves and what to do when encountering one.<sup>189</sup> Nonetheless, negative stories about human-wolf relations are increasingly in the news, with people speculating about even worse things happening if the Dutch allow the wolf to live close to people.<sup>190</sup> This is interesting, as many people around the world live near wolves without the severe consequences that many Dutch people are afraid of– the killing of children or pets – and the Dutch have historically shared their land with wolves, resulting in many people having nostalgic feelings of rehabilitating nature.<sup>191</sup> Especially with the current destruction of nature as a result of climate change, the Dutch actively advocate for the restoration and maintenance of wildlife.<sup>192</sup> So, if it is possible to coexist with wolves without the negative consequences, what is it that makes people see wolves negatively? Is it the potential danger, or is it something else?

In the last chapter, I argued that a cultural framework is useful for looking at human-liminal animal relations. To get answers to the questions above, however, the cultural

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zijn?at\_medium=Social%20media&utm\_medium=Social%20media&at\_campaign=YouTube&utm\_campaign=YouTube&utm\_source=youtube&utm\_content=artikel&utm\_term=omroep%20 gelderland.

<sup>188</sup> “Natuurorganisaties: provincie moet nu ingrijpen bij tamme wolf op de Veluwe,” NOS Nieuws, last modified November 10, 2022, <https://nos.nl/artikel/2451894-natuurorganisaties-provincie-moet-nu-ingrijpen-bij-tamme-wolf-op-de-veluwe>.

<sup>189</sup> “Natuurles over de Wolf,” IVN Natuur Educatie, last updated 2023, <https://www.ivn.nl/provincies/gelderland/lespakketten/natuurles-over-de-wolf/>.

<sup>190</sup> “Wolf blijft zorgen voor problemen: ook kalveren en pony’s slachtoffer,” RTL Nieuws, last modified October 6, 2022, <https://www.rtlnieuws.nl/nieuws/nederland/artikel/5337732/wolfenoverlast-drenthe-wolf-schapen-doodgebeten-boeren-maatregelen>.

<sup>191</sup> “Wennen aan de wolf,” Natuurmonumenten, last modified 2023, <https://www.natuurmonumenten.nl/wennen-aan-de-wolf>.

<sup>192</sup> Dik Nagtegaal, “We kunnen niet zonder natuur: Namens miljoenen Nederlanders roepen 64 organisaties het kabinet op om door te pakken met natuurherstel,” *Dierenbescherming*, last modified September 5, 2022, <https://www.dierenbescherming.nl/actueel/we-kunnen-niet-zonder-natuur>.

framework needs to be applied to the analysis of exclusionary cultural norms. In a nutshell, exclusionary cultural norms are the exclusion of an individual or group based on preconceived cultural notions of belonging. This can either be because the individual or group is not seen as fitting into the normative ideals of a cultural community, or because the individual or group poses a (real or perceived) threat to the cultural community. In this chapter, a more in-depth explanation will be given on what exclusionary cultural norms mean specifically in the context of liminal animals, and what categories of exclusionary cultural norms can be found when looking at human-liminal animal relations. Each category of exclusionary cultural norms has its own unique features that will be discussed by looking at specific case studies. At the same time, similarities and overlaps exist between categories, as both humans, liminal animals, and cultural perceptions are not static entities, but move in a constant motion influenced by their surrounding environment and experiences.

### Framework of Exclusionary Cultural Norms and Liminal Animals

#### *Defining exclusionary cultural norms*

Exclusion never happens without a reason. Most of the time, exclusion is not based on a single individual. Instead, conceptual and/or physical exclusion is often bound up with particular social infrastructures and political decisions.<sup>193</sup> As with other forms of exclusion, exclusionary cultural norms<sup>194</sup> do not happen coincidentally or at random. Instead, active choices are made to exclude an individual or group based on normative ideas on how members of a society should look like, behave, and what beliefs they should have. Members are informed

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<sup>193</sup> Eva Giraud, *What Comes after Entanglement? Activism, Anthropocentrism, and an Ethics of Exclusion* (Durham: Duke University Press, 2019), 172.

<sup>194</sup> Exclusionary cultural norms can be either explicit or implicit. The explicit mode involves practices that affirm the superiority of one cultural group over others, and either excludes those others from full and equal participation in society or allows inclusion only to the degree that the participants give up the practices that are basic to their identity in favour of those of the ruling culture. In the implicit form, factors of the above kind are involved, but as much broader cultural norms embedded within institutions and practices. Paul Crowther, "Cultural Exclusion, Normativity, and the Definition of Art," *The Journal of Aesthetics and Art Criticism* 61, no. 2 (2003): 121.

of the normative ideas through cultural practices and beliefs. Children are taught from a young age through movies and stories, what someone who belongs to society should look like, and what the traits are of someone who should be removed. Throughout our lives, we reinforce these normative ideas by repeating the practices and stories we grow up with. We instill these ideas in our own children and have them confirmed by others around us maintaining and repeating the same culturally instilled normative ideas. Popular culture contributes to sharing these normative ideas as well, providing accessible tools for spreading and reinforcing cultural narratives. Through the cultural practices and narratives, it is normalized and acceptable to exclude those who are considered not-belonging.

The dominant cultural group determines what normative expectations there are for someone to be included.<sup>195</sup> As such, they are also the ones responsible for establishing the factors for exclusion, and therefore exclusion is dependent on the entanglement of both cultures and individuals. Let's say, for example, that the dominant cultural group of a community believes, based on cultural narratives, that people should always cross the road with their left leg first as otherwise communal disaster could strike. People from a cultural minority group within the community, however, always cross the road with their right leg first, as that is what they believe keeps them safe. The people of the dominant cultural group decides that this causes great risk to the people in the society, and as such, culturally excludes all those individuals who cross the road with their right leg first. In this case, the dominant cultural group justifies the exclusion of some individuals on their own cultural belief that one must cross the road with their left leg first if communal disaster is to be prevented.

What the example of the left leg/right leg crossing of the road shows, is that exclusion never takes place in a vacuum, and is always created in relation to notions of belonging and is

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<sup>195</sup> Richard Johnson, *The Practice of Cultural Studies* (London: Thousand Oaks, 2004); David Byrne, *Social Exclusion* (Maidenhead: Open University Press, 2005); Antonio Gramsci, *Selections from the Prison Notebooks*, translated by Quintin Hoare and Geoffrey Nowell-Smith (New York: International Publishers, 1972), 12.

entangled with forms of resistance. This belonging contains an idea of how the world should be and how individuals within communities should act. When it comes to exclusionary cultural norms, ideas about how the world should be, and how individuals within a community should act come from the cultural perspectives of the dominant group within that community. It is here that the cultural framework plays an important role, as cultures are often decisive in establishing boundaries of belonging. We construct our communal identity through shared cultural norms and values, and these cultural notions trickle down to each aspect related to inclusion/exclusion – from the establishment of membership rights to who should be entitled to these rights.

It is important to note that not everything – and everyone – that falls outside the cultural requirements of inclusion is immediately excluded. Certain differences can be seen as acceptable, or as having the potential to be transformed in line with the dominant ways of inclusion. Immigrants often experience the latter when moving to another country; they are expected to adjust to the dominant culture if they want to be included as members. This can mean that immigrants learn the language of the community, cook cultural dishes, and dress in ways perceived as acceptable. When immigrants do not adjust to these cultural norms, however, they become outsiders within the community. They are not necessarily physically excluded, but they are also not treated as full members, and may experience micro forms of exclusion (not being invited to dinners, side comments being made about their appearances, or being denied for a job interview, just to name a few).

What is key in the lethal or forceful exclusion of an individual or a group is that the negative aspects are seen as being insurmountable. That is, the cultural perceptions of the individual or a group are so negative that they cannot be overcome or altered. This is either because the behaviour of the individual or group goes fundamentally against the norms and values of the dominant culture, or because there is the general belief that the individual/group

is not able to adapt to the dominant culture in a way that can be accepted. Think again about the example of the community excluding those who cross the street with their right leg first. Although there is the physical potential for right leg crossers to cross the road with their left leg, the cultural difference in belief as to with which leg to cross is insurmountable, as those crossing with their right leg believe that it is for their protection, not to cause harm.

Nonetheless, it is possible that some right leg street crossers suddenly decide that they were wrong all along and convert to becoming members of the community by crossing the road only with their left leg. In some cases, this would be acceptable, and the individual would be included. For others, simply because they are assigned as part of a group, it does not matter how they act, the preconceived idea that they cause disaster is sufficient for their exclusion. It is this preconceived idea of other's actions and beliefs that are often fundamental in their exclusion. Rather than looking at whether someone acts or looks a specific way, the categorization of the individual or group can determine whether someone is excluded or not. This is applicable to cases of discrimination and stigmatization, where people are excluded primarily based on preconceived negative perceptions of the group that are enforced and instituted in the dominant culture. Although they are not necessarily excluded from the community, chances are much higher as they are considered as non-conforming, even if individuals do not do anything that could be seen as directly against the cultural values and norms. Instead, they are seen as not-belonging because they are designated to a certain group or category within the community. It is this extreme form of exclusionary cultural norms that is examined in this chapter.

Going from humans to animals is a big step for some to make when applying ideas of exclusionary cultural norms. Nonetheless, it is undeniable that animals experience exclusion from cultural norms and values as well. As is the case with the return of the wolf in the Netherlands, liminal animals walk a fine line between acceptance and exclusion. The cultural

perception of wolves as threats to children and pets results in increasing support for their exclusion. This negative depiction is not yet overruling the support that they are receiving from the Dutch government. Nonetheless, many other liminal animals do not receive any support, and instead their exclusion is actively supported by the community.

In the case of liminal animals, exclusionary cultural norms can be seen both as a form of physical exclusion from the space they live in and as a form of ideological exclusion that does not allow liminal animals to ever be seen as potential members of a community. In each case, the form of exclusion stems from negative cultural perceptions about the individual or group. Forms of physical exclusion include the removal of animals through trapping or poison, the building of fences to block their entry, or the existence of a deterrent such as cats chasing mice or high pitch noise machines scaring off raccoons. Mental exclusion, on the other hand, does not deal with liminal animals directly, but instead is the space within people's minds that the cultural perceptions create of the impossibility of the animal having the capacities to ever become included. This is not to say that liminal animals should be seen as full political members of a community – although arguments for this have been made by some<sup>196</sup> – but that mental exclusion automatically excludes liminal animals from the possibility to become included within a community. In other words, mental exclusions allow liminal animals to exist only outside of the communal boundaries constructed by the cultural norms and values.

As discussed in the previous chapter, cultural perceptions of individual liminal animal species have been studied by scholars from a range of disciplines. The question as to whether there are similarities between exclusionary cultural norms in these case studies, however, is often neglected. Scholars working in the field of cultural exclusionary norms thus do not have an overarching framework that can be applied to determine whether exclusionary cultural

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<sup>196</sup> Dinesh Wadiwel, "Zoopolis: Challenging our Conceptualisation of Political Sovereignty Through Animal Sovereignties," *Dialogue* 52, no. 4 (2013): 749-758; Alasdair Cochrane, *Should Animals Have Political Rights?* (Cambridge: Polity Press, 2020).

norms are taking place. As such, the rest of this chapter will establish a framework of cultural studies based on an analysis of a large database of research conducted on cultural perceptions of liminal animals.

### Methodology

To get a better understanding of the exclusionary cultural norms liminal animals face in human societies, I have analyzed over 100 articles and books in detail. A couple of factors were important for deciding whether an article or book would be included in the analysis. First off, the article/book needed to be specifically about animals that can be considered liminal, and research focusing exclusively on either domestic or wild animals were therefore automatically excluded. Those research projects that were included either looked at liminal animals on a larger scale – such as the category of urban animals – or looked at individual species and animals that were occupying a liminal space – such as case studies of beavers in or near human settlements in Alberta or the reintroduction of Daniza the bear in the Italian Alps.

The second factor for determining whether an article/book was to be included was whether the article/book applied a social-cultural angle to analyzing the position of the liminal animal. As the goal of this analysis is to create a better understanding of the exclusionary cultural norms around liminal animals, those works that provided data that were useful for understanding liminal animals but that did not relate to cultural perceptions of people's norms were excluded. So, articles focusing on foraging habits of liminal animals, although interesting, were left out, whereas articles on interactions of liminal animals with humans were included. No specific restrictions were placed on the cultural background in the article/book, but due to a Western academic background and the predominant focus on Western societies in many articles, there is a dominant presence of articles/books centered within these cultures. What this means is that it is possible that cultures that show similar forms of – or deviations in – exclusionary cultural

norms are not fully represented in the database. Because of the wide range of works analyzed, however, it can be confidently said that a general framework of exclusionary cultural norms can be made, but that more detailed work needs to be done in the future to look at specific cases not clearly represented in the database.

Once a solid database of over 100 articles and books was selected, the core task of the analysis was to find patterns in treatment and to see if exclusionary cultural norms play a role in the treatment of liminal animals at all. To accomplish this, a schematic overview was created with animal species, location, forms of exclusionary cultural norms experienced, and potential solutions offered by author(s). After entering the data for each analyzed article/book, the information in each section was compared and strong commonalities in exclusionary cultural norms were found. Similarities in solutions for turning exclusion to coexistence were also discovered, and these will be discussed in more detail in chapter four.

### Summary Findings

There were three forms of exclusionary cultural norms that repeatedly stood out in the analyzed articles/books: liminal animals were repeatedly seen as ‘out of place’, ‘disruptive’, and as ‘threat’. Although these exact words were not always used, the context and responses from humans indicated that the way that they perceived the liminal animal(s) in question fits one of these categories. Each of these categories has its own specific characteristics, and a more detailed overview will be provided below. What is important to keep in mind, however, is that for each category the result was that the liminal animal(s) became excluded from society. Additionally, although each of these categories has its own specifics, there is overlap between them and it was often the case that one form of exclusion was established in relation to another. Research into cougars, for example, not only indicated the notion of the animal being out of place, but also being a threat to humans and small pets.

‘Out of place’ was by far the category of exclusionary cultural norms most encountered, with at least 75% of the articles/books indicating liminal animals experiencing this form of exclusionary cultural norms. Labelling an animal as ‘out of a place’ refers to a form of exclusionary cultural norms in which humans have constructed (imaginary) boundaries that were crossed by liminal animals. An example of being out of place is when a black bear enters a town or when rats enter a house.

To a slightly lesser extent, I encountered ‘disruptive’ as a category of exclusionary cultural norms in just over half of the articles/books analyzed. This exclusion category can be split into two main groups of disruption: disruption leading to financial losses and disruption leading to filth and nuisance. Words indicating disruption leading to exclusionary cultural norms include, for example, dirtiness, crop loss, and damage. Examples of disruptive liminal animals include raccoons raiding garbage cans, deer eating crops, or beavers damaging property.

The last category of exclusionary cultural norms frequently encountered in the analysis is that of liminal animals being a ‘threat’. As with the category of disruption, being a threat was encountered in just over half the articles/books analyzed. There are two forms of threat in this category of exclusionary cultural norms: indirect and direct threat. An indirect threat is when the animal itself does not directly pose a threat, but their feces, for example, could spread diseases. A direct threat is when a liminal animal is considered to be capable of harming humans and/or small pets. Ticks, for example, are on their own not a direct threat to humans, but through their bite they could infect humans and animals with Lyme disease. Wolves, on the other hand, pose a direct threat to humans by having the physical ability to significantly wound or kill a human and/or pet.

When analyzing the articles and books, there were some categories of exclusionary cultural norms that were encountered to a lesser extent than the three mentioned above. Although of interest, the decision was made to exclude these because of their lower number of

occurrences, therefore making them less significant for analyzing the exclusionary cultural norms around liminal animals. These categories include low societal value, the depiction of liminal animals as criminals, negative or no ecological impact, and the influence of religious beliefs. Excluding these categories does not mean that they do not play a role in the exclusion experienced by liminal animals, but instead, that not enough research was available to make a strong claim in favour of these factors as a category of exclusionary cultural norms.

It must be noted, however, that especially religion is a factor that should not be forgotten completely. Religion plays a large part in the exclusion of primarily domesticated animals from society, with pigs considered as a lower cast in India and non-kosher by Judaism. Dogs are thought of as a dangerous threat and filthy by many streams of Islam, and Christianity strongly argues for a divide in us vs. them when stating that God created animals for humans to use. Less evidence is found, however, when it comes to the exclusion of liminal animals, and instead, religion seems to be an important factor in human-liminal animal coexistence – this will be discussed in detail in chapter 3. That less evidence is found, does not mean that religion does not also play a role in the exclusion of liminal animals, but that not enough research has been done to this date to present a solid argument. As further work needs to be done to establish the role of religion in the exclusion of liminal animals, it is not included in the exclusionary cultural norms framework.

### Categories of Liminal Animal Exclusionary Cultural Norms Framework

The following section will discuss the three main categories of exclusionary cultural norms: out of place, disruptive, and threat. Each category will first be introduced with a general overview of how the category operates in the literature, followed by a discussion of specific case studies which illustrate the category.

## Out of Place

### *On Space and Place*

When thinking about urban landscapes, we most often think about the things that are directly related to humans: high-rise buildings, stores, a busy social life, business districts, and a lot of concrete. Coming from the Netherlands, nothing stood out more upon arrival in Canada than the endlessly wide roads that are everywhere for cars (well that and the number of Canadian flags that fly everywhere near Pearson Airport). These roads can have as many as six lanes, and there is little space for anything else. If you would like to explore an urban surrounding, you quickly learn that distances are simply too far for walking, and biking is generally not safely accessible – bike lanes are either directly shared with cars or are in a poor state. With more people being car-dependent, chances are higher for both humans and animals to get injured by traffic, something which again correlates to the way we set up our urban infrastructure.<sup>197</sup> This way of urban infrastructure is not only bad for the health of humans, it also negatively impacts the climate by emitting more greenhouse gasses while significantly reducing a safe environment for both humans and animals.

Yet, there is another side-effect to the way that urban environments are constructed: the intentional exclusion of animals. Although there are some exceptions<sup>198</sup>, most urban environments do not account for the animals that live within the cities' perimeters. Instead, animals are often rendered invisible, and when humans do come in touch with them it is likely

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<sup>197</sup> Higher speed limits have proven to cause more accidents, and cities worldwide are currently running pilot projects for car-free zones within a city to reduce their carbon footprint and to create a safer environment. See for example J.R. Brubacher, et al. "Road Safety Impact of Increased Rural Highway Speed Limits in British Columbia, Canada," *Sustainability* 10, no. 10 (2018): 3555; Mark Nieuwenhuijsen, and Haneen Khreis. "Car Free Cities: Pathway to Healthy Urban Living," *Environment international* 94 (2016): 251-262.

<sup>198</sup> There are more rooftop gardens created that enable butterflies and birds to diversify the ecosystem, see James Wang, et al. "Building Biodiversity: Drivers of Bird and Butterfly Diversity on Tropical Urban Roof Gardens," *Ecosphere* 8, no. 9 (2017). Also, existing infrastructure such as the glass on high-rise buildings is being adjusted to be less of a hazard to birds; New York City, for example passed a landmark bird-friendly building legislation in 2020, requiring that the materials in new buildings (and in some major renovations) meet avian-friendly standards to reduce the risk of bird collisions.

because the encounter is shaped by the urban environment. The only group of animals that humans do frequently cross paths with is that of companion animals, such as dogs and cats, and these encounters take place within human-dominated settings. It is the humans who determine which space the domesticated animal can occupy, and it is within these boundaries of domination that the behaviour of the animal is judged. Dogs, for example, are always to be on leash (no longer than 2 meters or 6 feet), and they are not supposed to touch humans without invitation, cannot eat food provided to them on the street, and their poop is considered to be disgusting and in need of direct removal. The one place where dogs are cut some slack is in designated off-leash dog parks, where slightly more natural dog behaviour is accepted, but where owners are left with the discretion to control their dog when misbehaving – which can lead to unpleasant encounters when behaviour is misunderstood.

If you are not an able-bodied human or domesticated animal, urban landscapes are not intended to be a welcoming environment. Buildings are intentionally designed to prevent animals from entering or nesting, and when a liminal or wild animal is encountered, they are only accepted in a small range of areas. Think about your own environment, or, if you live in the countryside, think about the times you walked around in a city. There were most likely birds flying around you, maybe you even saw some people feeding the birds. If you are, like me, in Canada, there is a fair chance that you also saw squirrels and if it was a summer day, you would probably encounter some bugs. These animals are all relatively accepted to be in these places (outside, away from human food sources, and preferably not near us). In other words, the place of non-domesticated animals around humans is as controlled as that of domesticated animals; the control is sometimes simply more indirect.

The notions of space and place, and where one belongs, is a human construction. In modern Western societies specifically, this construction of space and place separates humans from non-humans. Also known as the nature-culture dualism, Western human-animal

positioning needs to render human-animal relations invisible to maintain the divide between the groups, and animals are only welcome on human terms.<sup>199</sup> Places can thus be thought of as settings in which social relations and identities are constructed; places are not just neutral but are active agents in the shaping of human/animal experiences.<sup>200</sup> The way that these places influence experiences and relations depends heavily on the space in which they take place. And it is space that is often transformed by humans to benefit humans, without considering non-humans. Through these transformations, places have become more and more explicitly human domains, and animals can be excluded when not conforming to the cultural norms laid out for existing within these places.

Looking at space/place relations shows that popularity or vilification of certain animals at different times owes less to the behaviour of particular animals and more to broader political, social, and cultural concerns in human society.<sup>201</sup> Socio-zoologic systems rank animals for how well they seem to ‘fit in’ and play the roles humans expect them to play in society.<sup>202</sup> How well animals seem to know their place and stay in it determines their worth and position on the social ladder. On such a scale, good animals have higher status because they willingly accept their subordinate place in society.<sup>203</sup> Bad animals, however, have a lower status because their subordinate place is unclear or because they no longer remain quietly out of sight and distanced from people.<sup>204</sup> When animals are perceived as bad animals, and thus animals out of place, they become a symbolic or real threat which justifies their exploitation and/or exclusion.

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<sup>199</sup> Bruno Latour, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993), 10-11; Bruno Latour, *Politics of Nature* (Cambridge: Harvard University Press, 2004).

<sup>200</sup> Wilbert Gesler and Robin Kearns, *Culture/Place/Health. Critical Geographies 16* (London: Routledge, 2002), 5; Nancy Duncan and James Duncan, *Landscapes of Privilege: The Politics of the Aesthetic in an American Suburb* (New York: Routledge, 2004).

<sup>201</sup> Hilda Kean, “Imagining Rabbits and Squirrels in the English Countryside,” *Society and Animals* 9, no. 2 (2001): 166; Michel Foucault, *The Order of Things: An Archeology of the Human Sciences* (London: Tavistock Publications, 1970).

<sup>202</sup> Arluke and Sanders, *Regarding Animals*, 169.

<sup>203</sup> Idem.

<sup>204</sup> Arluke and Sanders, *Regarding Animals*, 169-170.

One of the more detailed theories explaining the justifications given by humans for constructing human-animal relations in space and place is given by Philo and Wilbert, who define it in their theory of imaginative geography. According to this theory, many human discourses contain within them a definite imaginative geography serving to position ‘them’ (animals) relative to ‘us’ (humans) in a fashion that links a conceptual ‘othering’ (setting them apart from us in terms of character traits) to a geographical ‘othering’ (fixing them in worldly places and spaces different from those that we humans tend to occupy).<sup>205</sup> So, animals are not only othered based on physical and mental differences, but also by the space they are – and more specifically are not – supposed to occupy and reside in. This is important to recognize, as humans have a biological inclination to like animals that resemble humans more, and especially animals that portray baby features such as large eyes, or a large head compared to their body.<sup>206</sup> Yet there are many animals that fulfill these requirements, and are still classified as bad: monkeys, foxes, and deer, to just name a few. The reason these animals are considered to be bad is not because of their physical appearances, but because they are in places where they are not wanted, or where people believe they do not belong.

The positioning of animals based on space and physical characteristics helps explain why some animals are considered bad in socio-zoological systems even if their behaviour or characteristics would not necessarily classify them as such. What the theory of imaginative geography also demonstrates is that there are multiple overlapping perceptions of animal species in the world, depending on whose imaginative projections are under consideration, where they are in the world, what kinds of animals are at stake, and so on.<sup>207</sup> As cultural values

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<sup>205</sup> Edward Said, *Orientalism* (New York: Pantheon Books, 1978), 54-55, 71-72; Philo and Wilbert, *Animal Spaces*, 10-11.

<sup>206</sup> For more on this topic, see Konrad Lorenz work on all infants (both human and animal) having features that are universally considered appealing.

<sup>207</sup> Philo and Wilbert, *Animal Spaces*, 11.

aid in the construction of place and consequentially the imaginative geography, it is thus culture that plays an important role in contexts of human perceptions of animals.

### *Boundaries of Place*

Places are thus inherently human-constructed spaces that dictate certain behaviours, movements, and rules. Animals are often not aware of these requirements, and frequently cross the boundaries of the places to which they are assigned. When liminal animals cross from their marginal spaces into areas claimed as designed for humans, the animals become seen as out of place. Routine territorial boundary-crossing behaviour thus forms part of the basis of 'out of place' status. Where such mobility occurs, the human-constructed order of place is threatened, with the result that the animal in question is perceived negatively and faces the threat of being removed. For example, in Western cultures, rats are seen as disgusting and inedible because they 'belong' in non-civilized places such as sewers and outskirts. As long as rats stay in their assigned places, they are relatively safe, but when they cross the boundary by coming into human territories such as houses, stores, or restaurants they are removed – often in lethal ways – as they disturb the human construction of place and belonging.

Boundary crossing is especially true for liminal animals, as they occupy the space between domesticated and wild. Balancing this fine line between two clearly separated groups makes it almost inevitable for liminal animals to go in places that belong to either one group or the other. This is not because liminal animals intentionally seek to defy the boundaries that are set in place, but more so because the places in which they are accepted are limited. Numerous liminal animals inhabit localities which do not warrant the designation 'wild', but rather comprise the marginal spaces in and around the towns, cities, and countryside where most humans live, work and rest. These areas tend to be the spaces that humans avoid, ugly to their eyes and surplus to their requirements, although there are some human 'outsiders' such

as homeless people, travellers and law-breakers whom also seek out these marginal spaces away from the public.<sup>208</sup> These marginal locations may include the sorts of spaces inhabited by rodents in cities, such as sewers, or the neglected tracts of land often situated next to urban railway lines where a diversity of humans and animals can be found. Such spaces and their occupants are commonly regarded as transgressive of settled human society, divorced from the civilized going-on of town, cities and villages, but still sufficiently close-by to prompt enough distaste, fear and loathing to be coded as ‘out of place’ in proximity to everyday houses, businesses and streets.<sup>209</sup> Sometimes the very presence of certain animals living their lives in these same spaces – think particularly of rats in sewers – can help to render such spaces marginal in the minds of many humans, as ones to be avoided at all costs by ‘decent’ people.

Interestingly, the border crossing of liminal animals is often a result of humans settling in an animal’s territory. Animals are frequently described as ‘immigrants’ in a way that inaccurately defines urban space as settled by humans prior to the presence of animals. As such, the culls of ‘pests’ that frequently accompany slum clearances and urban development projects figure animals as illegal occupiers.<sup>210</sup> The belief that urban areas are settled by humans first allows for the idea that animals can invade – even if the animal was there first. Nonetheless, the mere construction of an animal as an invader implies that their presence violates and potentially threatens the perceived natural order.<sup>211</sup> In New Zealand, the possum is predominantly represented as a pest: a successful invader who has largely conquered New Zealand’s forests and a threat to New Zealand’s substantial farming sector. In this ‘foreign threat narrative’, the possum spreads, infects, invades, attacks, and kills.<sup>212</sup> One of the main

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<sup>208</sup> David Sibley, *Geographies of Exclusion: Society and Difference in the West* (London: Routledge, 1995).

<sup>209</sup> Philo and Wilbert, *Animal Spaces*, 20.

<sup>210</sup> Marie Shingne, “The more-than-human right to the city: a multispecies reevaluation,” *Journal of Urban Affairs* (2020): 1-9.

<sup>211</sup> Best, “Constructing animal species,” 4; Not all animal invaders are necessarily perceived in a negative way – Monk Parakeets invading The Hague, Netherlands, have been welcomed by local citizens – and the construction of place is thus important for how an invader animal is treated.

<sup>212</sup> Annie Potts, “Kiwis Against Possums: A Critical Analysis of Anti-Possum Rhetoric in Aotearoa New Zealand,” *Society and Animals* 17, no. 1 (2009): 3.

ways possums are represented in New Zealand is through notions of invasion and military tropes related to defense and attack.<sup>213</sup> The strategic use of military metaphors facilitates a sense of threat and a desire to defend against attack; in this case, against attack on those forests, native animals, and farm culture that symbolize ‘New Zealandness’.<sup>214</sup> Possums in New Zealand are thus not only out of place because they are not native, they are out of place because they pose a threat to what is understood as important for New Zealand’ culture and identity. As a result of this representation of possums as out-of-place invaders, they are faced by extensive control campaigns led by governmental agencies that employ hunting, trapping, poisoning, and other methods of lethal control.

Animals are not the only invaders when it comes to space. Through continuous expansion humans frequently claim space that was originally considered ‘wild’, seeking to domesticate and civilize (read suppress and destroy) its inhabitants and nature. The last decades have seen a rapid increase of urbanization, and cities are frantically trying to keep up with demand for housing and jobs. As of 2007, more than half the world population lives in urban areas, and as of 2050 it is expected that cities occupy more than two-thirds of the world population, which roughly equals to 7 billion urban residents.<sup>215</sup> Although urban residences are frequently built vertically, suburbs and height restrictions result in an ever-growing urban landscape. The encroachment of urban expansion on ‘wild’ areas destroys living habitats of wild animals and minimizes their remaining resources and foraging spaces. Lacking proper land to survive off, this urban expansion leads to wild animals more often entering human inhabited areas to sustain themselves. Additionally, even if there is no direct urban expansion, suburban processes such as gentrification victimize wild and liminal animals as well, as their

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<sup>213</sup> Potts, “Kiwis Against Possums,” 4.

<sup>214</sup> Potts, “Kiwis Against Possums,” 4.

<sup>215</sup> For more information on urbanization statistics, see UN World Urbanization Prospects.

well-being is not taken into account during the process, and animals are violently displaced from neighbourhoods undergoing change.<sup>216</sup>

Human-bear conflict in Japan is a good example of the impact of human expansion into ‘wild’ spaces, as bears in Japan are increasingly venturing into human spaces in search of food, especially in years of poor nut harvest, as the bear’s natural habitat and food sources have become more and more depleted because of urban expansion.<sup>217</sup> These boundary-crossing bears cause psychological discomfort to those humans in the affected areas, who feel that it is a sign of something more ominous and far-ranging – a sign of a fundamental disturbance in the balance of nature.<sup>218</sup> This trauma from bear encounters is, however, not related to occurrences of real danger to humans, as numbers of attacks are very low, but because the encounter is not supposed to happen in human-occupied space: the bear has the same effect as a ghost might if it crossed the road in front of a driver or appeared at the back door.<sup>219</sup> Although there is some awareness of the causes of human-bear conflict in Japan, the most common way of dealing with human-liminal bear conflict remains to portray the bears as out-of-place dangerous pests who must be trapped and killed.<sup>220</sup> So, rather than recognizing the impacts that human expansion has on animals, it is the bear that is stigmatized as an invading threat who has left their rightful place and must therefore be killed.

#### *Case Study: Exclusionary Cultural Norms around Pigeons as Out of Place*

Looking at articles and works that represent the discourse of animals ‘out of place’, Colin Jerolmack’s analysis of pigeons in Western societies provides one of the best illustrations

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<sup>216</sup> Phil Hubbard and Andrew Brooks, “Animals and urban gentrification: Displacement and injustice in the trans-species city,” *Progress in Human Geography* 45, no. 6 (2021): 1504.

<sup>217</sup> Cat Knight, “The bear as ‘endangered pest’: symbolism and paradox in newspaper coverage of the ‘bear problem’,” *Japan Forum* 20, no. 2 (2008): 173.

<sup>218</sup> Idem.

<sup>219</sup> Knight, “The bear as ‘endangered pest’,” 183.

<sup>220</sup> Knight, “The bear as ‘endangered pest’,” 178,180.

on how liminal animals are excluded based on the culturally assigned discourse of being out of place. Drawing on interactionist theories of social problems and cultural geography, Jerolmack argues that the construction of animals as problems relies upon cultural understandings of nature-culture relationships, which in turn entail imaginative geographies.<sup>221</sup> Specifically, modernity posits a firm boundary between nature and culture. Animals have their place but are experienced as out of place – and often problematic – when they are perceived to transgress spaces designated for human habitation.<sup>222</sup>

The status of pigeons as out of place is a rather recent one, and up until the 1960s pigeons were not considered a major public threat. Quite the opposite, pigeons were heralded by many during World War I and II, providing communication, saving bomber crews, and wearing bras for the transportation of small goods.<sup>223</sup> They were even the recipients of the animal's equivalent of the Victoria Cross – the Dickin Medal. Yet, in the 1930s and 1940s, pigeons slowly became considered to be a nuisance, nesting and defecating in and on landmarks, statues, and sidewalks.<sup>224</sup> This change came at the same time that humans started to organize their cities more and more within ideologies of cleanliness and order. As such, the 1950s discovery that pigeons carry diseases that can spread to humans, and the 1963 framing of pigeons as menacing vermin that ought to be exterminated by American officials, signaled the downfall of the status of pigeons in North America.<sup>225</sup> A 1966 article by the *New York Times* neatly put together all of these threads in one convenient description of pigeons: 'rats with wings'.<sup>226</sup> In the same article, the apparent health and nuisance threat of pigeons was not only

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<sup>221</sup> Jerolmack, "How Pigeons Became Rats," 74-75.

<sup>222</sup> *Idem*.

<sup>223</sup> Claire Barrett, "How some bra-wearing pigeons saved thousands of lives during WWII," *Military Times*, last modified December 24, 2020, <https://www.militarytimes.com/off-duty/military-culture/2020/12/24/bra-wearing-pigeons-saved-thousands-of-lives-in-wwii/>

<sup>224</sup> Jerolmack, "How Pigeons Became Rats," 81.

<sup>225</sup> *Idem*.

<sup>226</sup> "Hoving Calls a Meeting to Plan for Restoration of Bryant Park," *New York Times*, published June 22, 1966.

linked to the existing menace of rats<sup>227</sup>, the author also tied them to recognized social problems of the time such as homeless people and homosexuals.<sup>228</sup> What is important to note here is that it was not the metaphor that created the pigeon problem, but rather the metaphor shows that the pigeon as a problem species reached a certain socio-cultural threshold that warranted a negative metaphor based on other socio-culturally perceived threats of space and place.<sup>229</sup>

These days, descriptions of pigeons alternate between ‘dirty’, ‘filthy’, and ‘disease-ridden’, but the most common urban descriptor for pigeons is still that of ‘rats with wings’.<sup>230</sup> Popularizing it in his 1980 movie *Stardust Memories*, Woody Allen used the term when he panicked at the sight of a pigeon in his apartment: ‘It’s not pretty at all. They’re, they’re, they’re rats with wings! ... It’s probably one of those killer pigeons ... You see? It’s got a swastika under its wings.’<sup>231</sup> Jumping out here, right away, is the threat that pigeons pose to humans, even referring to them as killer pigeons. Used frequently in North American urban settings, the rhetorical framing of pigeons as ‘rats with wings’ reveals more about the Western cultural anxiety about disorder and a deeply felt need for a sanitized city, than a concern for diseases that pigeons may carry.<sup>232</sup> Jerolmack argues that the metaphor of ‘rats with wings’ works to further reduce the moral and physical place humans allow for pigeons, making pigeons frequently considered as out of place.<sup>233</sup> This space-and-place setting is highly linked to the urban environment and the associated imaginative geographies. As discussed above, the ideal

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<sup>227</sup> Many cultures have a deep antipathy for rats, as they believe them to carry filth and disease, and associate them with death and places such as gutters. As such, people routinely react to rats in disgust and horror. For more on the negative perceptions on rats see Birke, “Who-or What-are the Rats,” 207-224; Anthony Barnett, *The Story of Rats: Their Impact on Us, and Our Impact on Them* (New South Wales: Allen and Unwin, 2001); Michael Lynch, “Sacrifice and the Transformation of the Animal Body into a Scientific Object: Laboratory Culture and the Ritual Practice in the Neurosciences,” *Social Studies of Science* 18, no. 2 (1988): 265-289.

<sup>228</sup> Hoving Calls a Meeting.”

<sup>229</sup> Pigeons are not the first birds to whom this frame was applied, and for more information on another case – that of sparrows – see Gary Alan Fine and Lazaros Christoforides, “Dirty Birds, Filthy Immigrants, and the English Sparrow War: Metaphorical Linkage in Constructing Social problems,” *Symbolic Interactions* 14 (1991): 375-391.

<sup>230</sup> Andrew Blechman, *Pigeons: The Fascinating Saga of the World’s Most Revered and Reviled Bird* (New York: Grove Press, 2006), 129.

<sup>231</sup> *Stardust Memories*, directed by Woody Allen (United Artists Corporation, 1980).

<sup>232</sup> Jerolmack, “How Pigeons Became Rats,” 73.

<sup>233</sup> Idem.

Western urban space is orderly and sanitized, with nature subdued and compartmentalized, and with the urban space one for humans and not so much for animals.

Pigeons, and their metaphor of ‘rats with wings’, are the antithesis of the ideal Western urban place. While typified as a health issue, pigeon’s primary offense is that they ‘pollute’ places dedicated to human use. This pollution can be either through their feces, or through pigeons simply existing in spaces where they are not supposed to be – think of ledges of high-rise buildings, or under the roof of a parking garage. Actual harm caused by pigeons, beyond leaving their feces everywhere, has, however, never been proven. On the contrary, it does not appear that pigeons carry diseases that are not carried by other urban birds, yet they are the ones that are perceived as a particularly filthy and dangerous animal.<sup>234</sup> What this shows, is that rather than the health threat to humans, it is the metaphorical threat of pigeons to the orderly, sanitary modern city, that leads them to be characterized as out of place in urban areas.<sup>235</sup> Being difficult to tame or control, pigeons, and their pollution, create a human experience of social disorder, and as such the human response is to perceive pigeons as not belonging in urban places.

The result of the out-of-place perception of pigeons is that they are being removed from Western urban areas, producing an even stronger loss of tolerance for them. Pigeons are legally allowed to be killed in Canada as they are not migratory species, and in the United States of America (USA) because they are introduced species. In the USA, pigeons captured in urban areas such as New York City are even used as targets for live pigeon shoots.<sup>236</sup> Pigeon feeding and breeding remains a hobby for some people, but city squares known for larger pigeon populations such as Trafalgar Square in London and the Piazza San Marco in Venice have

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<sup>234</sup> Natalie Angier, “New York’s Tough Pigeons Fight Predators for Survival,” *New York Times*, July 8, 1991; Bain Helen, “City Pigeons: Coo or Shoo?” *The Dominion (Wellington, New Zealand)*, February 6, 2001, 9; Tina Kelley, “From Lowly Pigeon, Lessons in Birds (and Bees),” *New York Times*, January 10, 2000.

<sup>235</sup> Jerolmack, “How Pigeons Became Rats,” 85.

<sup>236</sup> James Fanelli, “‘They shoot pigeons, don’t they?’” *New York Post*, July 27, 2008.

made it illegal to feed pigeons and are actively trying to remove pigeons from the area.<sup>237</sup> Many other Western urban areas are following suit, with both Toronto and New York City currently discussing legal bans on pigeon feeding, and Saskatoon even going as far as lethally removing pigeons from their bridges citing pigeon-caused pollution as the justification.<sup>238</sup> Offering an alternative to lethal removal, Leicester, UK, dealing with a similar problem, opted for the humane removal of more than 2000 pigeons and their young from council-owned properties by reaching out to PiCas International.<sup>239</sup> Regardless of the method of removal, pigeons are framed as out-of-place in Western urban environments because of their threat to Western urban imaginative geographies, resulting in a reduction of positive human-pigeon interactions and the – generally lethal – removal of pigeons from urban environments.

### Disruptive

Every morning I walk my dog Jay through our neighbourhood. On these walks we steadily pass one of our neighbours, who, rain or shine, will sit outside on a lawn chair smoking a cigar. We often have a quick chat about the weather and what the grandchildren have been up to, but he never fails to mention how these ‘damn squirrels and raccoons’ are causing havoc on his garden and garbage bins. My neighbour has nothing against animals, will always call Jay over for a pet, is fascinated by the rats living in our street – and who are frequently visible when it is raining – and shares his household with numerous cats. Nonetheless, squirrels and raccoons are bad animals that are not allowed near or on his property. This does not mean that my neighbour sits outside with a gun – we live in an urban neighbourhood with a high ratio of

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<sup>237</sup> Blechman, *Pigeons*, 141-142; Colin Jerolmack, *The Global Pigeon* (Chicago: The University of Chicago Press, 2013), 56-70; Phil Stewart, “Venice to fine tourists who feed pigeons,” *Reuters*, April 30, 2008.

<sup>238</sup> Darci Frinquelli, “NYC Parks Department is Considering Ban on Feeding Wildlife – Public Hearing March 1<sup>st</sup>,” *Washington Square Park Blog*, February 26, 2019; Elena DeLuigi, “City of Toronto to examine proposal to ban feeding of pigeons,” *Toronto Star*, July 14, 2021; Stephanie Taylor, “Advocate questions decision to kill pigeons pooping on Sid Buckwold Bridge,” *Global News*, May 8, 2019.

<sup>239</sup> “Reducing Pigeon Numbers in Towns & Cities,” *Pigeon Control Resource Centre*, 2009.

children – but that he also does not shy away from setting out traps or using poison. When asking him if he is okay with the squirrels across the street, he will explain that the squirrels are fine everywhere, if they would stop disrupting him by destroying his garbage cans. He would even be fine with them on his property if they would just not be such ‘a dang nuisance’.

My neighbour is not the only one who feels this way, as squirrels and raccoons are often seen as vermin and pests who do nothing but disrupt the lives of humans.<sup>240</sup> Part of the reason for these liminal animals to be seen as nuisances is because they thrive in areas where they are not supposed to thrive<sup>241</sup> – which links up with the characterization of being out-of-place. The category of exclusionary cultural norms discussed here, however, often recognizes this idea of being out-of-place, but targets a different factor: disruption. Rather than focusing on the animal as being disruptive because they are out-of-place, it is the disruption itself that becomes the reason for exclusion, leading to justifications for the removal of those liminal animals from society. While there is a correlation between the category of out-of-place and disruption, they can thus be seen as separate categories for understanding the exclusionary cultural norms around liminal animals. A study in Paris, for example, shows that rats can be seen as out-of-place, but when it comes to disruption, it is not as much about the space that rats are in, but the fact that they are causing disruption itself that leads to the removal of rats.<sup>242</sup> Another scenario that is brought up in this research is that rats are excluded for posing a health threat<sup>243</sup> – such as in restaurants – which again, targets the exclusionary cultural norms beyond the category of out-of-place, and focuses specifically on another category – which will be discussed later on.

There are two main types of disruption: disruption leading to financial losses and disruption leading to filth and nuisance. The first is signaled by damaging crops and the

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<sup>240</sup> Nicholas Holm, “Consider the Squirrels: Freaks, Vermin, and Value in the Ruin(s) of Nature,” *Cultural Critique* 80 (2012): 75-76; Lauren Corman, “Getting Their Hands Dirty: Raccoons, Freegans, and Urban “Trash,”” *Journal for Critical Animal Studies* 9, no. 3 (2011): 28-61.

<sup>241</sup> Holm “Consider the Squirrels,” 74-75.

<sup>242</sup> Pauline Delahaye, “Rats, Mice and Humans,” *Linguistic Frontiers* 4, no. 1 (2021): 49.

<sup>243</sup> Idem.

reduction of land, food, and money, whereas the second takes the form of scat, raiding garbage, and damaging gardens. What is important in the category of disruptive behaviour is that the culturally negative image is often based on actual events, but with perceived disruption being blown out of proportion in relation to actual disruption, thereby justifying the exclusion of those animals who are classified as disruptive. So, while there may indeed be some actual disruption, this is often less than perceived and serves as justification for the exclusion of liminal animals. The level of perceived disruption is related to the carrying capacity that people have, as some may be more accepting of disruption than others. This carrying capacity is strongly influenced by the social-cultural perceptions about the animals in question. As will be discussed in chapter three, when people have a more positive view of an animal species, they are more likely to accept the disruption, whereas animals perceived in a negative way will more quickly be excluded. There are other external factors that influence these perceptions as well, and perceptions of disruptive liminal animals are constantly in flux. Pesticides and other new inventions, for example, can have the effect of lowering farmers' tolerance of damage because of their promises of preventability.<sup>244</sup> So, while social-cultural perceptions play a determining role in the way that animals are perceived, external factors such as the level of control over the disruption can move the threshold of exclusionary cultural norms.

Societies also incorporate their experiences of disruption into cultural practises, such as rituals, festivals, and children's games. African harvest-time masquerades – in which elephant masks are worn – simulate elephant disrupting human space through performances.<sup>245</sup> In rural Japan annual festivals such as 'deer dances' and 'monkey-chasing festivals' ritually re-enact wildlife crop-raiding and village resistance to it.<sup>246</sup> And in the livestock-based communities of

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<sup>244</sup> John Knight, "Introduction," in *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*, ed. John Knight (London: Routledge, 2000), 10.

<sup>245</sup> Doran Ross, *Elephant: The Animal and its Ivory in African Culture* (Los Angeles: Fowler Museum of Cultural History, 1992), 18.

<sup>246</sup> K. Nomoto, "Changes in the Japanese view of animals: complications in the case of the deer," in *Animals and Civilization*, ed. M. Kawai and K. Hanihara (Tokyo: Asakura Shoten, 1995), 89-105; Okpyo Moon, *From*

northern Spain children play a wolf-hunt game in which they act out the roles of mounted hunters, horses and wolves.<sup>247</sup> The human experience of liminal animal disruption can thus be seen as a twofold one: the conflict is directly experienced through the confrontation itself and indirectly experienced through assorted cultural practices and performances which refer to it. These cultural practices are heavily influenced by social-cultural perceptions of the animal species and can aid in the exclusionary cultural norms around the animals involved.

### *Disruption Leading to Financial Losses*

Crop and livestock damage affect communities in more ways than just as a direct loss of an economic source. The economic loss sustained by liminal animals can also result in substantial social costs, including reduced food security, health care, education, labour, land tenure, access to resources and psycho-social well-being.<sup>248</sup> Disruptive behaviour leading to financial losses also includes a cultural aspect that determines the value of crops/livestock. In a study on perceptions of large carnivores in Tanzania, for example, local people cited lions as the most problematic species, even though spotted hyenas had a higher perceived problem score.<sup>249</sup> The reason for lions being chosen above spotted hyenas was because they reportedly posed a particular threat to cattle (which have high economic and cultural value), whereas spotted hyenas were perceived as more of a threat to less-valued small-stock.<sup>250</sup> As people in

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*Paddy Field to Ski-slope: The Revitalization of Tradition in Japanese Village Life* (Manchester: Manchester University Press), 156-162.

<sup>247</sup> James Fernandez, *Persuasions and Performances: The Play of Tropes in Culture* (Bloomington: Indiana University Press, 1986), 32-33.

<sup>248</sup> Lisa Naughton-Treves, and Adrian Treves, "Socioecological factors shaping local support for wildlife in Africa," in *People and Wildlife: Conflict or Co-existence?* ed. Rosie Woodroffe, Simon Thirgood, and Alan Rabinowitz (Cambridge: Cambridge University Press, 2005), 253-279; Monica Ogra, "Human-wildlife Conflict and Gender in Protected Area Borderlands: A Case Study of Costs, Perceptions, and Vulnerabilities from Uttarakhand (Uttaranchal), India," *Geoforum* 39, no. 3 (2008): 1408-1422; Sushrut, Jadhav, and Maan Barua, "The Elephant Vanishes: Impact of Human-elephant Conflict on People's Wellbeing," *Health & place* 18, no. 6 (2012): 1356-1365; Catrina Mackenzie, and Peter Ahabyona, "Elephants in the Garden: Financial and Social Costs of Crop Raiding," *Ecological economics* 75 (2012): 72-82.

<sup>249</sup> Amy Dickman, et al., "Carnivores, culture and 'contagious conflict': Multiple factors influence perceived problems with carnivores in Tanzania's Ruaha landscape," *Biological Conservation* 178 (2014): 25.

<sup>250</sup> Idem.

these communities rely heavily upon livestock for wealth and social status, most respondents wanted large carnivores to decline or disappear.<sup>251</sup> Looking at monthly recall figures, however, loss of livestock from carnivores accounts for less than 1,3% of herd size – far less than losses to other causes such as disease or even theft – similar to what has been found elsewhere.<sup>252</sup> Although even a few losses can have significant impacts on poor households, it was thus primarily the shared believe of carnivores causing most damage, as well as the cultural importance of the livestock that got killed that influenced whether carnivores, and specifically lions, were excluded.<sup>253</sup>

Disruptive behaviour leading to financial losses by animals can also be considered a potential lifestyle wrecker and destruction of years of hard work. On the discussion of reintroducing wolves to Yellowstone National Park, for example, some residents of the region expressed that they felt as if their way of life was being stolen. While economic concerns weighed heavily on residents' minds as they viewed the wolf's reintroduction, the issue was not purely one of economics or of earning a living, but about the possibility that making a living may no longer be possible.<sup>254</sup> While a compensation program was set in place for ranchers whose cattle or sheep were killed by reintroduced wolves, a rancher's labour is irreplaceable because of the expertise that the animals represent and because, once gone, the stock's genetic makeup vanishes as well.<sup>255</sup> In support of preserving their lifestyle, the wolves became constructed as governmental vehicles to limit residents' self-determination by

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<sup>251</sup> Idem.

<sup>252</sup> Dickman et al., "Carnivores, culture and 'contagious conflict'," 25-26; Marcelo Mazzolli, Mauricio Graipel, and Nigel Dunstone, "Mountain lion depredation in southern Brazil," *Biological Conservation* 105 (2002): 43-51.

<sup>253</sup> Rodney Jackson, et al., "Snow leopards: conflict and conservation," in *Biology and Conservation of Wild Felids*, ed. Macdonald and Loveridge (Oxford: Oxford University Press, 2010), 418-430; Gidey Yirga and Hans Bauer, "Livestock depredation of the spotted hyena (*Crocuta crocuta*) in Southern Tigray, Northern Ethiopia," *International Journal of Ecology Environment Science* 36, no. 1 (2010): 67-73.

<sup>254</sup> Rik Scarce, "What Do Wolves Mean? Conflicting Social Constructions of *Canis Lupus* in "Bordertown"," *Human Dimensions of Wildlife* 3, nr. 3 (1998): 35.

<sup>255</sup> Scarce, "What Do Wolves Mean?" 34.

controlling their lifestyles and their livelihoods.<sup>256</sup> Interestingly enough, this notion of limiting self-determination was also brought up by those in favour of reintroducing wolves, but then in context of the wolf. To reassure residents, the government said that they will always be prepared to control misbehaving wolves – wolves that get too close to people or their possessions.<sup>257</sup> So, even though wolves have been reconstructed in recent decades as symbols of freedom and wildness in Western cultures, society eventually still determines where and when they live.<sup>258</sup>

Although not all disruption resulting in financial losses leads to exclusion, analyzing numerous reports on reactions to animals causing financial losses indicates a strong preference for lethal or exclusionary measures. Studies looking at agricultural damage caused by geese, for example, found that there is no consistent relationship between local grazing intensity and yield loss<sup>259</sup>, making it unpredictable whether geese are causing the agricultural damage that is being reported. Nonetheless, a study from the Netherlands found that approximately half of respondents in the general public supported lethal control when they think that geese are damaging agricultural crops, as there is a cultural belief of geese as disruptive animals.<sup>260</sup> In addition, a study conducted on Mexican farmers' perceptions and reactions to wildlife damage of crops showed that 69.3% of the farmers tolerated losses because the source of the problem was the lack of other food sources for the animals, but that of the same group 81.6% used control measures leading to the exclusion of perceived disruptive animals.<sup>261</sup> Additionally,

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<sup>256</sup> Scarce, "What Do Wolves Mean?" 39.

<sup>257</sup> Scarce, "What Do Wolves Mean?" 41.

<sup>258</sup> Idem.

<sup>259</sup> Steve Percival and D. Houston, "The effect of winter grazing by barnacle geese on grasslands yields on Islay," *Journal of Applied Ecology* 29 (1992): 35-40; D. Patton and J. Frame, "The effect of grazing in winter by wild geese on improved grasslands in West Scotland," *Journal of Applied Ecology* 18 (1981): 311-325; I. Patterson, "Conflict between geese and agriculture: does goose grazing cause damage to crops?" *Ardea* 79 (1991): 179-186; Anthony Fox et al. "Agriculture and herbivorous waterfowl: a review of the scientific basis for improved management," *Biological Reviews* 92, no. 2 (2017): 854-877.

<sup>260</sup> Sijtsma, Vaske, and Jacobs, "Acceptability of lethal control," 1308-1323.

<sup>261</sup> Gabriel Can Hernández, et al., "Wildlife damage to crops adjacent to a protected area in southeastern Mexico: farmers' perceptions versus actual impact," *Human-Wildlife Interactions* 13, no. 3 (2019): 428-429.

lethal control of large carnivores in the United States of America is done primarily to benefit livestock producers in western states, often intensely at a very local scale, and can result in removal of one or more carnivore species from local ecosystems.<sup>262</sup> The annual number of control kills of coyotes by the Wildlife Services of the United States Department of Agriculture's Animal Plant Health Inspection Services, for example, has remained remarkably constant since 1939, varying between 50,000 and 110,000 and has exceeded 70,000 annually since 1985.<sup>263</sup> In 1994-1995 these control kills of coyotes were so intense that Wildlife Services removed approximately 23.2% of the estimated coyote population of Wyoming.<sup>264</sup> Although Wildlife Services continue to practice lethal control in western states, science is showing that these extreme measures are unnecessary and counterproductive to the goal of reducing disruption.<sup>265</sup> Regardless of the actual impact, the cultural perceptions of some liminal animals as disruptive is thus still frequently met with exclusion through lethal means.

#### *Disruption Leading to Filth and Nuisance*

Remember my neighbour who complained about the squirrels and raccoons in our neighbourhood? His description of squirrels and raccoons as nuisances fits neatly with the next category of disruptive liminal animals: filth and nuisance. Although some financial loss can be linked to the disruption caused by liminal animals, this category of disruption is also tied with notions of filth and garbage. In some cases, these notions of filth and garbage become directly linked to diseases – a category discussed later – but some liminal animals face exclusion

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<sup>262</sup> Bradley Bergstrom, et al., "License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function," *Conservation letters* 7, no. 2 (2014): 131–142.

<sup>263</sup> Kim Murray Berger, "Carnivore-Livestock Conflicts: Effects of Subsidized Predator Control and Economic Correlates on the Sheep Industry," *Conservation biology* 20, no. 3 (2006): 751–761; Bergstrom et al., "License to Kill," 131-142.

<sup>264</sup> Bradley Bergstrom, "Carnivore conservation: shifting the paradigm from control to coexistence," *Journal of Mammalogy* 98, no. 1 (2017): 1-6.

<sup>265</sup> Adrian Treves, Miha Krofel, and Jeannine McManus, "Predator Control Should Not Be a Shot in the Dark," *Frontiers in ecology and the environment* 14, no. 7 (2016): 380–388.

primarily through their association with filth itself. As such, these liminal animals are framed as filthy nuisances who need to be removed from society to stop the disruption caused by them.

The disruption caused by liminal animals takes place both in and around individual's houses and in public spaces. In both private and public settings, one of the primary locations around which this disruption takes place is that of the garbage can. As with the cultural characterization of pigeons as out-of-place because of underlying notions of cleanliness related to human vs. animal spaces, other liminal animals are also culturally negatively perceived in relation to notions of cleanliness. Contrary to the case study of pigeons, however, the characterization of disruption through filth and nuisance does not directly come from the division between human vs. nature spaces assigned by a culture but derives mainly from a direct connection to something that is considered a cultural taboo in many cultures: touching and consuming trash. An important distinction to make here between the categories of being out-of-place and being disruptive is that liminal animals framed as disruptive need to perform an act before they are being negatively perceived, whereas those animals characterized as out-of-place fall into this category regardless of their behaviour. In the cases of out-of-place perceptions, it is simply sufficient to belong to an unwelcome animal species.

In Rome, the decline of the city is directly linked to the increase in boars rooting through uncollected piles of trash. These notions of disrupting waste containment and management systems is widespread throughout Europe, and many cities consider liminal boars as sufficiently disruptive to exclude them through lethal means.<sup>266</sup> Moreover, previous studies in other areas of the world, which relied on interview data to estimate liminal boar distribution in an area, demonstrate a very high prevalence of false-positive detection errors for liminal boars – making it much more likely for people to blame boars for disruption even if boars were not

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<sup>266</sup> Bernhard Warner, "Boar Wars: how wild hogs are trashing European cities," *The Guardian*, July 30, 2019, <https://www.theguardian.com/world/2019/jul/30/boar-wars-how-wild-hogs-are-trashing-european-cities>

prevalent at the time.<sup>267</sup> Nonetheless, rather than looking at the causes of wild boars venturing into cities for food, and what role humans play in these cases of disruption, it is the liminal boar that is removed from society. As boars are nocturnal, and relatively little threat is caused by them through other means (both incidents of the spread of diseases, injury because of a vehicular collision, or direct attacks are very limited even though there has been a worldwide increase in liminal boars), the cultural depiction as disruptive is used to justify creating killing teams. Berlin even has its own *Stadtjäger*, who are specifically hired to cull urban boar.<sup>268</sup>

The decline of a city being linked to animals consuming trash aligns with ideas within Western culture that animality represents what is unclean, in- or sub-human, and uncivilized. These notions, however, do not only apply to animals, and the demarcation of certain human classes and races as dirty or filthy has helped perpetuate classist, racist, and imperialist ideologies.<sup>269</sup> Especially freegans – those who consume wasted food from dumpsters – and other people depending on trash as their food source, disrupt and reroute state regulated and socially-sanctioned food pathways, such as purchasing food at grocery stores, consuming it in the home or other designated area, placing waste within the appropriate receptacle (recycling, garbage, or compost), and depositing it in a city-approved container.<sup>270</sup> Liminal animals disrupting these aspects of trash interrupt the waste containment and management systems that serve both a literal and symbolic purpose within urban environments.

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<sup>267</sup> Rajeev Pillay, et al. “Accounting for False Positives Improves Estimates of Occupancy from Key Informant Interviews,” *Diversity & Distributions* 20, no. 2 (2014): 223-235.

<sup>268</sup> X.J. Meng, D.S. Lindsay, and N. Sriranganathan, “Wild boars as sources for infectious diseases in livestock and humans,” *Philosophical Transactions. Biology Sciences* 364, no. 1530 (2009): 2697-2707; John J. Mayer, 2013, “Wild Pig Attacks on Humans,” In *Proceedings of the 15<sup>th</sup> Wildlife Damage Management Conference, Lincoln, 2013*. (Lincoln: Digital Commons, University of Nebraska), 17-35; Annika Jägerbrand, and Ing-Marie Gren, “Consequences of Increases in Wild Boar-Vehicle Accidents 2003-2016 in Sweden on Personal Injuries and Costs,” *Safety* 4, no. 4 (2018): 53-65; Lucy Bearman-Brown, Rebecca Saunders, and Jennifer Howse, “Attitudes of residents to feral wild boar (*Sus scrofa*) in the Forest of Dean, England,” In *International Society for Anthrozoology Conference 2018: Animals in Our Lives: Multidisciplinary Approach to the Study of Human-Animal Interactions*, 2018. Sydney: University of Sydney; “Stadtjäger erlegen 12 Wildschweine im Brixpark,” *BZ-Berlin*, August 11, 2016, <https://www.bz-berlin.de/berlin/charlottenburg-wilmersdorf/stadtjaeger-erlegen-12-wildschweine-im-brixpark>.

<sup>269</sup> Corman, “Getting Their Hands Dirty,” 39.

<sup>270</sup> Corman, “Getting Their Hands Dirty,” 42.

Raccoons are perhaps the most well-known trash-raiding liminal animal, nicknamed trash pandas by social media and even having a baseball team in North Alabama named after them: The Rocket City Trash Pandas, with a raccoon in a trash can as their logo. Although their trash raiding has made them popular on social media – with videos of raccoons trapped in dumpsters or stealing from bins going viral – they are considered a disruptive pest by many. Within the dominant Western cultural system, raccoons do something regarded as dirty – digging through ‘trash’ and consuming pieces – while also contributing to the creation of dirt through the displacement of previously contained ‘trash’.<sup>271</sup> This trash raiding and consumption of trash directly clashes with the idea that the human environment needs to be clean, and that there is a clear separation between what does and does not belong into categories of consumable and dirty. Through their consumption of trash, overturning garbage cans, scattering the contents, and leaving a mess in their wake, raccoons thus interrupt the imaginative geography that Western culture has about civility. Additionally, raccoons are frequently understood as ‘stealing’ from the trash. Their distinct mask-like facial markings further prompt their common categorization as ‘thieves’ and ‘bandits’, names which clearly carry normative weight: such metaphorical condemnation draws its strength from a comparison with human beings who steal property and break the law, and these individuals are understood as morally corrupt and worthy of punishment.<sup>272</sup> Understandings of civility, dirt, and thievery thus intersect and inform Western negative cultural understandings of raccoons, resulting in the removal of raccoons from society.

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<sup>271</sup> Corman, “Getting Their Hands Dirty,” 43.

<sup>272</sup> *Idem.*

### *Perceived Versus Actual Disruption*

What is interesting about the disruptive category is that many animals that are perceived as disruptive are not the animals causing most of the disruption. As such, perceived versus real disruption is an important factor for understanding the impact of cultural norms around animals and their position in society. This factor is especially important as those liminal animals classified as disruptive face severe repercussions such as exclusion or even death, while other animals, whom at times cause even more damage, do not suffer the same consequences. As such, it is the negative cultural perception attached to the animal species that leads to exclusion rather than the animals' acts themselves.

Webber and Hill, for example, explored Ugandan farmer's perceptions of animal species causing crop damage in comparison with actual on-site measured crop losses. They concluded that local people consider baboons the most problematic species, but that actual loss measurements indicate that this perceived risk of severe crop loss is highly disproportionate.<sup>273</sup> When looking at actual crop damage, insects turned out to cause the most prevalent issues as well as the domestic goats that people keep at their farm.<sup>274</sup> Yet, during the discussions of general risks experienced by farmers, domestic animals, and specifically goats, were never identified as a significant problem.<sup>275</sup> Instead people primarily focused on baboons, describing them as the 'enemy' and perceiving them to be highly destructive with negative character traits such as 'greedy', and 'thief'.<sup>276</sup> Reviling liminal and wild species for causing damage even though domestic animals are responsible for a high proportion of the loss is not a new phenomenon.<sup>277</sup> The focus on wild and liminal animals as the primary causes of crop damage,

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<sup>273</sup> Amanda Webber and Catherine Hill, "Using Participatory Risk Mapping (PRM) to Identify and Understand People's Perceptions of Crop Loss to Animals in Uganda," *PloS One* 9, no. 7 (2014).

<sup>274</sup> *Idem.*

<sup>275</sup> *Idem.*

<sup>276</sup> *Idem.*

<sup>277</sup> Lisa Naughton-Treves, "Predicting Patterns of Crop Damage by Wildlife around Kibale National Park, Uganda," *Conservation Biology* 12, no. 1 (1998): 156-168; Catherine Hill and Amanda Webber, "Perceptions of nonhuman primates in human-wildlife conflict scenarios," *American Journal of Primatology* 71, no. 10 (2010): 1-6.

even though not backed up by actual damage analysis, suggests that the negative perceptions farmers have of these animals influence the perceived disruption caused by these animals, resulting in the exclusionary and/or lethal removal of these animals from society.

The Ugandan case study is not the only one showing a difference in perceived and actual disruption caused by animals. In Mexico, research has shown that wind and the presence of fungi in fruits cause greater economic losses compared to those caused by birds and mammals.<sup>278</sup> Even though the least damage to corn was caused by mammals, white-nosed coati and northern raccoons were still perceived as causing most crop damage, therefore being targeted by exclusionary measures such as baiting, poisoning, and trapping.<sup>279</sup> In parts of the northern Ethiopian highlands, 19% of respondents were negative towards leopards, and over 70% said leopards killed livestock, even though they no longer resided locally.<sup>280</sup> And in North America, wild turkeys face the same treatment as the white-nosed coati and northern raccoons in Mexico. Even though wild turkeys cause damage to crop, the damage is often minor or caused by other wildlife.<sup>281</sup> Nonetheless, turkeys are often considered disruptive by farmers, and where this is the primary cultural perception of turkeys state agencies have developed uniform guidelines and regulations that include the issuance of shooting permits, extension of hunting periods, and an increase in bag limit.<sup>282</sup> As is the case for baboons, white-nosed coati, and northern raccoons, wild turkeys are (lethally) depicted as disruptive, and are for this reason excluded from society, even when research demonstrates that they are not necessarily the primary cause.

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<sup>278</sup> Can-Hernández, et al., “Wildlife damage to crops,” 429.

<sup>279</sup> Can-Hernández, et al., “Wildlife damage to crops,” 428-433.

<sup>280</sup> Gidey Yirga, et al., “Farmers’ Perception of Leopard (*Panthera Pardus*) Conservation in a Human Dominated Landscape in Northern Ethiopian Highlands,” *Mediterranean Journal of Social Sciences* 3, no. 5 (2011): 160-166.

<sup>281</sup> Scott Groepper, et al., “Real and Perceived Damage by Wild Turkeys: A Literature Review,” *Journal of Integrated Pest Management* 4, no. 1 (2013): 1-5.

<sup>282</sup> James Miller, “Prevention and Control of Wildlife Damage: Wild Turkeys,” (paper written for Wildlife Damage Management Technical Series, National Wildlife Research Center, 2018), 8.

Some cases of perceived crop damage and exclusion of liminal animals demonstrates the cultural classification of the animal as a disruptor even when it is demonstrated that the animal is benefiting the crops. Wild turkeys, for example, often keep crop fields free from insects that would damage the crops. Another example is that of red colobus monkeys in Zanzibar. An endangered species, half of the remaining red colobus monkeys in Zanzibar reside outside of protected areas and within agricultural areas. There are a growing number of complaints about red colobus consumption of coconuts in the agricultural areas and requests by local farmers for the removal of the red colobus monkeys is increasing.<sup>283</sup> Research on the impact of coconut consumption by red colobus monkeys, however, shows that their feeding on immature coconuts does not limit coconut harvest, but instead positively correlates with the amount of coconuts harvested due to a pruning effect.<sup>284</sup> Rather than causing disruption and crop damage, as perceived by the farmers, red colobus monkeys thus contribute to the coconut harvest by pruning immature coconuts. What is perceived as causing damage is thus actually animals helping the agricultural sector.

Questions about perceived versus actual damage caused by disruptive liminal animals is not limited to disruption in the form of crop damage. Carnivorous animals frequently suffer from retaliatory or preventative killing, even when the data does not support the idea that the species is actually causing the disruption. Research on human-carnivore conflicts in Central Asia, for example, has focused on documenting the extent of livestock depredation and peoples' cultural norms in target villages. Many of these studies rely on what the local people tell researchers during interviews, and later research shows that these people actually fail to distinguish between livestock damage caused by snow leopards or wolves due to cultural

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<sup>283</sup> Kirstin Siex and Thomas Struhsaker, "Colobus Monkeys and Coconuts: A Study of Perceived Human-Wildlife Conflicts," *Journal of Applied Ecology* 36, no. 6 (1999): 1009.

<sup>284</sup> Siex and Struhsaker, "Colobus Monkeys and Coconuts," 1016.

biases.<sup>285</sup> This is especially of importance, as interviews in the same area conducted at a later stage, indicated that the majority of livestock damage is caused by snow leopards, but that wolves are thought of as being the main culprit.<sup>286</sup> As a result of this biased perception of the wolf, wolves near the villages face intense persecution.<sup>287</sup>

### Threat to Humans and/or Pets

Each year, people all over the world experience threats from liminal animals resulting in injury or death. What threats exist often depends on which animals live in an area, and whether someone knows how to prevent being injured or attacked. When I lived in India, for example, I initially wondered why people would hit their shoes against a wall before putting them on. This was not something we did in the Netherlands, unless you had just walked through a muddy pasture and tried to get your boots clean. Soon enough I learned that people in India did this to make sure that scorpions did not crawl into shoes at night, and I happily joined everyone in the shoe knocking, apologizing to my mother upon return to the Netherlands that I had picked up the habit of hitting her wall with my shoes.

Although liminal animals can and at times do pose a threat to humans and pets, some liminal animal species are culturally perceived as a threat even if chances of injury or attack are low. Even if higher numbers of injury and attack occur, the reason for attack often involves human factors. One of the primary reasons that liminal animals occasionally pose a threat to humans, is because humans encroach into the space of liminal animals, feed liminal animals, and condition liminal animals to lose their fear for humans. In addition, when an incident takes place, it is often blown out of proportion in regard to the animal species. For example, incidents

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<sup>285</sup> Shafqat Hussain, "The status of the snow leopard in Pakistan and its conflict with local farmers," *Oryx* 37 (2003): 26-33.

<sup>286</sup> Suryawanshi Kulbhushansingh, et al., "People, Predators and Perceptions: Patterns of Livestock Depredation by Snow Leopards and Wolves," *The Journal of Applied Ecology* 50, no. 3 (2013): 558-559.

<sup>287</sup> Kulbhushansingh, et al., davey "People, Predators and Perceptions," 550.

of direct attacks often involve individual animals, frequently referred to as a ‘problem animal’, but these incidents influence the way that the animal species is perceived in general.<sup>288</sup> Similarly, when there is a possibility that humans can get sick from the bite of an animal species, all animals belonging to this species can become characterized as a threat, such as rats carrying bubonic plague, even if chances of disease transmission are very slim. As such, actual incidents combined with fear and cultural perceptions about animal species play a large role in treating liminal animals as a threat.

Humans have different fear associations for high-predatory animals than for low-predation animals. Whereas fears of low-predation animals are associated with outcomes indicating either contamination or disease, fears of high-predatory animals are commonly associated with harm and pain.<sup>289</sup> Experienced fear is modified by the individual’s cognitive interpretation of the animal, which is influenced by the social-cultural stigmas surrounding the animal.<sup>290</sup> Fear of an animal does not necessarily lead to the exclusion of an animal; a lot of people who are afraid of snakes do not go on crusades to eradicate them. Nonetheless, fear plays an important role in assessing the exclusionary cultural norms around animals, as fear of an animal is often increased by culturally negative perceptions surrounding the animal, while fear at the same time can amplify the same culturally negative perceptions. When it comes to carnivore attacks, for example, fear seems to amplify the perceived risks of them, regardless of the actual risks.<sup>291</sup>

The category of being a threat can thus be divided into two groups: direct threat and indirect threat. With a direct threat, humans and pets face a direct attack on their life, such as a

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<sup>288</sup> Clark Adams and Kieran Lindsey, *Urban Wildlife Management: Second Edition* (Boca Raton: CRC Press, 2010), 234.

<sup>289</sup> Graham Davey, Kate Cavanagh, and Alice Lamb, “Differential aversive outcome expectancies for high- and low-predation fear relevant animals,” *Journal of Behavior Therapy and Experimental Psychiatry* 34 (2003): 117-128; Katie Webb and Graham Davey, “Disgust sensitivity and fear of animals: Effect of exposure to violent or repulsive material,” *Anxiety, Stress & Coping* 5 (1992): 329-335.

<sup>290</sup> Maria Johansson et al., “Factors Governing Human Fear of Brown Bear and Wolf,” *Human Dimensions of Wildlife* 17, no. 1 (2012): 60.

<sup>291</sup> Jennifer Lerner and Dacher Keltner, “Fear, anger, and risk,” *Journal of Personality and Social Psychology* 18 (2001): 146-159.

hiker being jumped on and killed by a cougar, or a coyote killing a domestic cat. An indirect threat stands in contrast to the direct threat in the sense that the chance to be harmed is not imminent, but rather occurs over a longer time. Often, indirect threats are related to potential hygiene risks and the spread of diseases, such as through a rat bite or by inhaling toxins from raccoon scat. At times, an indirect threat can also be related to beliefs of a community that an animal species is the harbinger of death, even when this is not brought to humans by the animal themselves. In rural Madagascar, for example, the aye-aye is traditionally believed to be a harbinger of sickness and death, so they are often killed on sight and entire villages have been abandoned after aye-eyes were seen in the vicinity.<sup>292</sup>

In the following sections, each category of threat will be discussed on its own. While there are many similarities between the two categories, larger liminal animals often fall into the direct threat category, and smaller liminal animals into the indirect group. Moreover, direct threats often take place on the periphery of human-nature boundaries, whereas indirect threats are more located within human environments. To highlight the key aspects of the threat category, each section focuses on a case study that supports the argument that liminal animals are culturally excluded and highlights the elements at play for the category of direct and indirect threat. In the direct threat section, a focus is placed on large carnivores as killers, and the indirect threat section takes a closer look at the case study of rats as disease spreaders.

### *Direct Threat: Attacks and Bears*

Large animals often elicit contrasting emotions. When we think of large animals such as lions, wolves, and bears we admire them for their strength and beauty, while fearing them at the same time for the threat they can pose. Surveys highlight how both kids and adults tend

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<sup>292</sup> Elwyn Simons and David Meyers, "Folklore and beliefs about the aye-aye (*Daubentonia madagascariensis*)," *Lemur News* 6 (2001): 11-16.

to care most about beautiful animals, specifically preferring fascinating megafauna – wild animals that are typically larger than humans.<sup>293</sup> Large liminal animals are sometimes even culturally adopted as symbols or mascots, with entertainment industries using them as flagship species for strong and attractive characters for their movies – see Disney with *The Lion King* and *Brother Bear*<sup>294</sup> – and conservation programs using popular large animals to attract more humans to their cause. Nonetheless, popular liminal animal species are also frequently portrayed in stories and folklore as the central menacing, devious character – such as the Big Bad Wolf or Reynard the Fox – which can help entrench lasting negative perceptions of these animals.

This contradictory view of beauty and power is also reflected in the category of liminal animals as a direct threat. People’s perceptions of animals are influenced by the threat posed by animals, and, even when admired, people commonly respond to this threat by killing animals, either pre-emptively or in response to actual events.<sup>295</sup> Large carnivores in particular tend to cause conflict, as they pose a severe, direct threat to human and/or pets’ lives.<sup>296</sup> The obvious reason for this is that large carnivores may potentially attack humans and/or pets for food, while also having the actual strength to injure or kill someone relatively easy. In other words, while large carnivores are often admired for their beauty, they are equally considered a threat due to their strength. It is primarily the dangerousness and uncontrollability of this threat

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<sup>293</sup> Hannah Shapiro, et al., “Wildlife species preferences differ among children in continental and island locations,” *Environmental Conservation* 44, no. 4 (2017): 389-396; Pavol Prokop and Jana Fancovicová, “Does Colour Matter? The Influence of Animal Warning Coloration on Human Emotions and Willingness to Protect Them,” *Animal Conservation* 16, no. 4 (2013): 458-466.

<sup>294</sup> Although the animals in these movies are portrayed as wild animals, people often do not make distinctions between whether an animal is liminal or wild and as such perceptions of the species as a wild animal can blend with cultural norms towards liminal animals and vice versa.

<sup>295</sup> Dickman, “Complexities of conflict,” 458-466; Simon Thirgood, Rosie Woodroffe, and Alan Rabinowitz, “The impact of human-wildlife conflict on human lives and livelihoods,” in *People and Wildlife: Conflict or Coexistence?* ed. Rosie Woodroffe, Simon Thirgood, and Alan Rabinowitz (Cambridge: Cambridge University Press, 2005): 13-26.

<sup>296</sup> Dickman, et al., “Carnivores, culture and ‘contagious conflict,’” 19.

that predicts the experienced fear of the animal.<sup>297</sup> Not only large animals are dangerous and uncontrollable, however, and smaller species such as snakes, spiders, and reptiles are equally culturally depicted as a direct threat.<sup>298</sup> For instance, despite its ecological importance and role in preventing mosquito plagues, the gecko is seen as a poisonous and evil animal and is therefore persecuted in Portugal.<sup>299</sup> Aside from dangerousness and uncontrollability, the fear of an animal species is also related to the proximity in space between an animal and human – which can be linked back to the idea of place and space. The animal is accepted and even admired when they are seen on a television screen or in the wild when out hunting or on a safari but are a threat when they come into places that are perceived as a human environment.

Although liminal animals can cause injury and death to humans and/or their pets through a direct attack, and cases are reported on a daily basis of this happening, the numbers are relatively low when looking at the number of times a liminal animal has the opportunity to attack a human. Nonetheless, liminal animals are frequently depicted as a threat to human lives and are therefore removed from society by lethal means. Looking at perceived threats from large carnivores in Tanzania, Dickman et al., for example, found that attacks upon humans emerged as a key reason for people perceiving large carnivores as problematic, even though there was no evidence for frequent attacks.<sup>300</sup> And a 2002 study in Norway revealed that 48% of respondents were afraid of wolves, with an additional 40% somewhat afraid, despite the fact that only one documented wolf attack has ever occurred in Norway, in 1800.<sup>301</sup> In Amazonia,

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<sup>297</sup> Maria Johansson and Jens Karlsson, “Subjective experience of fear and the cognitive interpretation of large carnivores,” *Human Dimensions of Wildlife* 16 (2011): 15-29; Johansson, et al., “Factors Governing Human Fear,” 58-74.

<sup>298</sup> Kevin Markwell and Nancy Cushing, “The “killer of the cane fields”: The social construction of the Australian coastal taipan,” *Journal of Australian Studies* 40, no. 1 (2016): 74-91; Rick Vetter, “Myth of the brown recluse: Fact, fear, and loathing,” *UCR Spiders Site*, University of California Riverside, accessed February 28, 2021, <https://spiders.ucr.edu/myth-brown-recluse-fact-fear-and-loathing>; Ceriaco, “Human Attitudes Towards Herpetofauna,” 8.

<sup>299</sup> Ceriaco, “Human Attitudes Towards Herpetofauna,” 2.

<sup>300</sup> Dickman, et al, “Carnivores, culture and ‘contagious conflict’,” 25.

<sup>301</sup> John Linnell, et al., “Is the fear of wolves justified? A Fennoscandian perspective,” *Acta Zoologica Lituanica* 13, no. 1 (2003): 34-40.

Brazil, when asked to indicate who was the attacker based on images shown of attacks on livestock and pets, those with culturally negative perceptions of jaguars assigned a larger number of photographs to jaguars, even though the majority of photographs did not show jaguar attacks.<sup>302</sup> Respondents indicated that the more negative the cultural norms around jaguars and the lower the knowledge about jaguars and depredation, the stronger the perception of the impact of jaguars on human safety – even when no evidence was presented.<sup>303</sup> What these examples show is that although attacks on humans are rare, the fear of an attack is often prominent in people’s perceptions of the animal. Additionally, previous incidents of attack or beliefs that animals will attack result in severe animosity and widespread fear.<sup>304</sup> In each of the examples, this fear of the animal attacking humans or domestic animals resulted in the animals’ lethal removal from society.

Aside from the perceptions of a threat often being misplaced, the perceived threat can also become exaggerated and reinforce the negative perceptions of liminal animals posing a direct threat. News of carnivore attacks, particularly on humans, often spreads far beyond the initial attack location, generating widespread and long-lasting fear.<sup>305</sup> For example, puma attacks are rare; from 1890 to 1990 there were only nine fatal attacks in North America and 44 non-fatal attacks.<sup>306</sup> Yet, 65% of people surveyed in Montana said they had read or heard of someone being attacked by a puma.<sup>307</sup> Similarly, sometimes the fear of a direct attack can create the idea that the negatively perceived animal species lives around humans through the

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<sup>302</sup> Silvio Marchini, and David Macdonald, “Mind over matter: Perceptions behind the impact of jaguars on human livelihoods,” *Biological Conservation* 224 (2018): 230-237.

<sup>303</sup> Marchini and Macdonald, “Mind over matter,” 235.

<sup>304</sup> Knight, “Introduction,” 1-35.

<sup>305</sup> John Knight, “Culling demons: the problem of bears in Japan,” in *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*, ed. John Knight (London: Routledge, 2000), 145-169; Jennifer Kelly, “A Sociocultural Perspective: Human Conflict with Jaguars and Pumas in Costa Rica,” *Conservation & Society* 17, no. 4 (2019): 355-365.

<sup>306</sup> Paul Beier, “Cougar attacks on humans in the United States and Canada,” *Wildlife Society Bulletin* 19, no. 4 (1991): 403-412.

<sup>307</sup> Tucker Murphy and David Macdonald, “Pumas and people: lessons in the landscape of tolerance from a widely distributed felid,” in *Biology and Conservation of Wild Felids*, ed. David Macdonald, and Andrew Loveridge (Oxford: Oxford University Press, 2010), 431-452.

stories that are told, even when it does not. Champion-Vincent describes how French concerns about a program to restore wolves in France invoke ‘big cat’ legends about reported sightings of panthers and other large predators in many countries.<sup>308</sup> In other cases, old stories can keep negative depictions alive for many centuries, even without recent events reinforcing these stories. In Hokkaido, Japan, in 1915, a bear killed seven people, some of them one night and the rest when the bear returned the following evening to resume the attack at a vigil for the original victims.<sup>309</sup> This incident was widely and dramatically reported and made an important contribution to the widespread perception of bears as blood-thirsty killers, which still persists across Japan almost a century later.<sup>310</sup> Even to this day, when there is more societal support for the conservation of bears in Japan, there are still men in local communities who are known as bear hunters. This status of a bear hunter is seen as heroic, and those who go out into the forest to cull bears are seen as protectors of their village, even when no bear attack has taken place in decades.<sup>311</sup> What this shows, is that the cultural idea of bears as a direct threat to the well-being of a community and its people is sufficient for people to go out of their way to take the life of non-attacking bears.

As seen in the case of bears in Japan, the characterization of liminal animals posing a direct threat to humans is often repeated and enforced through the stories told about animal attacks from the past. What research has shown is that perceptions of liminal animals are not altered by the frequency of encounters, but by the affective quality of the experience, including the quality of indirect experiences via friends, neighbours, and media.<sup>312</sup> The perception of an animal is thus not only based on the frequency of encounters or the individual experiences with

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<sup>308</sup> Veronique Champion-Vincent, “The restoration of wolves in France: Story, conflicts and uses of rumor,” in *Mad about wildlife: Looking at social conflict over wildlife*, ed. Ann Herda-Rapp and Theresa Goedeke (Leiden: Brill, 2005), 99-122.

<sup>309</sup> Knight, “Culling demons,” 152-153.

<sup>310</sup> Idem.

<sup>311</sup> Knight, “Culling demons,” 153-154.

<sup>312</sup> William Siemer et al., “Factors that influence concern about human-black bear interactions in residential settings,” *Human Dimensions of Wildlife* 14 (2009): 185-197.

the animal alone, but heavily depends on the stories of encounters that are being told by others within society. It is thus possible that someone who has not personally had any negative encounters with liminal animals still has a negative perception of them based on expressed experiences of others. For this reason, the media plays an important role in the construction of liminal animals as a direct threat to humans and/or their pets. An online media analysis from a California area, for example, shows that posts about found/lost pet provoke most commenters to discuss coyotes, with authors and commenters typically assuming that a coyote is responsible for the pet's death without witnessing a coyote attacking a pet.<sup>313</sup> When pictures emerged of coyotes carrying the remains of a pet, other options, such as the coyote having found the remains as roadkill, are not discussed, and instead, messages are posted warning people to protect their pets from coyotes.<sup>314</sup> By having these strong reactions of coyotes as pet killers being predominant in the media landscape, without evidence of them being the source of death, the stories circulating online create and reinforce negative perceptions of coyotes.

Another way that media plays a role in the cultural perception of liminal animals as a direct threat is by primarily focusing on the potential negative impacts liminal animals have on humans, or by hyper focusing on one specific incident without consulting experts or looking at the larger picture. For example, an increased level of Swiss media reporting of risks associated with animals in general likely contributed to an increased atmosphere of anxiety about human-animal encounters.<sup>315</sup> And when it comes to wolves, popular media gives wide coverage on messages that represent a highly biased and very selective discourse around wolves, which contain a large amount of misinformation and fabrication about the threat wolves pose to

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<sup>313</sup> Hunold and Lloro, "There goes the neighborhood," 164-165.

<sup>314</sup> Idem.

<sup>315</sup> David Gerber, Claudine Burton-Jeangros, and Annik Dubied, "Animals in the media: New boundaries of risk?" *Health, Risk & Society* 13, no. 1 (2011): 17-30.

humans in Europe and North-America.<sup>316</sup> This influence of the media is also clear in the case of other liminal animals. When a fox entered a house in an urban neighbourhood in the UK and attacked 9-month-old twins, the media covered the story for several months, exaggerating the negative features of foxes, highlighting the position of the fox as a predator, and accentuating its position not only as a pest, but as a source of danger to humans – even though incidences are extremely rare, and the media did not include specialists in their stories.<sup>317</sup>

### *Case Study: Direct Threat*

A case study that highlights the aspects of the direct threat category – perceived vs. real attacks, storytelling, and media representation – is the analysis of the debate on whether to allow the hunt of black bears in New Jersey. Throughout the nineteenth century, bears were viewed as nuisance or game animals in North America. With European settlers cutting down forests and draining swamps crucial to bear habitat, bears started to appear in towns and on farms looking for food and causing damage. Intolerance of bears grew as they came to be regarded as ‘vermin, noxious creatures to be killed on sight’.<sup>318</sup> In 1997, the state of New Jersey – one of the areas with a black bear population – estimated that the state had a population of less than 550 bears, who did not represent an imminent threat to residents.<sup>319</sup> Most incidents involved bears in campgrounds or bears begging for food along the roadsides, and over 90% of the injuries caused by bears were minor.<sup>320</sup> Given these statistics, New Jersey’s Nuisance/Damage Management program emphasized the prevention of damage through public education, control structures, and handling of individual problem bears – and not the culling or

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<sup>316</sup> John Linnell and Julien Alleau, “Predators That Kill Humans: Myth, Reality, Context and the Politics of Wolf Attacks on People,” in *Problematic Wildlife: a cross-disciplinary approach*, ed. Francesco Angelici (Cham: Springer, 2016), 366.

<sup>317</sup> Angela Cassidy and Brett Mills, ““Fox Tots Attack Shock”: Urban Foxes, Mass Media and Boundary-Breaching,” *Environmental Communication* 6, no. 4 (2012): 504.

<sup>318</sup> Barbara Ford, *Black bear: Spirit of the wilderness* (Boston: Houghton Mifflin Company, 1981), 51.

<sup>319</sup> McConnell, et al. “New Jersey black bear management plan,” *New Jersey Department of Environmental protection Division of Fish, Game, and Wildlife* (Trenton, 1997), 8.

<sup>320</sup> McConnell, et al. “New Jersey,” 61; Harker and Bates, “The Black Bear Hunt in New Jersey,” 333.

hunting of bears.<sup>321</sup> At the same time, however, a Division of Fish, Game, and Wildlife report indicated that the ‘cultural carrying capacity’ for black bears had been reached and that the bear population was large enough to sustain a hunting season.<sup>322</sup>

In 2013, highly publicized incidents of a two-year-old boy being swatted by a black bear while sitting on the front steps of his home – suffering a minor injury to the head – and an 18-year old woman getting tackled by a black bear while on a hike – leaving the woman with claw marks running down her lower backside – lent public support to the decision to authorize a bear hunting season.<sup>323</sup> Acknowledging that it is not environmental or factual danger but rather the ‘cultural carrying capacity’ that determines the bear policy in New Jersey, a heated debate on the social construction of bears and the bear hunt ensued between hunters and animal rights activists.<sup>324</sup> At the center of the debate, opponents and advocates of the hunt held fundamentally different cultural constructions of the bear and the bear’s relationship to human society.<sup>325</sup> Hunters and other advocates of the hunt reproduced cultural constructions of the bear as a public nuisance and stressed the potential danger of these larger animals.<sup>326</sup> In contrast, opponents to the hunt viewed the bear as a docile and caring creature, worthy of respect and compassionate stewardship.<sup>327</sup>

Half of the submissions in the media took a kill-or-be-killed approach, portraying the black bear as a vicious, dangerous animal in the wild.<sup>328</sup> Black bears are said to have become too bold, too dangerous, and live too close to humans– with the writers painting a picture of the black bear as a threat, especially to children and pets, who must be hunted before disaster

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<sup>321</sup> Harker and Bates, “The Black Bear Hunt in New Jersey,” 333.

<sup>322</sup> McConnell, et al. “New Jersey,” 73.

<sup>323</sup> Harker and Bates, “The Black Bear Hunt in New Jersey,” 334.

<sup>324</sup> *Idem*.

<sup>325</sup> Constructions of liminal animals as representations of larger underlying conflicts is nothing new, and liminal animals have been called on to represent governments or destroyers of lifestyles; Scarce, “What Do Wolves Mean?” 26-45

<sup>326</sup> Harker and Bates, “The Black Bear Hunt in New Jersey,” 342-343.

<sup>327</sup> Harker and Bates, “The Black Bear Hunt in New Jersey,” 343.

<sup>328</sup> *Idem*.

strikes.<sup>329</sup> These writers reflect a cultural fear of all bear interactions, with all bears representing a threat regardless of observed behaviour. Based on this construction of a threatening bear, the hunt then becomes an act of public defense and safety.<sup>330</sup> In contrast, opponents of the hunt offered a construction in which the black bear is portrayed as less of a threat than other humans – especially hunters – and as an animal deserving of human respect, sympathy, and protection.<sup>331</sup> These two cultural perceptions of black bears present entirely different and contradictory understandings of black bears and bears’ relationship to humans. Furthermore, the construction of black bears as a direct threat to humans and/or pets was used to justify the killing of black bears, even when actual numbers of attacks are low. In the end, New Jersey reinstated the hunt on black bears, but only as part of a management policy. After a decade of allowing the hunt of black bears, the management policy expired and did not secure enough votes to be continued.<sup>332</sup>

#### *Indirect Threat: Rats and Diseases*

A reoccurring theme when discussing my research with friends, neighbours, and strangers, is that people’s first reaction is one of ‘yuk’, followed by questions as to whether it is safe. Many people fear liminal animals, whether out of biological instinct, or because of the stories that are told about them. Not long ago, my neighbours called me to ask if I could help them trap a mouse. They had gotten some traps from the local hardware store and were terrified that they would touch any of the mouse droppings, or even worse, the mouse itself. When I entered the house, one of my neighbours apologized, saying that they could not help, because they are deadly allergic to peanut butter. I asked them why they were not using another food source to lure the mouse, but they had read online that peanut butter was a mouse’s favourite

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<sup>329</sup> Idem.

<sup>330</sup> Idem.

<sup>331</sup> Idem.

<sup>332</sup> “Black Bear Management,” New Jersey Department of Environmental Protection, New Jersey Division of Fish and Wildlife, accessed October 13, 2022, <https://www.nj.gov/dep/fgw/bears/black-bear-management.html>.

food, and they could not face the risk of having the mouse near their food. Now, as I told them as well, chances of getting sick from a mouse in your kitchen are very slim, and while their droppings may not be the nicest decoration, my neighbour was much more at risk from bringing themselves anaphylactic shock from the peanut butter than getting sick from the mouse. Nonetheless, my neighbour rather risked dying than an encounter with a mouse.

The idea that mice, and other liminal animals, are threats to human health is common, and no liminal animal is culturally depicted as much as a disease spreader as the rat. The idea of rats being harbingers of disease primarily stems from their role in the Great Plague of 1665, which research has since proven rats indeed played a part of, but that it was in fact the fleas who were carried by rats who transmitted the plague.<sup>333</sup> Adding to this idea of rats carrying deadly disease, scientist and pest control organizations frequently like to point out that rats are reservoirs for over 60 zoonotic pathogens.<sup>334</sup> This association with disease is directly linked to the way in which rats have become culturally enshrined as one of the most loathed animals on the planet.<sup>335</sup> Being a reservoir, or a carrier, of a disease, however, does not mean that the carrier spreads the disease at random, but this fact is often pushed to the background when it comes to the negative framing of disease carriers. Humans are no exception to this, and humans positive for HIV, for example, are frequently considered to have become the disease itself, with people believing that even touching the skin of someone who is HIV positive could give them the virus. Even now, with medical advancements making it possible to live a good life when HIV positive, and with medication available to block the spread of HIV, those with HIV often still experience exclusionary stigmas, thereby reducing the amount of people getting tested or people pre-emptively being able to take medication.<sup>336</sup>

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<sup>333</sup> Jonathan Butt, *Rat* (London: Reaktion Books LTD, 2006), 115.

<sup>334</sup> S. Morand, S. Jittapalpong, and Michael Kosoy, "Rodents as Hosts of Infectious Diseases: Biological and Ecological Characteristics," *Vector borne and zoonotic diseases* 15, no. 1 (2015): 1–2.

<sup>335</sup> Jerolmack, "How Pigeons Became Rats," 86.

<sup>336</sup> Julie Pulerwitz, et al., "Reducing HIV-Related Stigma: Lessons Learned from Horizons Research and Programs," *Public Health Reports* 125, no. 2 (2010): 272-281.

What disease frameworks show is that there is often a perceived indirect threat associated with the individual(s) linked to the possibility of spreading disease. And while it is possible for the disease to be transmitted, the reactions to those being carriers is often to the extreme, either excluding them from society or, as in the case of rats, lethal removal. This need to kill rats comes from cultural norms associated with the bubonic plague as a disease itself, which is not the most lethal disease in terms of death rate, but it is one that often strikes the most fear.<sup>337</sup> The 1907 plague outbreak in San Francisco, for example, resulted in the trapping and killing of more than 350,000 rats, but it has to be noted that there was not a single case of plague among the 1,000 men used in plague control.<sup>338</sup> It is this aspect of actually having the disease transmitted that is important for the cultural framing of rats as an indirect threat. Although there is a chance that humans can get a disease transmitted from rats, actual occurrences are low in comparison to other risk factors – especially in the Western world. For a disease to be transmitted, people need not only be in direct contact with rats, but this contact also needs to be either through ingestion or through a bite or scratch. In other words, touching a rat in and of itself, does not cause a great risk of getting sick, and being in proximity poses even less of a risk. Yet, the sight of a rat alone, or signs that rats may potentially be in our living environment, is often enough warrant for people to set out poison or kill-traps.

Research conducted in the UK shows that cultural norms around pest animals are more related to the idea of the animal species causing problems to the general population instead of the individual's personal experience.<sup>339</sup> In the same research, when asking people about their cultural norms around species found in a UK backyard, rats were the only mammal with a negative average score.<sup>340</sup> This negative response was directly linked with the amount of people believing rats to be a threat by causing problems, with 81% of the people reporting that rats

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<sup>337</sup> Butt, *Rat*, 115.

<sup>338</sup> Butt, *Rat*, 125.

<sup>339</sup> Baker, et al., "Not in My Backyard," 222.

<sup>340</sup> Idem.

cause problems generally, but only 21.9% of the people actually having experienced any rat caused threat or problem.<sup>341</sup> The trait most associated with rats being a threat or causing problems is that they spread disease to people or pets/domestic animals.<sup>342</sup> Other factors associated with people having negative cultural norms around rats are the beliefs that rats attack people, and that rats damage property and eat food.<sup>343</sup> When the researchers asked whether people actually have become sick from rats or know someone who has gotten sick from rats, nobody responded affirmatively.<sup>344</sup> This is not an uncommon occurrence, with another research indicating that although rats were perceived as disease carriers and threats to humans, none of the interviewees reported any disease – either to themselves or to others they know – that could be linked to the presence of rodents, such as leptospirosis.<sup>345</sup> The negative perception of rats being spreaders of disease, and therefore being an indirect threat, is thus sufficient for people to want rats removed – lethally – from their surroundings. Whether people actually have experience with cases in which rats spread diseases to people, does not matter in this instance, as the cultural depiction of rats as an indirect threat is strong enough to override actual experiences.

Historically, there has been little regard for the welfare of animals regarded as pests, and it is noteworthy that interactions with small problematic animals are often labeled ‘pest control’, while those with large animals are termed ‘human-wildlife conflict management’.<sup>346</sup> Welfare regard has been particularly poor for high-profile pest species, such as rats and mice, who can often be killed legally using lower-welfare methods than other species. While non-lethal wildlife management are increasingly used, many millions of rats and mice are killed

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<sup>341</sup> Idem.

<sup>342</sup> Idem.

<sup>343</sup> Idem.

<sup>344</sup> Idem.

<sup>345</sup> Delahaya, “Rats, Mice and Humans,” 48.

<sup>346</sup> Baker et al., “Not in My Backyard,” 222.

each year as indirect threats.<sup>347</sup> In the same UK based research as addressed before, more than 85% of the people said that they would use a form of control if there is a ‘rat problem’, and that the control type used needs to solve the problem as fast and lethal as possible, without direct regard for the welfare-friendliness.<sup>348</sup> Moreover, those people who indicated that they believe that rats spread disease to humans and/or pets are more likely to attempt lethal rat control.<sup>349</sup> This is interesting, as most of the people did not have experience with rats themselves, and nobody indicated that they have gotten sick from rats or know of someone who has.

When it comes to the methods used for removing rats, their cultural image of being an indirect threat has resulted in a very low standard of welfare and rat removal methods are often cruel. A survey in South Africa, for example, showed that only a minority of residents preferred rodent control to be humane but that most did not care how rats are killed, and almost a fifth said they would be happy if the rats suffered.<sup>350</sup> A few of the methods used to kill rats in homes include poisoning, trapping, hunting, shooting, fumigation, and deliberately introducing diseases.<sup>351</sup> Methods that produce a quick death with minimal suffering are preferred from an animal welfare point of view, but in 7-14% of all cases these quick death traps result in injury instead of death.<sup>352</sup> When complaints are made from a welfare standpoint, however, changes are made primarily to protect the sensitivities of the public – with traps being designed to avoid users having to touch and see dead rats – instead of improving the suffering of rats.<sup>353</sup>

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<sup>347</sup> G. Mason and Kate Littin, “The humaneness of rodent pest control,” *Animal Welfare* 12, no. 1 (2003): 1-37.

<sup>348</sup> Baker et al., “Not in My Backyard,” 222.

<sup>349</sup> Idem; Karin Wittmann et al., “Standards for lethal response to problem urban wildlife,” *Human Dimensions Wildlife* 3, no. 4 (2011): 29-48.

<sup>350</sup> Adam Buckland and Nicoli Natrass, “Understanding Preferences for Humane and Cruel Treatment of Pest Rodents in Site C, Khayelitsha, South Africa,” *Journal of Applied Animal Welfare Science* 23, no. 3 (2020): 315-324.

<sup>351</sup> Bastiaan Meerburg, Frans Brom, and Aize Kijlstra, “Perspective: The ethics of rodent control,” *Pest Management Science* 64, no. 12 (2008): 1207.

<sup>352</sup> Meerburg, Brom, and Kijlstra, “Perspective,” 1208.

<sup>353</sup> Sandra Baker and Trudy Sharp, “Welfare in commensal rodent trapping: One step forward, two steps back,” *Universities Federation for Animal Welfare* (2015): 369-371.

Another method that showcases the cruelty in rat removal is the use of ingestible poisons, such as anticoagulants. Although generally considered to induce animal suffering, they are nonetheless frequently used.<sup>354</sup> Rats typically remain conscious between the time of poisoning and death, a period with an average duration of 7.2 days.<sup>355</sup> During that time, haemorrhages in vital organs caused by anticoagulants can lead to serious discomfort through the accumulation of blood. Another impact of the use of anticoagulants is that dependent pups can die of dehydration and starvation when adult females are poisoned. Moreover, secondary poisoning may lead to lethal consequences for non-target species. Secondary poisoning can be either through other animals directly consuming the poison, or through consumption of an animal that has already ingested poison. Rat predators and scavengers are most at risk of secondary poisoning, as rats are the main target of poison control.<sup>356</sup> In other words, the cruel treatment of liminal rats does not only negatively impact rats, but also species that are not considered in need of removal from society.

Like other negatively perceived liminal animals – such as pigeons, raccoons, squirrels, mice, and others – rats are removed from society as they are believed to pose an indirect threat to human health. What makes the case of rats stand out, however, is how their cultural depiction as carriers of disease has resulted in such extreme and cruel methods of removal, with people showing little care for improving the treatment of liminal rats. Although rats are the most targeted species for removal in the category of indirect threat, other animals are not exempt from the indirect threat framework and its consequential removal from society.<sup>357</sup> Aside from being considered a nuisance, raccoons, for example, are often targeted as spreaders of rabies,

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<sup>354</sup> Anita Morzillo and Angela Mertig, “Urban resident attitudes toward rodents, rodent control products, and environmental effects,” *Urban Ecosystems* 14, no. 2 (2011): 253.

<sup>355</sup> Meerburg, Brom, and Kijlstra, “Perspective,” 1208.

<sup>356</sup> Craig Brakes and Robert Smith, “Exposure of non-target small mammals to rodenticides: short-term effects, recovery and implications for secondary poisoning,” *Journal of Applied Ecology* 42, no. 1 (2005): 119.

<sup>357</sup> Mice, badgers, pigeons, rabbits, gulls, and moles were also perceived to be spreaders of disease in the UK study, and therefore removed from properties. The extent to which this happened was lower, however, than for rats, and this can be related to other social-cultural perceptions that place these liminal animals in a more positive light; Baker et al., “Not in my backyard,” 222.

canine distemper, and roundworm. When looking at actual cases resulting in roundworm infections, however, only 22 documented cases were reported in the United States between 1973-2010.<sup>358</sup> So, while it is possible to contract roundworm from raccoons, chances are actually very low. Nonetheless, raccoons are frequently removed due to the perceived threat that they pose. This perceived versus actual contraction of disease is a reoccurring theme in the exclusionary cultural norms category of liminal animals as an indirect threat, and rather than the actual risk, it is thus the cultural perception of the animal that determines whether liminal animals are removed from society.

### Lessons Learned from an Exclusionary Cultural Norms Framework

Whatever category of exclusionary cultural norms liminal animals experience, the consequences are often the same: lethal removal from society. Liminal animals are thought of as threats, unbelonging, and disruptive, and these ideas are repeated through cultural narratives and symbolism. Analyzing these categories, however, shows that the beliefs about liminal animals are constructed. In addition, although the beliefs may bear some truth, many of the cultural narratives related to liminal animals are wrong when looking at whether the narrative holds true. Most liminal animals, for example, do not pose the health threat that they are made out to pose and as case studies show, the wrong species are at times blamed for causing disruption based on existing cultural norms. Through these skewed ideas, humans have turned liminal animals into a bogeyman without the ability to defend themselves.

The case studies analyzed for each category of the framework show that while each category has its own unique characterizations, many liminal animals are not excluded based on one category only. Instead, there is often overlap between the categories, allowing humans to

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<sup>358</sup> Anita Sircar, et al., "Raccoon Roundworm Infection Associated with Central Nervous System Disease and Ocular Disease – Six States, 2013-2015," *Morbidity and Mortality Weekly Report* 65, no. 35 (2016): 930-933.

justify the problematic status of liminal animals and their consequential removal from society based on a multitude of reasons. Cultural norms around liminal animals must thus not be analyzed in a vacuum, but in a wider framework that looks at all factors that contribute to their removal.

One of the major benefits of the exclusionary cultural norms' framework is that it allows for a bigger picture. What the analysis shows, is that exclusionary cultural norms around liminal animals do not take place within one isolated community but take place within different communities in different geographical locations. It is not one specific culture that targets liminal animals, and it is not one species of animals that is removed while others get to stay. Instead, liminal animals face many different exclusionary practices based on exclusionary cultural norms. Moreover, just because a liminal animal is excluded in one culture it does not mean that the same species is excluded in another. What this shows is that different and contrasting perceptions of liminal animals are possible, allowing for the possibility that human-liminal animal coexistence can be achieved even when liminal animals are currently removed.

The beauty of constructions is that they can be taken apart and reassembled. In the case of human-liminal animal relationships, the exclusionary cultural norms framework is a good place to start. It offers an understanding as to what the cultural norms around liminal animals are based on, and how these cultural norms are maintained. The exclusionary cultural norms framework also guides us to what needs to be changed for liminal animals to no longer be removed from society. What is still less clear is what positive cultural norms around liminal animals look like, how to change negative cultural norms into positive ones, and whether cultivating positive cultural norms through cultural change is even possible. It is exactly these questions that the next chapters seek to answer.

### Chapter 3: Culture and Human-Liminal Animal Coexistence

There's a place on earth where rats are not considered horrid pests but are seen as treasured guests. As many as 20,000 rats run freely in the Karni Mata temple in Deshnok, a city in northwest India.<sup>359</sup> The rats that live in and around this temple are considered holy, and each day, devotees bring large silver trays laden with offerings such as milk, coconut, and sugar for the rats to eat from.<sup>360</sup> According to Hindu practice, visitors must remove their shoes and socks when visiting, and if a rat runs over your feet, you are considered blessed. In addition, blessings, however, come from seeing a white rat, who are relatively rare and are special even among the holy rats.<sup>361</sup> Even greater fortune is promised by eating food that the rats have eaten from, and many devotees are seen eating from the same platters as the rats.<sup>362</sup>

What stands out in the human-rat relations at the Karni Mata temple is that there are no claims of rat bites or rat-related diseases.<sup>363</sup> Moreover, when nearby cities got struck by the plague in 1994, Deshnok went unscathed – there are no biological differences between the rats in Deshnok and surrounding cities.<sup>364</sup> Temple followers and many plague victims drank the rats' leftover milk and water as preventative medicine or cure, in the belief that the rats protect or heal them.<sup>365</sup>

The relation between humans and rats in Deshnok stand in stark contrast to the human-rat relation discussed in our previous chapter. Instead of depicting rats as spreaders of deadly diseases in want of eradication from society, the rats in Deshnok are welcomed with open arms

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<sup>359</sup> Kyle Trembley, "Jatikaran: Caste, Rats, and the control of space at the Karni Mata Mandir," *Environment and Planning E: Nature and Space* (2022).

<sup>360</sup> Idem.

<sup>361</sup> "Welcome to the Rat Temple," *National Geographic*, last updated February 3<sup>rd</sup>, 2012, [https://www.youtube.com/watch?v=20Os118Fajc&ab\\_channel=NationalGeographic](https://www.youtube.com/watch?v=20Os118Fajc&ab_channel=NationalGeographic).

<sup>362</sup> Jerry Langton, *Rat: How the World's Most Notorious Rodent Clawed Its Way to the Top* (New York: St. Martin's Press, 2007): 125-128.

<sup>363</sup> Trembley, "Jatikaran."

<sup>364</sup> Idem.

<sup>365</sup> Idem.

to the point of devotion.<sup>366</sup> So, why is it that one culture refers to rats as health hazards and the other as treasured guests? Are there cultural aspects that determine how we see and treat animals? Is it possible for us to change our cultural norms around animals when taking a closer look at other cultures?

None of these questions can be examined in a vacuum, and to get a better understanding of the role that culture plays in our norms around liminal animals, we need to see what it is that results in a more positive relationship between humans and liminal animals. As a starting point, case studies need to be found that indicate a form of coexistence between humans and liminal animals in places where the existence of the animals could just as well have resulted in the same negative treatment and removal from society as discussed in the previous chapter. In other words, if the animal has not changed, and other factors – psychological or economic – do not seem to be a dominant force, is there something imbedded within the local culture that allows for a different perception and treatment of the animal?

To even start answering this question, a different one needs to be addressed first: what is coexistence and why is this the threshold for identifying positive human-liminal animal relations? Although there is ongoing debate on what coexistence should look like<sup>367</sup>, the term is used here to indicate the acceptance of the animal as they are without actively seeking to remove them from their living area (whether this is shared with humans or not). It is important to note that this form of coexistence does not mean that the animal is treated in a way that may be the most desirable ethically, or that the culture in question treats all animals in the same way. Quite often, cultures treat different animals negatively based on varying cultural perceptions. A common example of this is the treatment of dogs as family members in Canada versus the Iranian idea that dogs should not be allowed in a home setting as they are polluting

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<sup>366</sup> Trembley, “Jatikaran.”

<sup>367</sup> Jenny Anne Glikman, et al., “Coexisting With Different Human-Wildlife Coexistence Perspectives,” in *Understanding Coexistence with Wildlife*, ed. Simon Pooley et al. (Lausanne: Frontiers Media SA, 2022), 127-133; Simon Pooley, “Coexistence for Whom?” *Frontiers in Conservation Science* 2 (2021): 726991.

and evil. The argument can be made that neither of these forms of treatment of dogs are necessarily morally correct<sup>368</sup>, and the case studies that will be discussed in this chapter should not be understood as a moral compass. Rather, the human-animal relations discussed in the case studies are reference frames for highlighting the cultural dimensions important in these positive human-liminal animal relations. Establishing an understanding of these cultural factors will support future work on improving human-liminal animal relationships.

Aside from the discussion about coexistence, whenever comparing cultures and cultural norms around animals, it can seem as if the argument is made that one culture is better than the other. I want to flag here that this is not the intention of any of the case studies discussed, but rather, I want to urge the reader to understand that these case studies are analyzed to support the argument that it is our ingrained cultural perception of animals that impact our norms about and treatment of them. Simply said, when we grow up in a culture that reinforces the notion that someone or something is bad and can be treated in a morally lesser way, chances are much higher that those individuals are treated more negatively. However, what the case studies in this chapter will show as well, negative cultural norms about others are not static, and there is a possibility for change.

It is also important to remember when reading the case studies that the notion of culture and communities used throughout is one that recognizes that small communities can have their own cultures within a larger culture. As discussed before, this can mean that people in small communities topographically residing next to each other can share an overarching cultural identity, as well as a local one. On that same note, it is also possible for a community to be comprised of a multitude of cultures – not everybody is necessarily from the same background or shares the same cultural values. When discussing the case studies, there is not always enough

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<sup>368</sup> There are a multitude of books and articles available on the moral treatment of companion animals. One of these is Christine Overall's *Pets and people: the ethics of companion animals* (New York: Oxford University Press, 2017).

room to explore all the different nuances at play within a community. In these case studies, I seek to showcase how people who identify as being part of a cultural community express how their culture perceives and treats the animals. So, when a statement is made such as that people from community x perceive animal y in manner z, this is based on data from interviews conducted with people from this community. There may be individuals who do not share the same feelings, but the cultural norms expressed is the dominant one. To further support this, a closer look is taken at how these cultural norms are represented within the community's culture. This can range from the way animals are presented in local stories, art, iconography, language, customs, social habits, and more.

When doing the initial research for human-liminal animal coexistence case studies, it became clear that there are too many to discuss in detail. As such, I decided to focus on commonalities between the case studies and to see if there were certain cultural aspects that contributed to coexistence. Although there are differences between communities and cultures, analyzing the case studies made it clear that there are similar cultural factors at play that are important for the positive cultural norms of people impacting coexistence with liminal animals. I have identified three such factors: the first cultural factor is termed 'recognizing animals as persons', the second is 'sharing space and knowledge', and the third is 'spiritual and religious significance'.

### Recognizing Animals as Persons

Washoe was an African female chimpanzee born in 1965 and who became famous around the world in the '70s when she became the first animal who learned American Sign Language.<sup>369</sup> Part of a research project, Washoe was raised by the Gardner family in a way that

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<sup>369</sup> John Livingston, "Other selves," in *Rooted in the Land: essays on community and place*, ed. William Vitek and Wes Jackson (New Haven: Yale University Press, 1996), 133.

as closely as possible mirrored the life of a human child, wearing clothes, sitting at the dining table, undergoing a regular routine that included chores, outdoor play and car rides.<sup>370</sup> Yet, when Washoe was five, the Gardners decided to move onto other projects and Washoe was moved to the University of Oklahoma's Institute of Primate Studies.<sup>371</sup> The recognition that chimpanzees can learn ASL came shortly after Jane Goodall transformed the Western world when she observed and recorded chimpanzees creating and using tools – a trait that, at the time, was thought to be distinctly human. That chimpanzees could use tools and learn a language used for communication by humans forced people to reconsider how they thought about animals.

For a long time, animals were perceived and described as 'things', 'machines', 'objects' by Western societies, depicting them as moving forces that reacted to instinct and desire, but that could never be seen as something with agency or personhood. Instead, this was a category reserved for humans, who, because of their high intelligence, sentience, and constructing capabilities were ascribed superiority. In addition, animals, it was said, do not have feelings, and an animal's reaction to pain or pleasure are automatic responses coming from their biological system without awareness of the actual emotions by the animal. This belief that animals are not actually aware of their pain even went so far that people would operate on animals in front of a live audience without giving the animal any anesthetic; the animals' pain could not be real because animals do not have self-awareness.

The description of animals as inferior things that do not possess the same capacities as humans allowed for humans in Western cultures to classify animals as objects instead of persons. Although research has proven throughout the last decades that most animals are sentient, that some animals are self-aware, that animals communicate, have their own cultures,

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<sup>370</sup> Allen Gardner, Beatrix Gardner, and Thomas Van Cantfort, *Teaching sign language to chimpanzees* (Albany: State University of New York Press, 1989).

<sup>371</sup> William Hillix and Duane Rumbaugh, *Animal bodies, human minds: ape, dolphin, and parrot language skills* (New York: Kluwer Academic Publishers, 2004), 87-88.

and form relationships with members from both their own species and other species, animals are still considered as non-persons by law, with little rights protecting their interests. This lack of recognition is a direct reflection of the Western cultural belief that animals (both domestic, liminal, and wild) are lesser beings, who should be removed if their interests conflict with human interests, and who are to be seen as out of place when the ‘superior’ humans decide they are.<sup>372</sup> Even with science discrediting every argument made against personhood for animals, Western cultures do not see animals as persons, complicating the potential for coexistence in situations of conflict – real or imagined.

Recognizing animal personhood is not the same as anthropomorphizing them. As was the case for Washoe, animals have been dressed up as humans (specifically children or dolls) for centuries, and many famous popular culture animals are depicted as a human in an animal body. Bears are an especially good example of this, given that they were portrayed during the late nineteenth and twentieth century as fuzzy creatures with rotund bodies suggestive more of fat than muscle, walking on hind legs, speaking European languages, and possessing a foreshortened humanoid face with a smiling demeanour and expressive eyes.<sup>373</sup> Examples of these changes are the invention of the teddy bear in 1902, the stories of Winnie the Pooh, and US Forest Service’s Smokey Bear. Although this image of a cuddly teddy bear seems more positive than that of a vicious killer, the impact of this image is minimal when it comes to human-animal conflicts. A recent effort to open a corridor from Canada’s Yukon territory to Yellowstone to encourage freer movement of grizzlies into parts of their old home ranges in Idaho, Wyoming and Montana, for example, was blocked after appeals from local ranchers and farmers who feared bears would endanger their cattle and sheep.<sup>374</sup>

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<sup>372</sup> This system of otherization in Western cultures is not unique to the case of animals, and white settler societies have used it as a system of oppression to many minority groups throughout history. Animal scholars have caught up on this as well, and I recommend the reader to read any work on the topic by Maneesha Deckha, Billy-Ray Belcourt, Claire Jean Kim, and others.

<sup>373</sup> Robert E. Bieder, *Bear* (London: Reaktion Books LTD, 2005), 122.

<sup>374</sup> Bieder, *Bear*, 140.

*Personhood and Coexistence*

Contrary to anthropomorphizing them, recognizing animals as persons does contribute to human-liminal animal coexistence. In Gudalur, a plantation landscape in South India, about 150 elephants share space with a quarter of a million people. To understand the human diversity and tolerance of elephants that allow for coexistence in this region, Thekaekara, Bhagwat, and Thornton combined a quantitative survey with ethnographic fieldwork.<sup>375</sup> In this research, a focus was placed on how different local communities perceived the elephants with whom they share space and what factors are relevant to tolerance. Using their data, it turns out that a shared history of living with elephants, mode of subsistence and type of agricultural crops, and most importantly, the fundamental understanding of ‘what is an elephant’ are the three social-cultural variables most relevant to tolerance towards living with elephants. The conceptualizations of elephants as ‘other-than-human persons’ proved to be the ontological stance best suited for coexistence, as it recognizes an elephant’s individuality, personality, and agency, resulting in the possibility of interpersonal negotiations of shared space.<sup>376</sup> Kattunayakans, for example, often talk to elephants as other-than-human persons and show respect and understanding to elephants, which to them is reciprocated by the local elephants not harming their property or community members.<sup>377</sup> Bettakurumbas share this view of elephants and consider elephants capable of mutual respect and cooperation, therefore possible to coexist with.<sup>378</sup> The Malayali settlers, on the other hand, do not have a cultural tradition of recognizing elephants as other-than-human persons, and they are also the community that has the most trouble living with elephants, believing that coexistence with elephants is not possible, and that elephants need to be removed as they are a threat to humans.<sup>379</sup>

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<sup>375</sup> Tarsh Thekaekara, Shonil Bhagwat and Thomas Thornton, “Coexistence and Culture: Understanding Human Diversity and Tolerance in Human-Elephant Interactions,” *Frontiers in Conservation Science* 2 (2021): 1-17.

<sup>376</sup> Thekaekara, Bhagwat, and Thornton, “Coexistence and Culture,” 11.

<sup>377</sup> Thekaekara, Bhagwat, and Thornton, “Coexistence and Culture,” 7-8.

<sup>378</sup> Thekaekara, Bhagwat, and Thornton, “Coexistence and Culture,” 8.

<sup>379</sup> Thekaekara, Bhagwat, and Thornton, “Coexistence and Culture,” 10-11.

*Protection through Interconnection*

Another form of recognizing personhood in animals relevant for human-liminal animal coexistence is related to the discourse of kinship. Contrary to the Western ideology of splitting humans and animals into different categories of beings, kinship recognizes that living beings in the world are connected. For example, in a response to Western dualism of humans versus nature, Métis/Otipemisiw scholar Zoe Todd writes that if we humans thought of ourselves as co-constituted with the lifeworlds that we share with non-humans, we would learn to view ourselves as part of a kinship with all beings.<sup>380</sup> Relatedly, Rarámuri anthropologist Enrique Salmón explains that a Rarámuri worldview does not differentiate between human and non-human. He calls this interconnected view a kin-centric ecology, in which everything is relative and interconnected and there is no need for categories of thought that separate wildlife from humanity.<sup>381</sup> This idea that humans and animals are interconnected has manifested itself in two different ways of coexistence. These ways are not necessarily unrelated to one another, and often share similarities and consequences for coexistence.

The first way cultural communities coexist through kinship is by recognizing animals as a direct family relation. Rather than seeing kinship in a broader sense of the word in which all beings are connected because we share a space, some cultural communities present connections with animal species to the extent that they share a direct relatedness to the animal. Mishmi people living on the Sino-India border, for example, claim tigers to be their brothers, taking credit for tiger protection as they observe taboos against hunting tigers.<sup>382</sup> The tiger is the most revered and feared animal and killing them is prohibited. Due to their kinship relation with tigers, the Mishmi are careful not to harm them in any way. This is not unique to the

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<sup>380</sup> Zoe Todd, "Fish, kin and hope: Tending to water violations in Amiskwaciwâskahikan and Treaty Six Territory," *Afterall* 43, no. 1 (2017): 102-107.

<sup>381</sup> Enrique Salmon, "Kincentric Ecology: Indigenous Perceptions of the Human Nature Relationship," *Ecological Applications* 10, no. 5(2000): 1327-1332.

<sup>382</sup> Ambika Aiyadurai, "'Tigers are Our Brothers': Understanding Human-Nature Relations in the Mishmi Hills, Northeast India," *Conservation and Society* 14, no. 4 (2016): 305.

Mishmi, as the Sundarbans Forest dwellers also conceive of themselves as tied in a web of relatedness with tigers.<sup>383</sup> As such, killing a tiger is like killing a kin-person, and therefore is considered to have severe consequences, a risk that is ameliorated through precautionary rituals.<sup>384</sup> Seeing tigers as brothers not only allows for tigers to be protected from being killed by humans, but also allows for humans and tigers to coexist. The relatedness between humans and tigers within these cultural communities indicates that tigers are just as capable of flourishing as humans— which results not only in protection but also respect and understanding for the tigers with which the communities share space.

Another way kinship contributes to coexistence is through the extension of personhood kinship allows to animals. In Amerindian perspectivism<sup>385</sup>, for example, animals are perceived as people or persons with their own cultures to the same extent that spirits, the dead, plants, and other subjectivities are.<sup>386</sup> This does not mean that for these cultures animals are the same as humans, but that personhood is attributed to animals as well. The possibility of including other beings and/or animal species in the realm of personhood remains always open, because in Amerindian perspectivism the personhood of animals (and of humans) is in effect a question of context.<sup>387</sup> Instead of treating animals as legal objects, Amerindian perspectivism sees animals as subjects without creating an artificial realm to separate humans from animals.<sup>388</sup> So called Amerindian cultures are very clear in their conviction that humans are just one species

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<sup>383</sup> Idem.

<sup>384</sup> Idem.

<sup>385</sup> Amerindian perspective is a concept developed by Eduardo Viveiros de Castro based on his research primarily of native cultures from Western Amazonia, in which he argues that Amerindian indigenous tribes have a different view from settlers on humanity and its relationship with other beings. In Amerindian thought, animals are perceived as people or persons with their own cultures to the same extent that spirits, the dead, plants, and other subjectivities are. Eduardo Viveiros de Castro, *A Inconstancia da Alma Selvagem. E Outros Ensaios de Antropologia* (Sao Paulo: Cosac & Naify, 2012).

<sup>386</sup> Markus Fraundorfer, “The Rediscovery of Indigenous Thought in the Modern Legal System: The Case of the Great Apes,” *Global Policy* 9, no. 1 (2018): 20.

<sup>387</sup> Viveiros de Castro, *A Inconstancia da Alma Selvagem*, 54.

<sup>388</sup> Fraundorfer, “The Rediscovery of Indigenous Thought,” 21.

among many and that all living species have the capacity to be persons depending on the context and the situation.

The influence of Amerindian perceptions of animals as persons on the legal status of animals becomes clear when analysing court cases involving animals in South America. In November 2016, an Argentine judge granted legal personhood to the chimpanzee Cecilia, referring to Amerindian perspectivism that it is our human responsibility to protect the environment and that this means that we need to recognize that great apes are subjects rather than objects.<sup>389</sup> As a result of this ruling, Cecilia was liberated from the zoo of the city of Mendoza, where she had lived almost her entire life in conditions comparable to solitary confinement, and transported to a Great Ape Project sanctuary in Sorocabo that focuses on recognizing the sentience and flourishing of great primates.<sup>390</sup> In 2017, a court in Colombia followed the same logic presented in the case of legal personhood for Cecilia and granted non-human personhood to the bespectacled bear Chucho.<sup>391</sup> Although these animals are all tamed, it is not a far stretch that the recognition of legal personhood of tamed animals can also contribute to coexistence with liminal animals, as the principal foundation on which the decisions are made do not differentiate between the status of domestic, liminal, or wild.

### Sharing Space and Knowledge

A couple of weeks ago, a video went viral on social media of a family of black bears using the hot tub on someone's patio. Many people commented on how cozy the bears looked, and how funny they were. These bears are not the only ones recorded on camera while enjoying the benefits of living close to human settlements. Ranging from a bear sleeping in a hammock to a bear playing the piano during a break-in, many people love the bears they see online. Yet,

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<sup>389</sup> Fraundorfer, "The Rediscovery of Indigenous Thought," 22-23.

<sup>390</sup> Fraundorfer, "The Rediscovery of Indigenous Thought," 23.

<sup>391</sup> Idem.

as is clear from the earlier discussion on living in proximity and sharing our living spaces with bears, humans fear that either their pets, children, or themselves are at risk – especially when they themselves have bears in their environment. The same physical strength for which bears are admired is also considered a problem when they reside in human habitats, and many people consider living with bears in their surrounding as a conflict. Even if there is a general understanding that bears do not pose a direct threat, they are still clouded by a negative image of a dumb and clumsy animal.<sup>392</sup> As such, it is often said that it is impossible to teach bears to coexist with humans, and the only solution is to remove them from the area. This understanding of bears as threatening conflict animals, however, is not prevalent in all cultures, and this alternative perception of bears allows for coexistence.

So, why is it that some cultural communities coexist with animals that are removed in other areas simply because they reside in the same area? This question was also asked by Toncheva and Fletcher when studying human-bear relations in Bulgaria.<sup>393</sup> Researching an area that is characterized by serious human-bear conflicts, one community stood in stark contrast to the others when it comes to human-bear coexistence. Inhabitants of Bulgaria primarily express negative cultural norms around brown bears, expressing the belief that human-bear coexistence is not possible and that bears need to be kept away from humans.<sup>394</sup> As was seen in the previous chapter when discussing the perception of some liminal animals as threats, brown bears evoke a sense of fear and vulnerability for individual and group safety in Bulgaria, even though no one has suffered a brown bear attack.<sup>395</sup> The safety concerns and widespread fear are also enhanced by a general negative perception and the constant

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<sup>392</sup> Bieder, *Bear*, 79.

<sup>393</sup> Svetoslava Toncheva and Robert Fletcher, “From Conflict to Conviviality? Transforming Human-Bear Relations in Bulgaria,” *Frontiers in Conservation Science* 2 (2021): 1-15.

<sup>394</sup> This is interesting as bears were used as circus performers or dancers for a long time in Bulgaria, and although illegal now, the law has been hard to enforce in some areas of the Balkan. It is possible that these bears are considered domestic bears, instead of liminal, resulting in a different perception.

<sup>395</sup> Toncheva and Fletcher, “From Conflict to Conviviality,” 7.

discussions concerning brown bears. As a result, brown bears are illegally poached or removed from the community.

Contrary to their surrounding communities, people in the Rodopi mountains have adapted to living together in relative harmony with brown bears. Although the people in the Rodopi mountains share an overarching cultural Bulgarian identity with those expressing negative cultural norms around brown bears, local cultural beliefs alter their relationships with brown bears. Chief among the local beliefs is the way both people and brown bears appear to pursue knowledge of one another and act on this knowledge to actively minimize potential for conflict.<sup>396</sup> As brown bears are widely considered fellow inhabitants of the shared space by residents, the animals are an important and often discussed topic. As such, people have more awareness of brown bear's behaviours and preferences, resulting in a landscape of tolerance in which residents believe that people and brown bears can peacefully coexist.<sup>397</sup> Ecologists claim that this cultural norm of tolerance is reciprocated by the bears around the village, who are, due to the predominantly tolerant cultural norms around them and the fact that they are not hunted, used to people appearing and do not see them as a threat.<sup>398</sup> That this is a locally developed system of knowledge that both derives from and informs an historical process of 'living together' demonstrates the importance of attention to diverse cultural norms, values and practices for encouraging human-bear coexistence.<sup>399</sup>

It could still be argued that the difference in human-brown bear relations between the communities is economic rather than cultural. The people in the Rodopi mountains benefit from their relationships with brown bears through ecotourism projects, which attract tourists

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<sup>396</sup> Svetoslava Toncheva and Robert Fletcher, "Knowing bears: An ethnographic study of knowledge and agency in human-bear cohabitation," *Environment and Planning. Nature and Space* (2021): 910.

<sup>397</sup> Toncheva and Fletcher, "Knowing bears," 912.

<sup>398</sup> Toncheva and Fletcher, "Knowing bears," 916.

<sup>399</sup> Pooley, et al., "An interdisciplinary review," 513-523; Esther Turnout, et al., "Rethinking biodiversity: From goods and services to "living with"," *Conservation Letters* 6 (2013): 154-161.

who express interest in photographing the animals.<sup>400</sup> Yet, the profit margins of these projects are small, and many residents express a lack of financial resources or knowledge of the legal regulations for maintaining the projects.<sup>401</sup> Moreover, the damage caused by brown bears does not differentiate between those areas where people perceive brown bears negatively and those where they are seen in a positive way. This seems to indicate that the economic factor is not sufficient to explain the difference in norms.

Instead, it is the place that brown bears occupy within local people's lifeworld that impact whether human-brown bear existence is seen as possible. If there is already a pre-existing understanding within a culture that coexistence between humans and bears is not a possibility, any time that humans and bears share space will be considered a negative experience and one that needs to be prevented from happening again. In the areas where brown bears are perceived negatively, the bear has become a symbol of threat to personal safety and an obstacle for development for the local population.<sup>402</sup> Such negative cultural norms make it difficult for people to even think of the possibility for coexistence, and the negative images are reinforced through the way that information is shared about the animals.

In contrast to this negative cultural depiction of brown bears, in the communities in which peaceful coexistence with brown bears is accepted as a way of sharing space, brown bears appear as characters in jokes and poems.<sup>403</sup> Moreover, traditional folklore promotes positive images of bears as symbols of fertility and power, which are enhanced by the performance of stress releasing rituals in case of bear encounters, which in turn contribute to mitigating potentially negative effects of such an encounter.<sup>404</sup> By sharing knowledge about

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<sup>400</sup> Toncheva and Fletcher, "From Conflict to Conviviality," 10-11.

<sup>401</sup> Idem.

<sup>402</sup> Toncheva and Fletcher, "From Conflict to Conviviality," 10-11.

<sup>403</sup> Toncheva and Fletcher, "Knowing Bears," 901-923; Svetoslava Toncheva, Robert Fletcher, and Esther Turnhout, "Convivial Conservation from the Bottom Up: Human-Bear Cohabitation in the Rodopi Mountains of Bulgaria," *Conservation and society* 20, no. 2 (2022): 124-135.

<sup>404</sup> Idem.

the bears through folklore, jokes, poems and stories, inhabitants learn to read the bears' signs and understand the animals as permanent inhabitants, which is beneficial for interactions within the shared space. The understanding of brown bear behaviour, as well as an acceptance of their role as fellow cohabitants of the space in which people reside, minimizes the potential for conflict, resulting in a drastically different experience of human-brown bear coexistence.

The Bulgarian case study is not an anomaly for human-brown bear coexistence. During interviews with residents in central Romania, most of the respondents showed a positive perception of human-brown bear coexistence.<sup>405</sup> What is clear in these interviews is that, just as in the Bulgarian case, the main driver for a positive perception of human-bear coexistence is the social-cultural importance people attach to bears and nature. And as in the Bulgarian case, the deep and continuous relations between people and nature seem to be more important to support coexistence than financial incentives or other use values.<sup>406</sup> Interviewees, for example, describe bears as equals to their human neighbours, with no difference between their neighbour and the bear that comes every second evening.<sup>407</sup> People and brown bears are both considered to be a part of nature that belongs within the space and with whom coexistence is possible.

Brown bears are not the only liminal animals accepted by some cultural communities even though they are perceived as threats that warrant removal by so many others. For example, despite a lack of compensation schemes for livestock losses, many people living in the Kruger area, South Africa, do not kill lions in retribution, and there is evidence of cultural tolerance enabling higher persistence of multiple carnivore species in India.<sup>408</sup> On the Indonesian island

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<sup>405</sup> Ine Dorresteijn, et al., "Social factors mediating human-carnivore coexistence: Understanding thematic strands influencing coexisting in Central Romania," *Ambio* 45, no. 4 (2016): 490-500.

<sup>406</sup> Dorresteijn, "Social factors mediating human-carnivore coexistence," 494.

<sup>407</sup> Dorresteijn, "Social factors mediating human-carnivore coexistence," 494-495.

<sup>408</sup> Legendijk and Gusset, "Human-carnivore coexistence," 971-976; Krithi Karanth et al., "The shrinking ark: patterns of large mammal extinctions in India," *Proceedings of the Royal Society: Biological Sciences* 277 (2010): 1971-1979.

of Sumatra, Indigenous people coexist with tigers, which is a centuries old tradition in many areas.<sup>409</sup> Although this willingness to coexist was initially ascribed to a sense of kinship, this kinship was lost through the centuries, and the tiger is instead located within a cosmological framework of belonging to the space in which the Indigenous peoples live.<sup>410</sup> For example, the Kerinci people have lost kin to tigers through the centuries, but often ascribe meaning to ancestral-tiger lore, in which the victim is considered to have transgressed a customary rule, such as committing adultery or unfairly dividing an inheritance.<sup>411</sup> The Minangkabau in West Sumatra believe that the soul of someone who sinned can transfer to a tiger, becoming a protector in the forest to its human family and friends.<sup>412</sup>

When presented with different human-tiger conflict scenarios, with varying levels of severity towards livestock or human life, the majority response of local Sumatran humans was to leave the tiger alone, rather than kill them. In addition, many local communities on Sumatra offer tigers protection, sharing stories about tigers not seeking interactions with people and instead helping people out of the forest indirectly by leaving a trail of pugmarks or broken twigs and roaring whilst hidden at the entrance to the farmland.<sup>413</sup> This cultural belief in the possibility of human-tiger coexistence is also recorded in historical accounts of the colonial Dutch in the 19<sup>th</sup> century. During this period, the Dutch offered rewards to those who killed a tiger, believing tigers to pose a threat to humans.<sup>414</sup> Very few carcasses were presented as the indigenous population did not believe in the killing of tigers as they were not seen as out of place or posing a direct threat.

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<sup>409</sup> Jet Bakels, "Farming the Forest Edge: perceptions of wildlife among the Kerinci of Sumatra," in *Wildlife in Asia: Cultural Perspectives*, ed. John Knight (London: Routledge Curzon, 2004), 147-165.

<sup>410</sup> Jeanne McKay, et al., "Tolerating tigers: Gaining local and spiritual perspectives on human-tiger interactions in Sumatra through rural community interviews," *PLoS ONE* 13, no. 11 (2018).

<sup>411</sup> Jet Bakels, *The pact with the tiger: Perceptions of man-eating animals in Kerinci, Sumatra* (Leiden: Research School of Asian, African, and Amerindian Societies Leiden University, 2000).

<sup>412</sup> McKay et al., "Tolerating tigers."

<sup>413</sup> Idem.

<sup>414</sup> Jet Bakels and Gerard Persoon, "Sharing stories. On the intercultural dialogue on the protection of species," in *Culture and conservation: investigating the linkages between biodiversity protection and cultural values and practices*, ed. Jet Bakels et al. (Cambridge: Arcus Foundation, 2016), 37-46.

### Spiritual and Religious Significance

When I traveled through India, one of the many things that stood out to me was the number of temples dedicated to animals. These animal temples were often related to specific gods, who were either represented through the animal, or who had a close relationship with the animal species. Through these temples, people not only paid respects to the gods, but also to the animal species, having certain associations and cultural norms about the animal species through religious means. Although religion can demonize animals, the temples in India show that it can also contribute to coexistence and a better understanding of the animal species. India is in no way an exception when it comes to the relationship of animals and religion, and other cultures practise it through temples or storytelling as well. For some of these cultures, the way that animals are discussed is not directly related to religion, but instead there is a connection between the coexistence with liminal animals and spirituality. Although spirituality is often seen as an individual connection to a higher power, I use the term here to indicate the difference between organized beliefs and practices, and cultural community practices that relate animals to a spiritual world. The distinction between the two is thus primarily that religion is organized on a large scale – such as Christianity, Islam, and Buddhism – whereas spirituality refers to the religious practices of smaller individual communities that are not tied to these wide-ranging religions. Religion and spirituality often have overlap and both can play a part in a culture's perception of coexistence with liminal animals, but for the case studies that will be discussed here, it is helpful to distinguish between the two.

### *Religion*

Snakes are considered the deadliest reptiles on earth and are often portrayed as the general image of evil – think about the snake in the garden of Eden, the basilisk in Harry Potter, or the myth of the joint snake that could remerge whole after being hacked into pieces. This

fear of snakes as deadly killers seems to be highly misleading when looking at the actual number of snakebite deaths. In the United States of America, more than half of all Americans are afraid of snakes, yet there are only about a dozen snakebite deaths a year.<sup>415</sup> And in Australia, where snakes are demonised, maligned, and instil disgust and fear in many people, the number of snakebite deaths averages fewer than five each year.<sup>416</sup> Of interest is that the country with the highest number of annual snakebite deaths is also the place in which cultural communities coexist with snakes.

With an estimated 58,000 snakebite deaths annually between 2000 and 2019, India outranks the rest of the world when it comes to the risk that snakes pose to humans.<sup>417</sup> While the fear of snakebites results in the death of many snakes in India, communities across India demonstrate that human-snake coexistence is possible. A key role within this coexistence is the perception of snakes in the Hindu religion. All animals, including the ‘unlovable’, fearsome, or repulsive are inherently sacred in Hinduism. This message of sacredness is misleading, however, as Hinduism represents snakes simultaneously as sacred and malevolent, evil, unlucky, and fearsome. In other words, human-snake relations in India are complicated. An example of this is in rapidly urbanizing areas such as Bangalore. A city of nearly nine million people, and rapidly growing, the living spaces of snakes is shrinking, and humans and snakes encounter each other more frequently. The fear of snakebites and the idea of snakes being evil makes residents of Bangalore want to remove the snake from their environment, while at the same time wishing not to upset the snake.<sup>418</sup> As such, the translocation of snakes

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<sup>415</sup> Chris Molony and Orabha Unnithan, “Reacting so Invasive Species: The Construction of a Moral Panic over Burmese Pythons,” *Sociological Inquiry* 89, no. 3 (2019): 355; Hal Herzog, *Some We Love, Some We Hate, Some we Eat: Why It’s So Hard to Think Straight About Animals* (New York: Harper, 2010), 42.

<sup>416</sup> Markwell and Cushing, “The “killer of the cane fields,”” 76.

<sup>417</sup> Wilson Suraweera, et al., “Trends in Snakebite Deaths in India from 2000 to 2019 in a Nationally Representative Mortality Study,” *eLife* 9 (2020): 1-37.

<sup>418</sup> Yamini Narayanan and Sumanth Bindumadhav, “‘Posthuman cosmopolitanism’ for the Anthropocene in India: Urbanism and human-snake relations in the Kali Yuga,” *Geoforum* 106 (2019): 404.

to ‘suitable’ areas (forested, remote, empty land or brownfields) is preferred to the older method of killing snakes on site.<sup>419</sup>

Of particular interest for understanding the possibilities of human-snake coexistence in a liminal setting<sup>420</sup> are those communities in India that worship snake deities, as snakes are not removed or killed here even if they pose a threat. Although Hindus make up 79.8% of the Indian population, there is a large variety in how the religion is practiced and which Gods are worshipped. Serpent-God worship is one of these subsections of Hinduism and is still practiced in many sacred groves across the Western Ghats of India. The Serpent-Gods are also known as Nagas, and although discussed here in the religious context of Hinduism, they are also represented in other religions and cultures. Described as the powerful, splendid, wonderful, and proud semi-divine race that can assume their physical form either as human, a partial human-serpent, or as a whole serpent, stories of Nagas can be found all over Asia.<sup>421</sup> Their power and venom make Nagas potentially dangerous to humans, but in Hindu mythology, they often take the role of beneficial protagonists.

Nagas are not necessarily synonymous with actual living snakes, but the two are inexorably connected in the sense that any affliction posed towards snakes, whether intentional or accidental, is believed to bring forth the wrath of the Nagas.<sup>422</sup> So how does the existence of sacred groves and stories about Nagas influence people’s perception of snakes? When interviewing community members of sacred groves in the Western Ghats in India, Yuan et al. discovered a general sentiment of tolerance, and, to a lesser degree, endearment towards snakes.<sup>423</sup> Even within the minority of participants that did not like snakes, respondents

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<sup>419</sup> Idem.

<sup>420</sup> An intentional choice has been made not to include pet snakes as this would fall under the domestic classification and brings in a whole different range of questions that are too broad for this dissertation.

<sup>421</sup> Herbert Härtel, “Aspects of early nāga cult in India,” *Journal of the Royal Society of arts* 124 (1976): 664.

<sup>422</sup> Amy Alloco, “Fear, reverence and ambivalence: Divine snakes in contemporary south India,” *Religions of South Asia* 7, no. 3 (2013): 231.

<sup>423</sup> Felix Landry Yuan, et al., “Sacred groves and serpent-gods moderate human-snake relations,” *People and Nature* 2, no. 1 (2020): 115.

indicated that despite their feelings about snakes, they would not harm them.<sup>424</sup> These tolerant cultural norms around snakes are further represented by a large number of people wanting more snakes both inside and outside sacred groves, implying a willingness to co-exist with them.<sup>425</sup> The influence of sacred groves on the willingness for coexistence also stands out in analyzing people's willingness to harm snakes. Concerns about venomous snakes are prevalent when encountering snakes both inside and outside sacred groves, but only 2% of the people indicated that they would harm snakes inside sacred groves, versus 23% outside sacred groves.<sup>426</sup> Nearly half of those claiming that they would harm a snake, however, put up the condition that they would only kill the snake if it was venomous.<sup>427</sup> Moreover, a significantly larger proportion of those who did not endorse harm to snakes outside sacred groves said they worshipped snake deities than those that did endorse harm.<sup>428</sup> So, while there are day-to-day concerns about the dangers of snakebites, the worshipping of snake deities contributes to a willingness to coexist with snakes.

Hinduism is not the only religion that has resulted in coexistence with liminal animals normally considered pests. Avian scavengers, such as vultures and kites, are frequently perceived as disgusting or nuisances. Population numbers of avian scavengers are rapidly declining around the world through eradication campaigns seeking to avoid the negative perceptions of nuisance and the spread of infectious diseases.<sup>429</sup> Countering these negative perceptions of avian scavengers, ecologists and biologists argue that avian scavengers are often misunderstood and provide important ecoservices such as disease control through carcass removal.<sup>430</sup> Avian scavengers are not always considered negatively, and some religious

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<sup>424</sup> Idem.

<sup>425</sup> Idem.

<sup>426</sup> Landry Yuan et al., "Sacred groves," 116.

<sup>427</sup> Idem.

<sup>428</sup> Idem.

<sup>429</sup> Laura Gangoso, et al., "Reinventing mutualism between humans and wild fauna: insights from vultures as ecosystem service providers," *Conservation Letters* 6, no. 3 (2013): 173.

<sup>430</sup> Ruth Garcia-Jimenez, et al., "Avian scavengers' contributions to people: The cultural dimension of wildlife-based tourism," *Science of the Total Environment* 806 (2022); Sergio Augustin Lambertucci, et al., "Presumed

communities coexist with them. The black kite, for example, is seen as an important animal in Islamic communities. Islamic communities around the world practice religious kite-feeding, whereby compact chunks of red meat are thrown in the air.<sup>431</sup> These offerings are made for a variety of reasons, such as asking for blessings and relief from sins and worries.<sup>432</sup> While meat-offering is practiced by several communities, in Delhi, India, it has resulted in the largest urban raptor concentration recorded in the world.<sup>433</sup> As large quantities of meat are tossed to kites at predictable hours each day, 90% of the diet of urban black kites in Delhi now comes from religious offerings, and the black kites predominantly live in Islamic communities in Delhi.<sup>434</sup> Residents actively make sure that the black kites remain within their community through feeding practices, and their positive cultural norms around them allows for the black kites to live in relative safety. Through the religious acceptance of the black kite as an important animal, Muslim communities around the world have created ways of coexistence.

Another avian scavenger who coexists with people through the influence of cultural religion is the vulture. The Himalayan vulture, a sacred and important bird for local people in the Qinghai-Tibet Plateau, enjoys considerable protection as a result of the cultural practices and beliefs from the community.<sup>435</sup> Vulture populations have seen a dramatic decline in the last decades, with more than a 95% decline in vulture populations in Asia during the last 30 years.<sup>436</sup> Often branded as malicious predators of livestock and people, vultures populations

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killers? Vultures, stakeholders, misperceptions, and fake news,” *Conversation Science and Practice* 3, no. 6 (2021).

<sup>431</sup> David Pinault, “Raw meat skyward: Pariah-kite rituals in Lahore,” in *Comparative Islamic studies: notes from the fortune-telling parrot: Islam and the struggle for religious pluralism in Pakistan*, ed. David Pinault (London: Equinox Publishing Ltd, 2008), 108-121; Nishant Kumar, et al., “The population density of an urban raptor is inextricably tied to human cultural practices,” *Proceedings Royal Society B* 286, no. 1900 (2019).

<sup>432</sup> Anand Vivek Taneja, “Saintly Animals: The Shifting Moral and Ecological Landscapes of North India,” *Comparative Studies of South Asia, Africa and the Middle East* 35, no. 2 (2015): 216.

<sup>433</sup> Kumar et al., “The population density of an urban raptor.”

<sup>434</sup> Idem.

<sup>435</sup> Roller MaMing, et al., “Vultures and sky burials on the Qinghai-Tibet Plateau,” *Vulture News* 71 (2016): 22-35.

<sup>436</sup> Vibhu Prakash et al., “Catastrophic collapse of Indian white-backed *Gyps bengalensis* and long-billed *Gyps indicus* vulture populations,” *Biological Conservation* 109, no. 3 (2003): 381-390; Darcy Ogada Felicia Keesing and Munir Virani, “Dropping dead: causes and consequences of vulture population declines worldwide,” *Annals New York Academy of Science* 1249, no.1 (2012): 57-71.

are threatened by (sometimes unintentional) poisoning and negative effects of other numerous human activities in their environment including use of their body parts in traditional medicine, loss of breeding sites, and direct persecution.<sup>437</sup> Contrary to most populations of vultures, the vulture populations in Qinghai-Tibet Plateau are relatively stable. Due to protection by Buddhist monks and local people – with generosity and compassion for all beings to be important virtues in Buddhism – human-vulture coexistence has created an associated cultural history with positive symbolic values.<sup>438</sup> Buddhist virtues such as generosity and compassion are, however, not the only reason humans and vultures coexist in Qinghai-Tibet Plateau. The tradition and custom of sky burial, also known as *jhator*, meaning ‘giving alms to the birds’, give vultures an important religious role for funerals.<sup>439</sup> During a sky burial, the hair is removed from the deceased body, and the body is offered to vultures for consumption. It is considered a bad omen if the vultures will not eat during the ceremony or if even a small portion of the body remains after the birds fly away.<sup>440</sup> Although the practice of sky burials was condemned by the Communist regional autonomous Tibetan regime, recently, the local government has changed its approach toward sky burials, and between 2013 to 2016 large investments have been made in the renovation of sky burial stations.<sup>441</sup> The local government also passed regulations to protect Tibetan tradition and culture. These regulations prohibit human activities such as firing, blasting and quarrying around the burial sites to avoid disturbance to the

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<sup>437</sup> Lambertucci et al., “Presumed killers?”; Christie Craig, Robert Thomson, and Andrea Santangeli, “Communal farmers of Namibia appreciate vultures and the ecosystem services they provide,” *Ostrich* 89, no. 3 (2018): 212; Rhys Green et al., “Diclofenac poisoning as a cause of vulture population declines across the Indian subcontinent,” *Journal of Applied Ecology* 41, no. 5 (2004): 793-800; Lindsay Oaks et al., “Diclofenac residues as the cause of vulture population decline in Pakistan,” *Nature* 427, no. 6975 (2004): 630-633; Justus Deikumah, “Vulture declines, threats and conservation: the attitude of the indigenous Ghanaian,” *Bird Conservation International* 30, no. 1 (2020): 104; William Kuvlesky, et al., “Wind energy development and wildlife conservation: challenges and opportunities,” *The Journal of Wildlife Management* 71, no. 8 (2007): 2487-2498.

<sup>438</sup> Roller MaMing and Guohua Xu, “Status and threats to vultures in China,” *Vultures News* 68, no. 1 (2015): 3-24.

<sup>439</sup> MaMing et al., “Vultures and sky burials,” 22.

<sup>440</sup> Idem.

<sup>441</sup> MaMing, et al., “Vultures and sky burials,” 30-31.

scavengers.<sup>442</sup> In addition, the regulations do not allow sky burials for people who have died of toxicosis or infectious diseases to prevent poisoning of vultures.<sup>443</sup> Sky burials are not only practiced in Tibet, and take place in Mongolia, China, India, and Iran as well.<sup>444</sup> The sky burials in Tibet are unique however, in that they have turned into a tourist attraction, with Tibetan people building temples and towers of deaths near great sky burial sites to attract and entertain the growing number of Chinese tourists who visit to see the vultures.<sup>445</sup> Although perhaps a macabre thought to see vultures consume the body of a deceased individual, the religious perceptions of people in Qinghai-Tibet Plateau do contribute to coexistence with vultures, respecting the scavenging abilities and ecosystem services that vultures provide.

### *Spiritual Significance*

As with organized religion, local forms of spirituality are also an important part of the cultural acceptance of liminal animals, contributing to a willingness to coexist. The Sclater Monkey is a threatened primate mainly found in southeastern Nigeria, but who does not live in any protected areas. Due to habitat loss and hunting pressure, they live alongside people, raid farms and gardens, and are commonly viewed as pests. Interviews in the region reveal that most residents hold negative opinions of the monkeys, with crop and garden raiding having the most adverse effect on people's cultural norms.<sup>446</sup> Yet, there are two Igbo communities in southeastern Nigeria, Akpugoeze and Lagwa, where social taboos linked to spirituality and local folklore result in protection for Sclater's from being killed or eaten.<sup>447</sup> In Akpugoeze, monkeys are protected because they are considered the property of two local deities, and in

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<sup>442</sup> MaMing, et al., "Vultures and sky burials," 30.

<sup>443</sup> Idem.

<sup>444</sup> Dan Martin, "On the Cultural Ecology of Sky Burial on the Himalayan Plateau," *East and West* 46, no. 3 (1996): 353-370.

<sup>445</sup> MaMing, et al., "Vultures and sky burials," 29.

<sup>446</sup> Lynne Baker, et al., "Role of local culture, religion, and human attitudes in the conservation of sacred populations of a threatened 'pest' species," *Biodiversity and Conservation* 23, no. 8 (2014): 1897.

<sup>447</sup> Idem.

Lagwa, monkeys are also associated with a deity, and they are well represented in local folklore.<sup>448</sup> Lagwa folklore about Sclater's monkeys stand out, as they are very positive of the monkeys, expressing affection and kinship toward monkeys. When asked during interviews, several Lagwa residents expressed pride about the monkeys, stating that:

Monkeys are identified with this place, and we do boast of them... Monkeys are the pride of this community, and we are identified with them. Monkeys bring out the uniqueness of our culture. They help to spread the culture of our people beyond the borders of this community.<sup>449</sup>

Through folklore stories and spirituality, 90% of the residents of the Akpugoeze and Lagwa communities believe that there is no situation in which it is acceptable to kill monkeys.<sup>450</sup> The three most frequently cited reasons for this were: monkeys are owned by or associated with a shrine (50%); it is the custom of culture of the community (42%); monkeys are closely related to people (12%).<sup>451</sup> Additionally, nearly two-thirds of people interviewed said that there are adverse consequences for people who intentionally kill monkeys.<sup>452</sup> The most frequently mentioned consequence was being obligated to organize and pay for a burial for the monkey (55%), and the next most mentioned consequence was being harassed, shunned, or ostracized by others (35%), or facing spiritual repercussions, such as being killed by the shrine, becoming mad or ill, or having to appease the gods.<sup>453</sup> In recent years, changes have taken place that are slowly changing the perspective of local residents about Sclater's monkeys. Religious

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<sup>448</sup> Lynne Baker, "Links between local folklore and the conservation of Sclater's monkey (*Cercopithecus sclateri*) in Nigeria," *African Primates* 8 (2013): 17-24.

<sup>449</sup> Baker, "Links between local folklore and the conservation of Sclater's monkey," 20-21.

<sup>450</sup> Baker, "Role of local culture," 1904.

<sup>451</sup> Baker, "Role of local culture," 1902.

<sup>452</sup> Baker, "Role of local culture," 1903.

<sup>453</sup> Baker, "Role of local culture," 1903-1904.

conversion to Christianity changes people's views on the importance of the monkeys, with numbers indicating that the more someone attends church, the less likely they consider Sclater's monkeys to be important.<sup>454</sup> As a result of the lowering status of Sclater's monkeys, those local people converted to Christianity express their change in religious belief as a reason for accepting the killing of monkeys in some circumstances.<sup>455</sup> This shows how important local cultural spirituality is for coexistence with liminal animals, especially if they are considered to be pest animals.

Sclater monkeys are not the only primates facing the threat of removal or killing because of spiritual conversion in a local community. Analyzing attitudinal differences towards primate species considered as agricultural pests in India, Sharabh Anand et al., discovered that there are significant differences in how communities in north India respond to pest primates versus those in south India. Whereas 80% of the respondents in the north classified the local primate species rhesus macaques as gods who should not be killed in 2015, 2018 research shows that these local spiritual beliefs are declining rapidly.<sup>456</sup> In contrast to the fluctuations in the north, residents in the south of India predominantly express negative feelings towards primates, with 94% classifying them as pests who are allowed to be killed in retaliation for crop-raiding.<sup>457</sup> Yet, as in south Nigeria, local communities in north India are still reluctant to remove primates when given the opportunity. In response to an increasing intensity of rhesus macaque conflict, the state government of Himachal Pradesh declared the species as vermin twice, once in 2010 and more recently in 2016, and offered a monetary reward for those who culled monkeys.<sup>458</sup> Nevertheless, Himalachi farmers expressed reluctance to kill problem

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<sup>454</sup> Baker, "Role of local culture," 1901.

<sup>455</sup> Baker, "Role of local culture," 1904.

<sup>456</sup> Raghav Saraswat, Anindya Sinha, and Sindhu Radhakrishna, "A god becomes a pest? Human-rhesus macaque interactions in Himachal Pradesh, northern India," *European Journal of Wildlife Research* 61, no. 3(2015): 435-443; Sharabh Anand, Vilakkathala Vijayan Binow, and Sindhu Radhakrishna, "The monkey is not always a God: Attitudinal differences towards crop-raiding macaques and why it matters for conflict mitigation," *Ambio* 47, no. 7 (2018): 716-717.

<sup>457</sup> Sharabh, Vijayan Binow, and Radhakrishna, "The monkey is not always a God," 716-717.

<sup>458</sup> Idem.

macaques, and in April 2017, the state government of Himachal Pradesh acknowledged that spiritual beliefs prevent farmers from shooting macaques, therefore bringing in external cullers.<sup>459</sup> So, even though changes are taking place in the local belief systems, treatments of local residents still reflect residual spiritual beliefs that protect and encourage coexistence with liminal animals – even if they are considered agricultural pests.

### Lessons Learned from the Case Studies

Human-liminal animal relations do not need to be negative, and cultural perceptions play an important role in coexistence. As studies of urban animals show that the negative imaginative geographies of liminal animals can be destabilized,<sup>460</sup> it is important to look at factors that can contribute to this destabilization. This chapter has shown that human-liminal animal coexistence is possible by looking at cultural factors contributing to positive perceptions of liminal animals. Looking at these different cultural perspectives of liminal animals is especially important as it shows that our beliefs are not fixed. As can be seen in the case studies discussed in this chapter, many other societies and cultural worldviews are prepared to see capacities for agency distributed much more widely across the many different things of creation – humans, animals, spirits, and the elements all included – thereby disrupting what Westerners have normally taken to constitute the properties of consciousness, self-awareness, intentions, thought and language. By taking serious ‘other’ cultural knowledges – which provide a less dualistic account of the differences between humans and animals – many people (outside the West, but in it too) are starting to deconstruct seemingly obvious claims about the privileged status of humans over animals as the main source of agency in the world.<sup>461</sup>

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<sup>459</sup> Idem.

<sup>460</sup> Griffiths, Poulter, and Sibley, “Feral Cats in the City,” 56-70.

<sup>461</sup> Philo and Wilbert, *Animal Spaces*, 15; Tim Ingold, “From trust to domination: an alternative history of human-animal relations,” in *Animals and Human Society: Changing Perspectives*, ed. Audrey Manning and James Serpell (London: Routledge, 1994), 1-22.

The recognition of agency and personhood is not the only factor in cultural representations of liminal animals that aids human-liminal animal coexistence. Another important factor is how space is reflected within cultural communities. Whereas liminal animals and humans often occupy separate spaces in Western thought, with liminal animals not allowed to cross these boundaries without facing the repercussion of exclusion, a more fluid perception of space and belonging contributes directly to human-liminal animal coexistence. What resonates most in the cultural communities where humans and liminal animals coexist, is that when residents discuss the place of liminal animals, animals belong just as much within the space occupied by humans. As such, space is something that is considered as shared, something that is reflected in cultural activities such as storytelling and paintings.

The final cultural factor that stands out in positive perceptions of liminal animals is the spiritual or religious influence liminal animals have. While it seems impractical and unethical to forcefully convert people to religious worshipping to promote coexistence, the social-cultural taboo against harming liminal animals can be useful for the promotion of coexistence with dangerous liminal animals. Many have argued that this social-cultural taboo can be pushed forward as leverage for the integrative conservation of liminal animals, such as in the case of snakes and sacred groves in the face of encroachment by development and plantations.<sup>462</sup> Moreover, cases have been documented where traditional taboos in sacred sites have successfully led to the protection of species otherwise considered as dangerous or pests.<sup>463</sup>

The cultural factor of religious or spiritual significance is thus not one of enforcing conversion to these religious or spiritual beliefs. Instead, as is the case for the other cultural

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<sup>462</sup> Shonil Bhagwat and Claudia Rutte, "Sacred groves: potential for biodiversity management," *Frontiers in Ecology and the Environment*, 4, no. 10 (2006): 519-524; Mohammed Khan, et al., "The sacred groves and their significance in conserving biodiversity: An overview," *International Journal of Ecology and Environmental Sciences* 34, no. 3 (2008): 277-291; Alison Ormsby and Shonil Bhagwat, "Sacred forests of India: A strong tradition of community-based natural resource management," *Environmental Conservation* 37, no. 3 (2010): 320-326.

<sup>463</sup> Idem.

factors, they are important influences on coexistence that need to be looked at to demonstrate that the Western viewpoints on which the exclusion of liminal animals is based is not fixed. By looking at other cultural perceptions of liminal animals, and underlying commonalities, it becomes clear that human-liminal animal coexistence is possible. Coexistence, however, will not be possible within the current landscape, and changes in Western perceptions of liminal animals need to take place. Rather than making the argument for a singular homogenous culture, the case studies discussed in this chapter highlight how different cultural communities all around the world coexist with liminal animals, and key to this is the recognition of liminal animals as agents with value who belong in the spaces we share with them. This recognition of liminal animals does not only contribute to sharing space, however, it also offers liminal animals protection from harm. So, even though there are many differences between the cultural communities discussed in this chapter, they all have one thing in common: human-liminal animal coexistence.

## Chapter 4: From Conflict to Coexistence

As a child I often wondered whether I came from an odd family. If we are different, and if so, what makes us different? I come from a typical middle-class family, some Catholicism in the background, but never actively practiced. We all play the same sports as everyone else, eat whatever anyone else eats for their meals, attended public schools, and did not stand out in any other ways from families around us. Except for feeding the mice. I never dared to tell others about it, having heard friends react in disgust to rats or mice, and listening to the stories told in school of how rodents are spreaders of disease. Somehow it felt better to keep the mice feeding as a family secret. Yet, as it turns out, my family is not the only one who is not disgusted by rodents. As we saw in the last chapter, some temples in India consider rats holy, while other people have a more general sense of mice having an equal right to belong in the world as humans. So why is it that some of us seek to coexist with mice? Is there perhaps a similarity between those who do want to coexist that could create a world of coexistence between humans and liminal animals in places where liminal animals are currently excluded?

While the previous chapter revealed certain similarities that underpin successful cases of human-liminal animal coexistence, this does not entail that there is one holy grail of culture. In other words, my search for a way to have people coexist with liminal animals does not follow the logic that if one culture coexists with liminal animals, this culture is therefore better than any others. Instead, cultures all have their strengths and weaknesses, and by creating an overview of different cultures coexisting with liminal animals, we can see whether there are any underlying factors that contribute to human-liminal animal coexistence. Religion, for example, can play an important role in establishing positive human-liminal animal relationships, but it can also contribute to negative human-liminal animal relationships elsewhere. And while some religions may inherently seek better relationships between humans

and liminal animals, this does not mean that we must all conform to this religion if we seek human-liminal animal coexistence. Instead, there is an underlying notion of kinship and belonging that connects those who coexist with liminal animals. This is also what made my family's relationship with mice so different than how families around us treated them. Instead of seeing mice as disgusting carriers of disease, we thought of the mice as belonging just as much as we did to the space we shared.

The question that remains is how to create a notion of kinship or belonging in places where negative cultural norms dominate. Are solutions to conflict situations sufficient for changing cultural norms, or are other methods needed? And most of all, is it even possible to change the negative cultural norms around liminal animals?

### Moving from Conflict to Coexistence

A change in cultural norms around animals often starts from a small group. The people in this group consists of those who believe that an animal belongs. While groups often start out small, they can gain momentum and have great impact on the way that animals are perceived. Those who make this change happen come from different walks of life, but their perseverance and beliefs of belonging and kinship share a similarity to those discussed in the previous chapter. The difference in creating coexistence from conflict is that those who seek to change negative cultural norms around an animal are often the minority.

A variety of case studies show that changing negative cultural norms around liminal animals is possible, albeit not easy.<sup>464</sup> What these case studies also show is that creating

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<sup>464</sup> Goedeke, "In the Eye of the Beholder," 99-116; Anita Malhotra, etc. "Promoting co-existence between humans and venomous snakes through increasing the herpetological knowledge base," *Toxion: X* 12 (2021): 100081; Alexandre Chausson, et al., "Evaluating the impact of Warrior Watch: Behaviour change to promote human-lion coexistence," *Biological Conservation* 271 (2022): 109571; Nina Fascione, Aimee Delach, and Martin Smith, *People and predators: from conflict to coexistence* (Washington D.C.: Island Press, 2004); Angelica Caiza-Villegas, Bettina van Hoven, and Owain Jones, "Bats in the City: Exploring Practices of Citizen Bat Conservation Through the Lens of Becoming-With Animal," *Anthrozoös* (2022): 1-17.

coexistence where there is conflict does not require a culture to adopt another one. It does, however, require a change in mindset on how liminal animals are perceived, represented, and where they are thought to belong. Education plays a large role in creating this change, as people's negative perceptions of liminal animals are often based on wrong or misleading information. Sometimes this requires us to go back to the basic facts: we cannot live in a world without animals, and if we cannot and do not want to remove animals from our lives, we need to find ways to coexist with them. Change, however, is not simple and does not happen overnight. Environmental educators, and others advocating for coexistence, are not deterred by this, and many projects seeking to improve human-liminal animal relationships show success in altering the way that animals are culturally perceived.<sup>465</sup>

Some may say that creating human-liminal animal coexistence does not require a cultural change of norms. Instead, they argue that fixing the conflict situation directly would be sufficient for humans and animals to coexist. This, however, does not sufficiently address the inherent conflict at play, as those liminal animals who are negatively perceived will still be excluded simply based on the negative perceptions rather than the conflict. In other words, the potential of conflict or perceived conflict is sufficient for the animal to be removed. An example of this is monetary aid to those who are negatively affected by conflicts with liminal animals – such as farmers who have crops eaten or trampled. Although the monetary aid is an important tool in conflict situations, it does not solve the problem of animal removal, as they are often still removed with the thought that they pose a potential threat or nuisance. Recent publications on conflict animal management, however, show that positive cultural interactions

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<sup>465</sup> Li Jönsson and Tau Ulv Lenskjöld, “A foray into not-quite companion species: design experiments with urban animals as significant others,” *Artifact* 3, no. 2 (2014): 1-13; Tuomas Aivelo and Suvi Huovelin, “Combining formal education and citizen science: a case study on students’ perceptions of leaning and interest in an urban rat project,” *Environmental Education Research* 26, no. 3 (2020): 324-340; Carly Sponarski, et al., “Changing attitudes and emotions toward coyotes with experiential education,” *The Journal of Environmental Education* 47, no. 4 (2016): 296-306; Meng Wu, Tzu-Chi Yuan, and Chi-Chang Liu, “Changing stigma on wild animals: a qualitative assessment of urban pupils’ pre-and post-lesson drawings,” *Environmental Education Research* 26, no. 6 (2020): 830-848; Susanne Gannon, “Saving squawk? Animal and human entanglement at the edge of the lagoon,” *Environmental Education Research* 23, no. 1 (2017): 91-110.

and depictions of the animals involved are necessary to adequately prevent conflict<sup>466</sup> – something which can only be achieved if humans are willing to move beyond the negative cultural norms. Changing cultural norms through education and awareness campaigns does not only limit conflict, but it also creates higher tolerance and a greater capacity for coexistence.

While some educational programs take place in educational centers or schools, others have found ways to improve cultural norms about liminal animals directly around the house. A well-known example of the at-home projects is the Great Backyard Bird Count, a joint program of the Cornell Lab of Ornithology and Birds Canada, where anyone around the world can report for four days which birds they see in their backyard.<sup>467</sup> Reporting backyard birds does not only help scientists track which bird species are where, but also increases awareness amongst people about the animals they share space with. Other at-home projects such as placing footprint tunnels, hanging up wildlife cameras and having an annual Garden Watch – where people report on the animals they see in their yard – all contribute to improving human-liminal animal relationships.

Merely creating awareness of the animals around us is not sufficient, as this could also result in an increased removal of the animals involved. Instead, changing people's cultural norms relies on not only creating awareness about the animals around us, but also increasing their knowledge of why these animals play a vital role for the ecosystems and how we can interact with them in a way that limits conflict. An example of tools used for improving knowledge about animals are tracking apps, where people only need to upload a picture to be provided with a plethora of information without disturbing the animal. Through these apps,

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<sup>466</sup> Akashdeep Roy, Suraj Jumar Dash, and Sambandam Sathyakumar, "A Combination of Cultural Values and Economic Benefits Promote Tolerance Towards Large Mammals in a Hotspot of Human-Wildlife Conflicts in Eastern India," *Human Ecology: An Interdisciplinary Journal* 50, no. 2 (2022): 321-329; Chausson, et al., "Evaluating the impact of Warrior Watch," 109571.

<sup>467</sup> "Great Backyard Bird Count," *Birds Canada*, last updated 2023, <https://www.birdscanada.org/bird-science/great-backyard-bird-count>.

people learn about the benefits that animals provide for the environment and how these animals live, creating a direct connection from the human to the animal.

Changing humans' cultural norms about liminal animals does not require people to directly engage with liminal animals. It can be said that it would be better for liminal animals not to have to engage with them constantly, as this would interfere with their lives. As such, any method used for improving human-liminal animal relationships needs to walk a fine line of educating humans while not negatively impacting the animals' life. To limit direct interactions with liminal animals, researchers and activists use tools such as social media and online programs to change people's perceptions of the involved animal species.<sup>468</sup> In addition through using knowledge about liminal animals allows humans make changes in ways that encourage coexistence with minimal impact to their daily lives. A great example of this are garbage cans. A variety of liminal animals, from bears to cockatoos, are known to pose a threat or be a nuisance by raiding garbage cans. Rather than removing the animal, however, humans have adjusted their garbage recycling systems by building bear-proof garbage cans, establishing laws on littering, and consistently renovating systems when animals discover new ways to raid bins.

No matter the awareness and knowledge of liminal animals, there always remains the potential for conflict. Occupying the same places with species' survival depending on construction, nesting, and transportation, humans and liminal animals inevitably run into conflict. Nonetheless, through awareness of each other's needs and habits, humans can adapt their living styles and buildings to accommodate the needs of liminal animals and mitigate

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<sup>468</sup> John Blewitt, "The media, animal conservation and environmental education," *Environmental Education Research* 17, no. 6 (2011): 711-718; Chiara Grasso et al., "Anthropomorphized Nonhuman Animals in Mass Media and Their Influence on Human Attitudes Toward Wildlife," *Society & Animals* (2020): 1-25; Didone Frigerio et al., "Citizen science and wildlife biology: Synergies and challenges," *Ethology: International Journal of Behavioural Biology* 124, no. 6 (2018): 365-377; Ryan Hathaway et al., "From fear to understanding: changes in media representations of leopard incidences after media awareness workshops in Mumbai, India," *Journal of Urban Ecology* 3, no. 1 (2017): 1-7; Mona Schönfelder and Franz Bogner, "Two ways of acquiring environmental knowledge: by encountering living animals at a beehive and by observing bees via digital tools," *International Journal of Science Education* 39, no. 6 (2017): 723-741.

conflict. Although this may require some compromising, and adjustments from liminal animals may be limited, it is a much better alternative than continuous conflict resulting in the removal of liminal animals. To explore the role of cultural norms in human-liminal animal conflict, I have decided to focus as my test case on human-beaver relationships, and more specifically, on a recent local project in Kingston that sought to enhance human-beaver coexistence – including positive attitudinal changes. Human-beaver relationships in Canada are a great example of the role cultural norms play in human-liminal animal conflict, as beavers play an important role as a cultural symbol in Canada while currently trying to navigate their place within society. As we will see, the case of beavers in Canada, and of Kingston in particular, provides an excellent illustration of how we can apply the cultural frameworks I discussed in the previous chapters.

#### Case Study of Human-Beaver Coexistence in Canada

It was one of those mornings where you could feel the power of winter on your lungs with every step you take. Some people complain about it, but I actually enjoy the feeling. It almost makes you feel as if you are renewing your lungs with every breath. With every inhale, old air is frozen inside your body, and with a good exhale you push it out, removing the negative energy. Today, however, felt different, and no matter how much air I breathed out, a nagging feeling was making me feel uncomfortable. Nothing was indicating that something was wrong, and as I continued my way down the path I had just started, everything indicated another wonderful day.

Like every other week, I was on my way to check in on cameras that I had set up near some beaver lodges. With heavy snowfall or rigid freezing spells, the batteries of the cameras could act up, and I wanted to make sure that everything was alright. The beaver lodges reside on land shared with the local mountain bike club (MTB), who I had been helping mitigate

conflict with local beavers. Realizing that their previous lethal methods did not accomplish anything good, the director of the club had asked me that summer if I was able to help them find ways to keep the beavers alive while also maintaining the trails rideable. After twenty years of conflict, in which the club had trapped the beavers, this seemed a good step forward for the beavers. Yet, cultural norms around beavers were still not overly positive amongst members, and the most important task to me seemed to change the cultural norms around the beavers. This is where the cameras came in, as they show the daily activities of the beavers, creating a better understanding of the local beavers and allowing MTB members to establish a connection with the beavers.

Jay, my best friend who some mainly identify as a golden retriever, was standing still ahead of me. Nothing uncommon, as he can get a bit fixated on squirrels. The odd thing was that he was not looking towards the trees as he usually does. Instead, his focus was on the pond that was next to him, and the feeling of agony I had earlier turned into panic. The ATV tracks that had been bothering me already – ATVs destroy a lot of habitats and are just loud noise machines – made my heart stop when I saw them go off the path and onto the ice towards the lodge. Standing on the road, the sticks scattered over the ice and a hole visible in the lodge confirmed the nagging feeling I had been having; something had happened to the beavers. Carefully, I went closer to the lodge, something which I normally refuse to do to give the beavers their space, hoping that someone had only wanted to take a closer look. Standing next to the lodge, however, confirmed that the beavers were no longer there. The hope was that some of them had managed to escape through their water tunnels before people opened the lodge.

The only luck that day was that the cameras had not stopped working, and the images confirmed that men had gone on the ice with their ATVs and pulled two beavers out of the lodge. As far as the cameras had shown before, the lodge had only occupied two beavers, and

the lack of activity in the next weeks confirmed that no beavers were left at the pond. When asking the mountain bike club, they expressed that the men on the ATV were no members and that it must have been local people who had removed the beavers. In one way this was a relief, as it meant that the club had not started to remove beavers again, but the loss of the beavers hurt and was a setback in the progress that had been made on mitigating the suffering of beavers.

The precarious relationship between humans and beavers is not unique to Kingston, and beavers are woven through the lives and stories of those residing in Canada. On March 24, 1975, the beaver was given official status as an emblem of Canada for its involuntary role in founding modern day Canada. Yet, in 2011, Conservative senator Nicole Eaton proposed that the polar bear should become Canada's new national animal, because the beaver is a '19<sup>th</sup> century has-been', a 'dentally defective rat', and 'toothy tyrant' that wreaks havoc on the environment.<sup>469</sup> This was especially interesting, as Eaton gave an impassioned speech in parliament only a year earlier celebrating the beaver.<sup>470</sup> As it turns out, Eaton's vendetta against beavers is much more personal: the beavers living at the main dock near her cottage in Georgia Bay are a nuisance to her.<sup>471</sup> Various farming groups agreed with Eaton's sentiments given that beavers sometimes result in the flooding of farmlands. The Canadian public, however, overwhelmingly rejected the proposal, and the beaver is still the official emblem of Canada.

Although Canadians may not want to replace the beaver as their official emblem, the relationship humans have with beavers is fickle. Beavers are thought of as hardworking animals, with incredible engineering skills, and a cute look. At the same time, beavers are described as destructive nuisances, pests, and destroyers of their environment through the

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<sup>469</sup> The Canadian Press, "Canada urged to swap beaver emblem for bear," *CBC North*, last updated October 28<sup>th</sup>, 2011, <https://www.cbc.ca/news/canada/north/canada-urged-to-swap-beaver-emblem-for-bear-1.1024431>.

<sup>470</sup> Randy Boswell, "Anti-beaver senator once lauded the 'tooth tyrant'," *National Post*, last updated October 28<sup>th</sup>, 2011, <https://nationalpost.com/news/canada/anti-beaver-senator-once-lauded-the-toothy-tyrant>.

<sup>471</sup> Anne Kingston, "Beaver be damned," *Maclean's*, last updated November 4<sup>th</sup>, 2011, <https://www.macleans.ca/news/canada/beaver-be-dammed/>.

cutting of trees or the flooding of areas. Beavers are thus both beloved and hated at the same time. Recent years seem to indicate an increase in human-beaver conflicts, and with the number of beavers steadily increasing, the question is how to move forward. To understand where the human-beaver conflicts are coming from and how some people are trying to create human-beaver coexistence, the case study of human-beaver coexistence in Canada is split in separate sections that follow the arguments presented in the chapters of this dissertation.

The historical overview of human-beaver relationship in Canada highlights that the settler relationship is founded primarily on materialistic grounds during the start of colonization. What will be highlighted as well is that Indigenous nations have a mixed relationship based on both materialistic, economic, and cultural aspects. With the fur trade drastically depleting the number of beavers in Canada, the relationship of humans and beavers among settlers has shifted towards a cultural one throughout the 20<sup>th</sup> century. The comeback of beavers at the mid to late 20<sup>th</sup> century results in a mixed relationship of positive cultural symbolism and exclusionary cultural norms, with the latter gaining ground as humans and beavers start to share space again.

The contemporary situation of exclusionary cultural norms around beavers is illustrated through the case study of MTB. By analyzing comments made and responses to beavers on their online discussion boards, exclusionary cultural norms fitting into the categories of out of place, threat and disruption become clear. A willingness to change among some of the board members, however, and projects set up in accordance with notions of belonging as discussed in the chapter on human-liminal animal coexistence is reflected in a change of cultural norms around beavers. I discuss methods used to accomplish this change as well as how members of MTB are now willing to coexist with beavers at the end of the chapter. The hope is that by using this case study as an example, more people are inspired to seek coexistence with beavers

and other liminal animals as well, applying methods of education and adaptability to move away from exclusionary cultural norms.

*Historical Overview of Human-Beaver Relationships in Canada*

The beaver makes everything perfectly well, it makes us kettles, swords, knives, bread; in short, it makes everything... without the trouble of cultivating the ground. The English have no sense; they give us twenty knives... for one beaver skin.

*A Montagnais Indian, 1634<sup>472</sup>*

Most historical overviews of human-beaver relationships in Canada start with the arrival of the early European settlers in the 16<sup>th</sup> Century. Yet, this negates the fact that there were people living on the lands here long before, people who already had relationships with beavers. In some of these societies, including those of the Tlingit, Tsimshian, Haida, Huron-Wendat, Haudenosaunee, Anishinaabe, Menominee, and Mojave, beavers are linked to clans or similar social divisions.<sup>473</sup> Other people regarded beavers as part of a cosmology in which every living and nonliving thing is imbued with spirit.

Some of the most valuable insights into the pre-colonial relationship between humans and beavers come through stories that have been passed down and preserved against all odds. Throughout North America, Indigenous peoples killed beavers for meat and fur, and often used other body parts as well; how important beavers were to a particular group's diet and material culture depended on their availability. This predator-prey relationship is different, however, from the settler use of beavers. Most Indigenous societies have species-specific precepts

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<sup>472</sup> Dietland Müller-Schwarze and Lixing Sun, *The Beaver: Natural History of a Wetlands Engineer* (Ithaca: Cornell University Press, 2003), 136.

<sup>473</sup> Frances Backhouse, *Once They Were Hats: In Search of the Mighty Beaver* (Toronto: ECW Press, 2015), 41.

governing the treatment of prey remains, which served as a kind of social contract: animals would willingly give themselves up to hunters who demonstrated respect for their prey by following the rules and would withhold themselves from anyone who violated them.<sup>474</sup> An obligation to return beaver bones to the water was common, as was a belief in some form of reincarnation.<sup>475</sup> A story, told by the Omaha, serves as a protocol reminder, as well as explains a peculiar anatomical feature of beavers:

One time, the story goes, the trickster Ictinike went to visit his wife's grandfather, the Beaver. The Beavers had no food to serve him, so their youngest child volunteered to be eaten. The Beaver killed his son and the Beaver's wife dutifully boiled the body. As he placed the meal before their guest, the Beaver warned Ictinike that he must not break any of the bones. No one noticed when the perpetual troublemaker bit down hard on one small bone and cracked it in two. After the meal, the Beaver gathered the bones, wrapped them in a skin and plunged them into the water outside the lodge. Moments later, the youngster emerged from the pond, miraculously whole and alive. His father asked how he was. Fine, he replied, except that Ictinike's careless chewing had broken one of his toes. Since then, all beavers have had one split toe on each hind foot.<sup>476</sup>

What is clear in this story is that it not only provides guidelines on how to interact with beavers, but it also shows that relationship is at the heart of the story, a cross-species bond that is almost unfathomable to those not brought up in a world where the boundaries between human and non-human are semi-permeable. Beavers are thus not only a material object to some Indigenous

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<sup>474</sup> Backhouse, *Once They Were Hats*, " 41-42.

<sup>475</sup> Backhouse, *Once They Were Hats*, " 42.

<sup>476</sup> Katharine Berry Judson, *Myths and Legends of the Great Plains* (Chicago: A.C. McClurg & Co., 1913).

communities, but also play an important cultural role through their interactions and stories. Within these stories, beavers are not mere objects that provides food for humans, and instead beavers guide humans in how to survive and for this reason they must be respected.<sup>477</sup> An example of this is the story of the Deisheetaan beaver:

After being caught by a net set by the chief of the Deisheetaan people, who was trying to save their people from starvation, the beaver told the chief that if he let the beaver go, the beaver would give the chief good luck. The beaver was a special beaver, and he gave the chief explicit instructions about where to find caribou, and how the people should drink boiled caribou blood before giving them any meat, as they had not eaten solid food for so long. The beaver also told the chief that from now on, the beaver would be their crest, and the chief did everything he was supposed to do, and he saved the whole tribe.<sup>478</sup>

Until this day, the Deisheetaan people use the split-tail beaver as their crest. This story, as many others, harkens back to the time when animals were said to talk to humans, as well as that it highlights a method of beaver hunting that was once common across all North America. Even though the beaver in the Deisheetaan story was released, beavers were central to many Indigenous cultures, providing the materials for making tools, dice, necklaces, bags, clothes, and food.<sup>479</sup> Fat-rich beaver meat – roasted, boiled, or smoked – was likely a critical food for many Indigenous people, especially in winter and early spring, when most other animals are at their leanest. Yet, as is clear in the Omaha story as well, beavers were more than sustenance, portraying an important cultural role within Indigenous communities. All this shows that

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<sup>477</sup> Leanne Betasamosake Simpson, *A Short History of the Blockade: Giant Beavers, Diplomacy, and Regeneration in Nishnaabewin* (Edmonton: University of Alberta Press, 2021), 19-23, 55

<sup>478</sup> Backhouse, *Once They Were Hats*, 48-49.

<sup>479</sup> Backhouse, *Once They Were Hats*, 55.

relationships between beavers and humans existed before the first European explorers arrived, and that this was believed to be a reciprocal relationship of kinship and respect.

In contrast to the Indigenous relationships with beavers, colonizers moving into Canada initially had primarily a materialistic relationship with beavers. The transformation into the fur trade began slowly in the late 1400s, as French, Portuguese, Spanish, and English cod fishermen and whalers ventured into the waters off the east coast of North America and engaged in casual trade with people they met, exchanging knives and other small items for furs. By the early 1600s, the French, English and Dutch all controlled significant fur-trading operations in North America and were engaged in fierce competition with each other.<sup>480</sup> The French navigator Jacques Cartier is the first European explorer memorialized as traveling inland in North America over the Saint Lawrence River during the 1530s. After realizing that he had not discovered the Western passage to Asia, Cartier used the name Canada to designate the territory on the shores of the Saint Lawrence River. Although initially searching for spices and gold, Cartier quickly realized that he had stumbled upon a different bounty: fur. Stories go, that he even went as far as trading the clothes of the backs of the Indigenous people in exchange for beads and European tools.<sup>481</sup>

At the time of Cartier's explorations, beavers had already become a hot commodity in Europe, as overharvesting for food, medicine and fur had left only small pockets of European beavers in the far reaches of Russia and Scandinavia.<sup>482</sup> The Europeans at the time used the fur for many purposes, but the primary reason for its popularity were the beaver felt hats made in

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<sup>480</sup> Among the most dramatic manifestation of this political upheaval were the Beaver Wars, a series of 17<sup>th</sup> century conflicts also known as the Iroquois Wars. While the fighting had multiple causes, it was fundamentally a struggle for control over resource wealth, with the resource in question being beaver pelts. For nearly 40 years, starting in 1628, members of the Dutch-allied – and later English-allied – Iroquois (Haudenosaunee) Confederacy repeatedly attacked the Huron-Wendat and other nations that supported the French fur trade. By the time the hostilities ceased, the Haudenosaunee had devastated, dispersed, or absorbed most of their Indigenous neighbours.

<sup>481</sup> Idem.

<sup>482</sup> Glynnis Hood, *The Beaver Manifesto* (Victoria: Rocky Mountain Books, 2011), 20.

Flanders.<sup>483</sup> While squirrels were the commodity for hats in the 13<sup>th</sup> and 14<sup>th</sup> centuries, the 15<sup>th</sup> century marked the fashion obsession for the marten, whose fur soon became scarce in Europe.<sup>484</sup> As such, the marten got replaced by the beaver, whose felt hats demanded a lot of furs, as they were a popular fashion in Europe at the time, and soon fur traders were selling beavers pelts in Europe for 20 times the original purchase price. Over the next century, the Flemish beaver hat became wildly popular throughout Europe, valued both as a fashionable accessory and for their outstanding ability to hold up in wet weather – a definite asset before the inventions of the rain-shedding umbrella in the late 1600s.<sup>485</sup> Yet, it was not only the furs that made the beaver so wanted, and for much of recorded history, the most sought-after parts of beavers were their castor glands, prized for the castoreum they contained. Castoreum was believed to be able to cure many ailments.<sup>486</sup> Although castoreum has gone out of fashion as a pharmaceutical, we now know it contains significant quantities of salicylic acid, the same substance that gives aspirin its potency and helps treat various skin conditions.<sup>487</sup> Castoreum is still a popular product these days and is used in flavouring and as an ingredient in perfume. Today, a pound of castors is recognized by provincial governments to be of high value, with some giving an advance of \$25 for a pelt and \$65 for a pound of castors.<sup>488</sup>

The end of the 1600s saw the rise of the *coureurs des bois*, independent, itinerant French traders who travelled deep into the interior of Canada in search of furs, as well as the founding of what would eventually become the dominant North American fur-trading enterprise: the Hudson's Bay Company.<sup>489</sup> In 1670, England's King Charles II issued a royal charter that established the Hudson's Bay Company, and awarded its bearer exclusive trading rights to the

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<sup>483</sup> Müller-Schwarze and Sun, *The Beaver*, 137.

<sup>484</sup> *Idem*.

<sup>485</sup> Backhouse, *Once They Were Hats*, 103.

<sup>486</sup> *Idem*.

<sup>487</sup> *Idem*.

<sup>488</sup> Liny Lamberink, "Beaver castors being bought for \$65 'long overdue' addition to N.W.T. fur program," CBC News, last updated April 5<sup>th</sup>, 2022, <https://www.cbc.ca/news/canada/north/beaver-castor-money-nwt-1.6408312>.

<sup>489</sup> Backhouse, *Once They Were Hats*, 57.

entire Hudson Bay drainage basin, a territory known as Rupert's Land. Rupert's Land encompassed nearly 40 percent of what now constitutes Canada, but it took a while for the company to reap the benefits of this largesse and rise to the top of the business. With France refusing to recognize England's right to grant such deals, the Hudson's Bay Company and its French rivals constantly clashed for territory and furs until the signing of the Treaty of Paris in 1763.<sup>490</sup> After that, traders of Scottish and English descent took over the French system and competition intensified. The North West Company, created in 1779, soon emerged as the Hudson's Bay Company's most formidable opponent and the struggle for supremacy lasted until 1821, when the two finally amalgamated under the older firm's name.<sup>491</sup>

From around 1780 to 1810, the number of North American beavers killed for their fur spiked, a result of the North West Company expanding aggressively into the western territories while the Hudson's Bay Company held its ground in Rupert's Land, and various Spanish and American independents plundered the southwest<sup>492</sup>. Then, in the following decade, beaver-pelt sales plummeted, dropping to less than half of the peak numbers and remaining low until the middle of the nineteenth century. Silk hats played a role in these trends, although their impact is more complicated than often acknowledged. While it was true that there was a change in fashion trends in Europe, rather than causing the crash of the beaver fur trade, silk hats kept the beaver-fur trade going longer than it would have if beaver hats had prevailed.<sup>493</sup> The real reason for the declining pelt sales was that there were hardly any beavers left to trap – a predicament that would have arisen sooner if consumers had stayed true to their infatuation with beaver hats. Although people argue it was the introduction of the steel trap in the 1800s that accelerated the demise of the beaver, many areas had been depleted long before then.<sup>494</sup>

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<sup>490</sup> Idem.

<sup>491</sup> Idem.

<sup>492</sup> Backhouse, *Once They Were Hats*, 118.

<sup>493</sup> Backhouse, *Once They Were Hats*, 120.

<sup>494</sup> Hood, *The Beaver Manifesto*, 35.

According to zoologists Stephen Jenkins and Peter Busher, by 1900 beavers were almost extinct in North America and in some areas they have yet to return.<sup>495</sup>

At the height of the colonial fur trade, from about 1780 to 1810, the number of beaver pelts sold hovered around the 300,000, possibly reaching as high as 400,000 at its peak.<sup>496</sup> Other than that, the yearly take rarely broke 200,000 between 1670 and 1890, and it stayed below 100,000 for most of the early 1800s. Although the trade of beaver pelts is generally portrayed as something from the past, trades from more recent decades tower like skyscrapers over the colonial period: 430,000 pelts a year in the 1950s; 590,000 in the '60s; 660,000 in the '80s.<sup>497</sup> As of the 1980s, the fur business has waned because of the anti-fur movement and animal rights advocates.<sup>498</sup> Until this day, only a minor revival of the use of fur by fashion designers has been reported, but the larger public seems to have stopped using beaver furs.<sup>499</sup>

No one knows how many beavers inhabited North America before Europeans arrived. All we have are educated guesses that range from a cautious 60 million to a mind boggling 400 million.<sup>500</sup> With the rapid decline of these numbers to near extinct, the beaver has made an extraordinary comeback in the last century. While some provinces closed beaver trapping entirely in the 1930s with stiff penalties for violations, individual beaver advocates fought hard for the beavers to make a comeback.<sup>501</sup> Figures such as Archibald Belaney, who culturally appropriated the name 'Grey Owl', became the patron saint of beaver conservation. A cultural imposter, alcoholic, and the author of obsolete nature books<sup>502</sup>, Belaney became famous when in 1928 the Dominion Parks Branch made a 13-minute, black and white silent motion picture

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<sup>495</sup> Stephen Jenkins and Peter Busher, "Castor canadensis," *Mammalian Species* 120 (1979): 1-8.

<sup>496</sup> Backhouse, *Once They Were Hats*, 145.

<sup>497</sup> Idem.

<sup>498</sup> Chantal Nadeau, *Fur Nation: From the Beaver to Brigitte Bardot* (London: Routledge, 2001), 168.

<sup>499</sup> Nadeau, *Fur Nation* 169-171.

<sup>500</sup> Hood, *The Beaver Manifesto*, 19; Backhouse, *Once They Were Hats*, 62.

<sup>501</sup> Müller-Schwarze and Sun, *The Beaver*, 151.

<sup>502</sup> Armand Garnet Ruffo challenges this notion of Belaney being an imposter in his recently reissued book by highlighting the agency of the Indigenous people who claimed him as kin; Armand Garnet Ruffo, *Grey Owl: The Mystery of Archie Belaney* (Hamilton: Wolsak and Wynn Publishers Ltd, 2021).

featuring Belaney and his two pet beavers, Rawhide and Jelly Roll.<sup>503</sup> No professional filmmaker had ever filmed beavers in a natural setting and *Beaver People* was a hit. Following the production of this film, Belaney was offered a job promoting beavers at Saskatchewan Prince Albert National Park. During his time living there, a steady stream of admirers visited Belaney's cabin every summer, as he lived there together with Jelly Roll and Rawhide, and a series of kits.<sup>504</sup> Through his books and grainy black-and-white video footage, the beavers were portrayed as lovable characters with distinct personalities, creating sympathy with governments to institute protective measures.

Belaney by no means singlehandedly led to the revival of beavers in Canada, but his story of compassion resembles that of many others fighting the good cause for beavers. Thanks to conservation efforts, reintroductions, and better protection of floodplain habitats, beavers are now no longer listed as threatened. Estimates of today's population are between 6 and 12 million in Canada, and 10-15 million in all of North-America.<sup>505</sup> The beaver is not only making a comeback in Canada, however, and in recent years efforts have begun in Europe to restore beaver populations by reintroducing beavers from Russia to areas such as Scotland, England, and Romania— with a high success rate.<sup>506</sup> The conservation program of rewilding beavers in Scotland even led to the official protection of beavers in 2019, and policy is underway to create

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<sup>503</sup> Frances Backhouse, "Rethinking the beaver," *Canadian Geographic*, last updated November 2013, <https://canadiangeographic.ca/articles/rethinking-the-beaver/>.

<sup>504</sup> Backhouse, *Once They Were Hats*, 72.

<sup>505</sup> "The beaver: architect of biodiversity," *Ontario Parks*, last updated March 2022, [https://www.ontarioparks.com/parksblog/the-beaver-architect-of-biodiversity/#:~:text=Estimates%20of%20today's%20population%20are,and%20biodiversity%20has%20gradually%20followed; \"Beaver,\" Defenders of Wildlife, last updated 2022, https://defenders.org/wildlife/beaver.](https://www.ontarioparks.com/parksblog/the-beaver-architect-of-biodiversity/#:~:text=Estimates%20of%20today's%20population%20are,and%20biodiversity%20has%20gradually%20followed;\)

<sup>506</sup> Olivia Box, "A Comeback for Beavers?" *JSTOR DAILY*, last updated March 2021, <https://daily.jstor.org/a-comeback-for-beavers/>; Derek Gow, *Bringing Back the Beaver: The Story of One Man's Quest to Rewild Britain's Waterways* (White River Junction: Chelsea Green Publishing, 2020); Irina Marica, "Nature in Fagaras Mountains: The beavers in Romania," *Romania-Insider*, last updated October 2018, <https://www.romania-insider.com/nature-fagaras-mountains-beavers-romania#:~:text=In%20Romania%2C%20beavers%20became%20extinct,have%20reached%20the%20Danube%20Delta..>

future management measures.<sup>507</sup> Although the numbers are in no way up to what they once were before the fur trade, the beavers are here to stay - whether humans want it, or not.

### *Human-Beaver Conflict*

Cultural norms around beavers are interesting to study. When asking people how they feel about beavers, people will give mixed reactions depending on whether they share space with them. Beavers are seen as a sign of a healthy environment, and they create a connection with nature.<sup>508</sup> Yet, these positive cultural norms are primarily expressed when beavers do not reside close to humans. As was the case for Conservative senator Nicole Eaton, when the beaver comes close to home, the positive cultural norms are quickly replaced by negative ones. The main reason for the change in cultural norms is the disruption attributed to beavers industrious building of dams. Although the result of beavers' activity and frustration with it can be closely related to financial and materialistic concerns, beavers are excluded primarily through cultural norms of disruption. Conservative estimates suggest that wildlife damage in Ontario alone costs farmers approximately \$41 million per year, with the cost of beaver damage thought of as exceeding that of any other wild species.<sup>509</sup> Yet, the benefits that beavers bring to the landscape – such as a drastic reduction of drought – and whether damage is actually caused by beavers are not discussed. Instead, beavers are removed immediately when residing near humans for their perceived disruption.

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<sup>507</sup> Box, "Comeback for Beavers."

<sup>508</sup> Sandra Jonker, et al., "Stakeholder Norms Toward Beaver Management in Massachusetts," *Journal of Wildlife Management* 73, no. 7 (2009): 1158-1165; Nicholas Yarmey and Glynnis Hood, "Resident perceptions of human-beaver conflict in a rural landscape in Alberta, Canada," *Human-Wildlife Interactions* 14, no. 3 (2020): 480.

<sup>509</sup> Al Mussell and Claudia Schmidt, "An Economic Update of the Wildlife Impact Assessment for Ontario Agriculture," *George Morris Centre* (2009).

Aside from perceived agricultural disruption – including decreased water quality for cattle, damage to cattle dugouts from burrowing, and flooded crops – beavers are also cited for causing damage to road and culvert infrastructure, cutting of valued trees, blocking of recreational trails, and damage to individual’s property such as gardens and home foundations.<sup>510</sup> The amount of damage reports has rapidly intensified as human populations continue to increase and expand into beavers’ habitat. These reports of damage and the perceived disruption that beavers could cause is often sufficient for people to lethally remove beavers. With the rapid increase of beaver populations in the last decades the impact of the exclusionary cultural norm of disruptive has become an important category in the exclusion of beavers from society as human-beaver conflicts are becoming more frequent and contentious.<sup>511</sup>

In addition to the category of disruption, the other category of exclusionary cultural norms that applies to beavers in Canada is that of threat. This threat posed by beavers is primarily linked to the spread of diseases. The disease most frequently blamed on beavers is giardiasis, or ‘beaver fever’. It is caused by protozoan parasites in the *Giardia* genus, which live in the intestines of many animals, humans included, or as a spore-like cell, called a cyst, which can survive in the external environment once excreted. The *Giardia* genus can spread when the parasite or the cyst is ingested through the process of ingesting contaminated water, putting something in the mouth that has come in contact with infected animal or human feces, eating raw or undercooked contaminated food, inadequate hand sanitation, or contact with infected feces during sex. The parasite can only cause infection when it is swallowed; blood that comes in contact with the parasite will not become infected.

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<sup>510</sup> Idem.

<sup>511</sup> John Organ and Mark Ellingwood, “Wildlife stakeholder acceptance capacity for black bears, beavers, and other beasts in the east,” *Human Dimensions of Wildlife* 5, no. 3 (2000): 63-75.

Giardiasis was nicknamed ‘beaver fever’ after hikers at Banff National Park drank stream water that had been contaminated with beaver feces, and contracted the Giardia genus.<sup>512</sup> Despite its nickname, it has been found that human usage of watersheds may be more to blame for giardiasis outbreaks than beavers, and that humans may be infecting the water that is then carrying the disease to beavers.<sup>513</sup> Moreover, it has never been proven that the giardiasis found in humans is caused by the same species of the Giardia genus that beavers carry.<sup>514</sup> In Ontario, between 2003 and 2009, there was an average of 12 confirmed cases of giardiasis reported per 100,000 persons each year, of which none of the cases could be conclusively linked to beavers.<sup>515</sup> So, not only are the number of people with giardiasis on an annual basis low, chances that humans get the Giardia genus from beavers is almost nil. As such, the health risk that beavers are believed to pose for humans is extremely limited.

With the likelihood that humans and beavers will continue to share space, the question is whether some of the positive norms around beavers expressed through cultural symbolism remains, or if the negative categories of disruption and threat will result in total culturally exclusionary practises towards beavers. Research regarding cultural norms around beavers shows that humans are often conflicted in their perceptions. While they recognize the hardworking skills and the historical colonial role of beavers, local cultural norms in places where beavers share space with humans are not so positive. Studying the cultural norms around beavers in Massachusetts, Jonker et al., for example, found that even though symbolic perceptions of beavers are positive, once someone shares space with beavers, less-favourable cultural norms are expressed.<sup>516</sup> Additionally, the more damage one experiences, the less

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<sup>512</sup> “Giardiasis,” Disease, *Ontario Ministry of Health*, last modified November 6<sup>th</sup>, 2015, <https://www.health.gov.on.ca/en/public/publications/disease/giardiasis.aspx>.

<sup>513</sup> Stanley Erlandsen, et al., “Prevalence of Giardia spp. In Beaver and Muskrat Populations in Northeastern States and Minnesota: Detection of Intestinal Trophozoites at Necropsy Provides Greater Sensitivity than Detection of Cysts in Fecal Samples,” *Applied and Environmental Microbiology* 56, no. 1 (1990): 31-36.

<sup>514</sup> Russell Link, *Living with Wildlife in the Pacific Northwest* (Seattle: University of Washington Press, 2004).

<sup>515</sup> “Giardiasis,” *Ontario Ministry of Health*.

<sup>516</sup> Jonker, “Stakeholder Norms Toward Beaver Management in Massachusetts,” 1163

favourable cultural norms around beavers are, and the more likely people are to support proactive management, including use of invasive or lethal techniques.<sup>517</sup> With a rapid increase of humans and beavers interacting, exclusionary cultural norms are being amplified, and it is these cultural norms that contribute to the removal of beavers even if no actual disruption or threat is present.

In Canada, provincial regulations about the removal of beavers from private property vary, but each province allows for the removal of beavers if the removal does not cause noticeable damage to protected landscapes or species. Whereas most provinces require the removal to be completed by licensed trappers, Alberta allows beavers to be hunted and trapped on privately owned land without a license during all seasons if someone is the owner of the land or has written permission from the owner or occupant of the land.<sup>518</sup> Other provinces, such as Ontario, recommend non-lethal methods first, such as making property uninviting to beavers and the removal of beaver dams, before using lethal actions as last resort.<sup>519</sup> There is little accountability on the lethal removal of beavers from private land, however, and it is up to landowners to decide when beavers must be removed. In most cases, people tend to go for the removal as soon as beavers reside within private land, based on the perceived problems that beavers may cause and the costs of using preventative measures. In other cases, provincial regulations only allow beavers to be moved 1km from their point of capture if they are live trapped, limiting the success of non-lethal methods, resulting in cities and individuals opting for lethal methods instead.<sup>520</sup>

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<sup>517</sup> Jonker, “Stakeholder Norms Toward Beaver Management in Massachusetts,” 1161; Harry Zinn et al., “Using normative beliefs to determine the acceptability of wildlife management actions,” *Society and Natural Resources* 11, no. 7 (1998): 649-662.

<sup>518</sup> “Human-Wildlife Conflict – Beavers,” *Alberta*, last updated 2022, <https://www.alberta.ca/beavers.aspx>.

<sup>519</sup> “Preventing conflicts with beavers,” Ministry of Natural Resources and Forestry, Ontario, last updated November 25, 2021, <https://www.ontario.ca/page/preventing-conflicts-beavers>.

<sup>520</sup> Matthew Kupfer, “City of Ottawa accused of ‘ongoing hate’ for beavers,” *CBC News*, last updated October 18, 2021, <https://www.cbc.ca/news/canada/ottawa/ottawa-beaver-trapping-killing-1.6210757>; Ian Austen, “Beaver Dams Mean No Love Lost for Canada’s Emblematic Animal,” *The New York Times*, last updated November 21, 2021, <https://www.nytimes.com/2021/11/20/world/canada/canada-beaver-dams.html>.

In some provinces, private landowners have an additional reason to be wary of beavers on their property, and that is that they can be held responsible for damage done by beavers if those beavers are residing on their private property. What this means is that if beavers have built a dam on private property, and that dam breaks and floods a road, the private landowner is held responsible for the damage that is caused. In Ontario, the Ministry of Natural Resources and Forestry (MNFR), for example, states that they are not responsible for monitoring beaver dams or the damage they may cause. Instead, although not legally required, the MNFR recommends property owners to monitor dams and to manipulate or destroy beaver dams to protect their property as needed if they do not want to be held responsible for the damage.<sup>521</sup> The Fish and Wildlife Conservation Act exempts landowners from hiring a licensed fur trapper if the landowner is removing the dam or beaver for the specific reason to protect property.<sup>522</sup> The Fish and Wildlife Conservation Act also stipulates what kind of traps can be used, and the Ontario government has set up a code of practice for beaver dam breaching and removal.<sup>523</sup> In each of these regulations, the removal of beavers is favoured as soon as they are deemed a nuisance, something which is up to landowners to decide. As landowners perceive the potential of being held liable in and of itself a nuisance, beavers are often seen as disruptive even when they are not actually causing any disruption.

The use of primarily lethal management techniques is not only applied by Canadian private landowners, but also cities and municipalities. Many municipalities have a zero-tolerance approach to the presence of beavers, particularly as it pertains to roads, bridges, and

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<sup>521</sup> Sarah Sobanski, “Beaver dam monitoring landowners’ responsibility,” *Bancroft This Week*, last updated July 20, 2017, <http://www.bancroftthisweek.com/beaver-dam-monitoring-landowners-responsibility/#:~:text=The%20Fish%20and%20Wildlife%20Conservation,to%20protect%20the%20person's%20property>.

<sup>522</sup> *Idem*.

<sup>523</sup> Canada. Ontario. Fish and Wildlife Conservation Act, 1997, c41, Ontario Regulation 667/98, “Trapping”, <https://www.ontario.ca/laws/regulation/980667>; “Code of Practice: Beaver dam breaching and removal,” *The Government of Canada*, last updated November 10<sup>th</sup>, 2022, <https://www.dfo-mpo.gc.ca/pnw-ppe/codes/beaver-dam-barrage-castor-eng.html>.

storm water management systems.<sup>524</sup> To remove beavers, municipalities and cities often hire fur trappers, who will either dynamite the beaver dam, or set out traps to remove the beaver. Costs for beaver removal is high, and long-term results are low, yet many cities offer rewards for people to lethally remove beavers. Saskatchewan, for example, offers up to a 50% rebate per adult nuisance beaver removed by licensed fur trappers for the year 2022, stimulating people to remove beavers from their land.<sup>525</sup> In addition, although trappers must follow the Agreement on International Humane Trapping Standards (AIHTS), signed by Canada in 1997, the AIHTS has relatively low animal welfare performance thresholds and procedures for handling animals is nonexistent.<sup>526</sup> As such, many beavers are inhumanely removed and disposed of.

With an increase in human-beaver conflict, cultural norms around beavers have shifted towards exclusionary cultural norms amongst most Canadian settlers. Rather than celebrating the return of the emblematic rodent, the beaver has become a symbol of disruption and threat to many. Not all is lost for beavers, however, and efforts are being made to show that human-beaver coexistence is possible. With that, it may be good to have the beaver's status in Canada be more than simply a symbol of Canada's sovereignty, moving away from a representation of misplaced colonial pride and towards appreciating beavers on their own.

### *Human-Beaver Coexistence*

The beaver may have lost its positive cultural status on the local level, but as a national symbol they are still going strong in Canada. Sir William Alexander, who was granted title to Nova Scotia in 1621, was the first person to include the beaver in a coat of arms, followed by

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<sup>524</sup> Animal Alliance, "Techniques for Mitigating Human/Beaver Conflicts in Urban and Suburban Environments," *Animal Protection Party of Canada* (May 2016): 17.

<sup>525</sup> SARM, "Beaver Control Program," *Saskatchewan Association of Rural Municipalities*, last updated 2022, <https://sarm.ca/programs/canadian-agricultural-partnership/beaver-control-program/>.

<sup>526</sup> Gilbert Proulx et al., "Updating the AIHTS Trapping Standards to Improve Animal Welfare and Capture Efficiency and Selectivity," *Animals* 10, no. 8 (2020): 1262.

the Hudson's Bay Company in 1678, who put four beavers on its shield. By the late 1600s, the beaver as a symbol became directly associated with the land that would eventually become Canada. To symbolize the economic importance of the beaver for the development of Canada, one only needs to look at the currency of the time. One 'buck' equaled one male beaver pelt. The use of the beaver as Canada's valuta did not end with the buck, and as of 1937, the beaver has predominantly faced on Canadian 5-cent coins, only replaced at war times or during commemorative years.<sup>527</sup> The beaver was also featured on Canada's first postage stamp, the Three Penny Beaver, in 1851, and to this day the beaver is everywhere in Canadians' lives; popular clothing company Roots uses the beaver emblem on all its clothes, the Canadian Pacific Railroad includes the beaver on its crest, and the Canadian Army has the beaver pinned up on soldiers' uniforms. Their tails have even become a popular deep-fried pastry sold by the company Beavertails, with stores not only in Canada, but also the USA, Dubai, Japan, France, and Mexico.

It seems hard to imagine Canada without beavers, and luckily, some people are advocating for the beaver to stay. Acknowledging the disruption that beavers may cause, they argue that the beaver contribute more good to the world than bad. Dam building can improve degraded hydrologic regimes and geomorphology, while enhancing habitat for native plant and animal communities.<sup>528</sup> These actions also provide vital ecosystem services for developing and developed areas. Beaver dams impound and reduce stream velocity during storm events, retaining flow to reduce storm-water run-off and increasing water retention.<sup>529</sup> Beaver ponds

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<sup>527</sup> "5 cents", *Royal Canadian Mint*, last updated 2022, <https://www.mint.ca/en/discover/canadian-circulation/5-cents>.

<sup>528</sup> David Bailey, Benjamin Dittbrenner, and Ken Yocom, "Reintegrating the North American beaver (*Castor canadensis*) in the urban landscape," *WIREs Water* 6, no. 1 (2019): 1323.

<sup>529</sup> Dorothy Bergstrom, "Beavers: Biologists "rediscover" a natural resource," *Forestry Research West-United States Department of Agriculture* (1985); Carol Johnston and Robert Naiman, "Boundary dynamics at the aquatic-terrestrial interface: The influence of beaver and geomorphology," *Landscape Ecology* 1, no. 1 (1987): 47-57; M. Parker, "Beaver, water quality and riparian systems," in *Proceedings of the Wyoming water and stream-side zone conference, Wyoming*, 1986, 88-94. Laramie: Wyoming Water Research Centre, University of Wyoming.

and wetlands also recharge groundwater through infiltration, elevating the water table and extending the area of riparian habitat and inundation. This can be particularly beneficial in urban areas where the capacity for infiltration is severely diminished due to the extensive use of impervious surfaces such as roadways, buildings, and the compaction of soils.<sup>530</sup> Together, these benefits reduce stream temperatures and increase available stream nutrients, addressing planned climate change adaptation and carbon and water storage goals within local catchments.<sup>531</sup>

Indigenous communities, such as the Anishinaabe, have long recognized the importance of respecting beavers and sharing land with them. As Leanne Betasamosake Simpson explains, in many versions of Nishnaabeg Seven Ancestor teachings, beavers represent the practice of wisdom.<sup>532</sup> The reason for this is that beavers are the ones who work continuously with water and land, and animals and plant nations, and consent and diplomacy to create shared worlds.<sup>533</sup> Rather than destroying beaver dams and populations, Simpson continues, Nishnaabeg stories share practices in which humans and beavers find ways of working together and respecting each other's sovereignty.<sup>534</sup> These practices require respect for beavers and a recognition of their life-giving abilities.

Beavers are both ecosystem engineers and keystone species: organisms that have a disproportionate effect on their habitat and ecological community despite their relative abundance.<sup>535</sup> Beavers are skilled at creating and maintaining wetland systems, which offers abundant habitat for a diverse array of plants and animals.<sup>536</sup> Nonetheless, their image as

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<sup>530</sup> S. Chithra et al., "Impacts of impervious surfaces on the environment," *International Journal of Engineering and Science Invention* 4, no. 5 (2015): 27-31.

<sup>531</sup> Bailey, Diitbrenner, and Yocom, "Reintegrating the North American beaver," 1323.

<sup>532</sup> Leanne Betamosake Simpson, *Dancing on Our Turtle's Back: Stories of Nishnaabeg Re-Creation, Resurgence and a New Emergence* (Winnipeg: ARP Press, 2012), 124-127.

<sup>533</sup> Simpson, *A Short History of the Blockade*, 15.

<sup>534</sup> Simpson, *A Short History of the Blockade*, 55-56.

<sup>535</sup> Scott Mills, Michael Soule, and Daniel Doak, "The keystone-species concept in ecology and conservation," *Bioscience* 43, no. 4 (1993): 219-224.

<sup>536</sup> Ellen Wohl, *Saving the Dammed: Why we need beaver-modified ecosystems* (New York: Oxford University Press, 2019).

disruptive nuisance animals in the past decades has resulted in beavers not traditionally being considered or utilized in the design of constructed or enhanced wetlands, riverine areas, and green spaces.<sup>537</sup> There are some exceptions to this, however, and case studies show that when urban planners, architects, and site managers are open to it, human-beaver coexistence is not only possible, it is a positive experience for all.

Seattle's Golden Gardens Park is a popular 35.6-ha public park located on the shores of Puget Sound. In 1997, Seattle Parks and Recreation designed and constructed a coastal lagoon within the park by converting a parking area into a wetland complex and natural area. In 2014, beavers entered the site, began felling large trees densely planted around the lagoon, and constructed a dam at the outlet to the beach, which increased the elevation of inundation and altered the vegetative structure within the site. The assumption of beaver integration was not included in the initial project design, since the site is constrained by exposed coastline beach topography, adjacent to a nearby bluff. Although there were concerns for safety risks to the public and local people expressing their concerns about the felling of trees by beavers, long-term management strategies were implemented to keep both the visitors and the beavers safe.<sup>538</sup>

Another example of site managers adjusting their strategies towards human-beaver coexistence can be found in Canada. Gatineau Park, a 361 square-kilometre conservation area on the Quebec side of the Ottawa River, lies just north of the city of Ottawa. With more than 50 lakes nestled among its forested hills, as well as countless streams, bogs, marshes, and swamps, it is an ideal environment for beavers. Roughly 1,200 of them live here, distributed between about 300 colonies.<sup>539</sup> Back in 1931, when the Quebec government outlawed beaver trapping throughout the province, hardly any beavers had remained in the Gatineau Hills. By the time the ban was lifted in 1941, Gatineau Park had been created, putting the beavers living

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<sup>537</sup> Bailey, Diitbrenner, and Yocom, "Reintegrating the North American beaver," 1323.

<sup>538</sup> Idem.

<sup>539</sup> Don Butler, "NCC keeping a close eye on Gatineau Park's beaver population," *Ottawa Citizen*, May 20, 2014, <https://ottawacitizen.com/news/local-news/ncc-keeping-a-close-eye-on-gatineau-parks-beaver-population>.

within its boundaries permanently off-limits to pelt seekers.<sup>540</sup> The beaver population exploded over the next few decades, and so did management headaches, as park staff struggled to keep culverts clear and repair roads washed out by breached dams. They exterminated hundreds of beavers annually, but as fast as they emptied out lodges and dismantled dams, newcomers moved in to rebuild and repopulate.<sup>541</sup>

In the late 1970s, with the help of trapper Michel LeClair, the park started experimenting with alternatives to lethal control. Instead of trying to remove beavers and constantly fighting with them about water levels, LeClair devised a way to surreptitiously thwart beaver's dam-building objectives.<sup>542</sup> Three decades on, LeClair's beaver bafflers control pond levels at about 75 locations around Gatineau Park.<sup>543</sup> The development of the beaver baffler greatly reduced the number of disruptive beavers killed in Gatineau Park. While the park once trapped upwards of 1,000 a year, this number has dwindled to less than 50 annually.<sup>544</sup> Beaver bafflers have also inspired similar efforts all over North America, and more people have been searching for remedies to coexist with beavers. Vermont-based Skip Lisle, for example, invented the Beaver Deceiver in the 1990s, a trademarked fence system that prevents attempted culvert damming.<sup>545</sup>

What these case studies show is that human-beaver coexistence is possible when people are willing to put in the effort. Even when beavers are initially not considered in spatial planning or management, adaptations are possible to make spaces both human and beaver friendly. The case studies, however, all focus on areas that are already targeting the creation of natural features such as wetlands, and the question is how adaptations can be made in situations

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<sup>540</sup> Backhouse, *Once They Were Hats*, 213.

<sup>541</sup> *Idem.*

<sup>542</sup> *Idem.*

<sup>543</sup> *Idem.*

<sup>544</sup> Butler, "NCC keeping a close eye."

<sup>545</sup> Skip Lisle, "The Use and Potential of Flow Devices in Beaver Management," *Lutra* 46, no. 2 (2003): 211-216.

where there is no such thing. Most homeowners do not plan to turn their backyard into a wetland, or to have the trees on their land removed by beavers. And what if beavers alter a landscape to the point that its initial purpose no longer seems feasible? Many people are inclined to remove beavers from their property based on current exclusionary cultural norms. The removal of beavers, however, is often not necessary, and to accomplish a place of human-beaver coexistence requires educating people not only about the behaviour of beavers, but also that beavers belong to the space and that conflict is not necessary with appropriate management strategies. The case study of MTB demonstrates how moving from conflict to coexistence is possible in places where humans do not want the landscape to be changed.

#### Kingston Mountain Bike Club and Beaver Coexistence

As with many great things, my involvement with the Kingston Mountain Bike Club (MTB) started with walking the dogs. My husband had found a video of a beaver north of the city and thought that I would be interested. Little did he know what he had started. On the video, you can see a beaver chewing their way through at least a meter thick tree. Only slightly annoyed by the human and their dogs, the beaver briefly looks at the camera, and then steadily continues their work. The person posting the video reported how wonderful it was that they could see nature up close and was kind enough to tell my husband where they were walking their dogs: Burbrook Road.

That same day we went out to the place, and low-and-behold, the tree was now halfway done. Burbrook Road once stretched from east to west of Kingston, but by now, only half of the original road is paved, with the other half having become a trail. Walking the trail further down, it immediately became clear that we were in beaver heaven. The trail itself had a layer of gravel – which we later learned was placed there by the mountain bike club – and on each side there are beaver ponds. While some of them have been abandoned, that first day we

stumbled upon at least one active pond. Although we did not see any beavers on our first trip, interest was piqued in seeing the beavers live within city boundaries, and many more trips followed.

The trips to Burbrook Road were initially for letting the dogs run free, while we got to enjoy a walk away from people and admiring the work that the beavers were doing. My husband and I would constantly point out new changes that we saw and started recording the landscape with the use of a drone and cameras. We discovered more active ponds and saw the beavers more frequently. Based on previous experiences, we expected that the beavers would be trapped or that the dams would be destroyed, but over a year in, the landscape had not changed, and the beavers were still there. I had seen signs along the trail warning people that you could not go off the trail as you would then enter private grounds. We discovered that Burbrook Road itself is owned by the city, but that all the sideroads are part of private land primarily owned by MTB. As I had gotten curious about the relationship between humans and beavers, I found the contact information of MTB online and sent them an email explaining that I was curious how they shared the land with the beavers.

To my surprise, I got an email back within a day. Now, it is not that surprising to get an email, but most of the time when inquiring about relationships with beavers, people do not respond, or they respond negatively. The email that came back, however, was not only fast, but it was also not what I expected. The president of MTB wrote that they were happy that I reached out and explained that the club is unsure about what to do with the beavers. The club recently had a board meeting about the beavers, apparently, and some of the members did not want the beavers to be removed (a rather controversial statement when it comes to beavers). The meeting had come to an impasse, and the beavers were to be left alone for now.

As my interest in beavers increased steadily with our walks on Burbrook Road, I started doing a lot of research on human-beaver coexistence, and I got invited to the MTB clubhouse

also known as ‘the farm’. It quickly became obvious that the members are passionate about mountain biking, showing me how they can see how trails could go simply by looking around him. We went for a walk over some of the trails in the forest, and the director told me how the club had grown drastically from a couple of hundred members annually until 2019 to almost three thousand members in 2021. With more than 40+ kilometers of trails available, however, we only saw two riders on our walk. The director of MTB asked many questions about beavers, kindly naming me a beaver expert – as with anyone named an expert, I believe there is always more to be learned – and asking if I was willing to be their advisor on how to share the land with the beavers. I accepted on the condition that I could place cameras so that we could learn more about the beavers.

Over the next two years, I got introduced to the owner of the land on which the clubhouse sits and much of the private land used by MTB, and many more lodges and beavers were discovered. A total of 5 wildlife cameras were set up, and a drone was used to survey the landscape. With the help of some of my students, trees were marked with a special paint mixture for protection – both for the trees and for the humans riding the trails – and emails went back and forth on what to do whenever the trails were at risk of flooding. Not everything was a success, but beavers are still at Burbrook Road (and beyond) and are thriving more than ever. Moreover, a change was witnessed in members cultural norms around beavers, which can be traced through an analysis of their Facebook page – the main platform used for communication amongst members.

### *Exclusionary Cultural Norms at MTB*

Kingston was established as a trading place by the French when they built Fort Frontenac in 1673, and in the following years, beavers played an important role in the further

establishment of the city.<sup>546</sup> Beavers were such hot commodities at the time that French colonists requested that military and tactical actions were taken to prevent the smuggling of beavers by Indigenous populations through Fort Frontenac for exchange with the British.<sup>547</sup> The reason Fort Frontenac was built at the mouth of the Cataraqui river, was because the French realized that this location provided the entrance for Indigenous people to travel to their hunting grounds inland of the Cataraqui river. By building the fort, the French could regulate the Indigenous trade of beaver pelts in this area, which was the most sought-after commodity of the time.<sup>548</sup> Over the next years, beaver populations dwindled around Fort Frontenac, and following similar trends in Canada, the beaver became near extinct.

During the restoration efforts of the early 20<sup>th</sup> century, beavers slowly came back to the Kingston area. Key to the reintroduction of beavers in Kingston was Algonquin Park. Established in 1893 as a refuge for fur-bearing animals, early park rangers spent much of their time patrolling for beaver poachers in the park.<sup>549</sup> As beavers flourished in Algonquin Park, they began to repopulate surrounding areas, and were also live-trapped and sent to other regions to re-establish populations.<sup>550</sup> During the 1930s, beavers became sighted more frequently closer to the Southern border, and soon reports came of damage caused by beavers.<sup>551</sup> Over the next decades, more beavers came back to repopulate the landscape, as a reduction in farming

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<sup>546</sup> Stones, "Fort Frontenac," *Stones Kingston*, last updated 2022, <http://www.stoneskingston.ca/francophone-history/fort-frontenac/>; Mike Postovit, "Archeologists unearth the past at Kingston's Fort Frontenac," *Global News*, last updated August 12, 2020, <https://globalnews.ca/news/7267229/digging-up-the-past-kingston-fort-frontenac/>.

<sup>547</sup> Letter from Calliere to the Minister, November 7, 1700, COL C11A 17/fol.44-50v, Overseas National Archives (France); Jose Antonio Brandao, "'Your fyre shall burn no more': Iroquois Policy Towards New France and her Native Allies to 1701," (PhD Diss., York University, 1994), 307-312

<sup>548</sup> Nick Adams, "Iroquois Settlement at Fort Frontenac in the Seventeenth and Early Eighteenth Centuries," *Ontario Archaeology* 46 (1986): 9.

<sup>549</sup> Dan Kraus, "The Rewilding of Southern Canada has Brought Back the Raven," *Huffpost*, last updated March 2015, [https://www.huffpost.com/archive/ca/entry/the-rewilding-of-southern-canada-has-brought-back-the-raven\\_b\\_6527332](https://www.huffpost.com/archive/ca/entry/the-rewilding-of-southern-canada-has-brought-back-the-raven_b_6527332).

<sup>550</sup> Idem.

<sup>551</sup> "Comeback by Beavers in Blakeney District," *The Ottawa Citizen*, last updated May 1940, <https://lindaseccaspina.wordpress.com/2021/03/11/did-you-know-the-beavers-almost-went-extinct-in-ontario/>; "Howe Island Trees Cut by Beaver, Residents Say," *The Globe and Mail*, 1938, 4.

provided beavers with more trees to eat.<sup>552</sup> The increase in numbers unfortunately did not aid the relationship between humans and beavers, and they are primarily considered as nuisances among the local people. Although the beaver gained popularity as a cultural symbol, when beavers came near Kingston residents, they would rather see the beaver removed.

In the 1980s, trappers received more and more calls from landowners to remove beavers from their property, claiming that the beavers were a nuisance and posed a threat to humans.<sup>553</sup> The City of Kingston does not respond to beavers any differently. As a flood-control measure, the City of Kingston hires a licensed trapper to exterminate beavers using underwater traps.<sup>554</sup> This method is a very cruel one, as beavers slowly drown in the traps, and other, more humane methods are available. In 2017, city councillor Lisa Osanic presented a 1,000-name petition that urges the city to stop killing beavers, citing the practice as cruel and unnecessary.<sup>555</sup> Osanic also suggested other humane, non-lethal devices that can be used, and referred to other cities and municipalities around Kingston that seek to coexist with beavers.<sup>556</sup> In the years since the petition, the City of Kingston has been looking at alternative methods, but so far, cultural norms around beavers have not improved.<sup>557</sup> Instead, most people in Kingston still resort to the trapping of beavers, removing them as soon as they settle on private or public properties.

MTB was no exception in the removal of beavers in Kingston, as for 20 years landowners would kill the beavers as soon as they were thought of as being disruptive or posing a threat – and sometimes even before reaching that stage simply based on exclusionary cultural

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<sup>552</sup> Kraus, “The Rewilding of Southern Canada.”

<sup>553</sup> “Dam Beavers you can trap ‘em and you can trick ‘em but the nuisances just keep coming back,” *The Whig Standard*, 23 August 1986, 1.

<sup>554</sup> Bill Hutchins, “Residents urge City of Kingston to stop ‘cruel and unnecessary’ practice of killing beavers,” *Cambridge Times*, last updated August 23, 2017, <https://www.cambridgetimes.ca/news-story/7516688-residents-urge-city-of-kingston-to-stop-cruel-and-unnecessary-practice-of-killing-beavers/>.

<sup>555</sup> *Idem*.

<sup>556</sup> Elliot Ferguson, “Petition calls on city to stop killing beavers,” *The Whig*, June 5, 2017, <https://www.thewhig.com/2017/06/05/petition-calls-on-city-to-stop-killing-beavers>; Jeff Green, “Stewardship Council Talk About Beavers,” *Frontenac News*, April 25, 2013, <https://www.frontenacnews.ca/item/406-stewardship-councils-talk-about-beavers>.

<sup>557</sup> Bill Glisky, “City looking to deceive beavers, protect culvert,” *InQuinte*, May 02, 2019, <https://inquinte.ca/story/city-looking-to-deceive-beavers-protect-culvert>.

norms. During one of the times talking with some of the members, I asked whether this tactic had helped. As is the most common response when talking to people about conflict with beavers, they acknowledged that as soon as you remove one beaver, another one will come in to take their place.

Exclusionary cultural norms are clear when analyzing the MTB Facebook page – their main communication platform on which they exchange things happening on the trails, thoughts on how to improve things related to mountain biking and events organized by the club. They also set up volunteer activities and share opinions about subjects related to the club and its trails. Initial discussions range from repair works that need to be done because of damage caused by beavers to how best to get rid of beavers. At times, comments are made about new dams that are spotted along trails, or plugged culverts and floods, and most solutions offered in the comments relate to the removal of either dams or beavers – even when there is no clear evidence that any of the problems are caused by beavers and in some cases, it is discovered that beavers were not the ones causing the problem at all. Comments fit either into the category of disruption and/or threat as discussed in chapter two and the previous section on human-beaver conflict.

Throughout the years the predominant response is that beavers are disruptive, causing trouble for the club, and in need of removal. An example of this is how members responded on how to deal with clogged culverts. The problem with culverts being clogged is that trails flood, but the clogging of culverts does not just happen by beavers. Instead, slow-moving, or stagnant water deposits a large amount of sediment in the culvert pipe. With that, filling such as vegetation, human debris, and nests from animals such as birds fill up a culvert pipe. This is not to say that beavers cannot clog a culvert, but that they are not the only factor for it to happen. Nonetheless, members would immediately blame beavers for clogged culverts, stating

that the best solution to fix the culvert clogging problem was not to clean out the culvert whenever riding by, but to kill the beavers.<sup>558</sup>

As in the case of the culvert, whenever there are floodings on or near trails, beavers are blamed – this while melting snow, land erosion, rainfall and other sources all contribute to floods. Again, rather than looking at combined factors or possible mitigation options, members would react in ways that expressed a clear sentiment of beavers being unwelcome.<sup>559</sup> Moreover, removal of beavers was frequently proposed through lethal means, with members wanting to actively partake in the activity. This removal of beavers was not confined to the perimeters of MTB, and members would express sentiments of wanting beavers removed near their own private properties as well.<sup>560</sup> Some members shared how they had dealt with beavers by lethally removing them from their private property before, using guns, hiring trappers, or through other lethal means. Throughout these initial posts, no suggestions were made on how humans could coexist with beavers.

Throughout the initial comments made by MTB members, it becomes clear that beavers are not only thought of as conflicting with interests of riding a mountain bike, but also as having a specific place within society. This place is primarily one in which the beaver is not a living animal, but instead functions as clothing items for humans.<sup>561</sup> These comments reflect a colonial sentiment in which beavers are only useful as commodities, allowing for the removal of beavers and a lack of respect towards beavers as living sentient animals. This cultural norm around beavers being better when dead is most frequently expressed when pictures are posted about trees being downed by beavers.

In 2018, a year in which there was an increase in conflict due to a dam flooding and trees being chewed near trails, cultural norms around beavers did not only fit the category of

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<sup>558</sup> “MTB Kingston,” *Facebook*, accessed March 14<sup>th</sup>, 2023.

<sup>559</sup> *Idem.*

<sup>560</sup> *Idem.*

<sup>561</sup> *Idem.*

disruptive, but also that of being a threat to riders and their dogs. As it turns out, no rider has ever been harmed by a beaver, but the perceived risk was enough for people to express negative cultural norms and desires to remove the beavers. Multiple comments were made that the beavers were out to kill the riders, and that the beavers should be trapped and removed. Members specifically commented about remnants of chewed trees, making statements about beavers specifically targeting mountain bike riders.<sup>562</sup>

Not only humans were believed to be at risk and concerns specifically for dogs were expressed over numerous times when I was working at one of the dams or lodges. Members would stop to talk and would ask questions about beavers and the risks that there are to having beavers around us. Multiple times, people would ask me if they should let their dog run near a dam. They would share stories of how they had heard that dogs had been killed by beavers and that they were very concerned for their dog's safety and rather saw the beavers removed. Although it has happened that beavers attack a dog, this is primarily done out of self-defence, with only two known cases are known of beavers killing dogs.<sup>563</sup> When dogs enter ponds or come close to lodges, beavers can feel threatened, especially when they have young. Most times when damage is done, dogs swim in ponds where beavers are fast, and their teeth can do considerable damage. It is, however, uncommon for beavers to ever attack a dog unprovoked, and as for any time when being on the trail with dogs, you must keep an eye on them.

Until recently, MTB members thus present similar exclusionary cultural norms around beavers as the general Kingstons population – perceiving lethal removal of beavers as the primary solution to perceived disruption or threat. Developments in the last 3 years seem to be causing a change, however, and MTB is moving from conflict to coexistence with beavers.

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<sup>562</sup> Idem.

<sup>563</sup> Rosemary Shinohara, "Beavers get tough defending their turf," *Anchorage Daily News*, last updated September 29<sup>th</sup>, 2016, accessed March 14<sup>th</sup>, 2023, <https://www.adn.com/alaska-news/article/beavers-get-tough-defending-their-turf/2011/06/12/>; Jamie Komarnicki, "National symbol puts fear into pet owners," *Calgary Herald*, published July 15<sup>th</sup> 2010.

*From Conflict to Human-Beaver Coexistence at MTB*

A variety of methods were used for creating coexistence with the beavers at MTB. None of these went smoothly, and adjustments had to be made, hurdles overcome, and lessons had to be learned. The first step, however, was to create an overview of where beavers are living and where conflict is taking place. This required a survey of the area and multiple conversations with the board of MTB to get an understanding of their knowledge on beavers, their frustrations so far, and where the beavers are living. The analysis of the Facebook page allowed for an understanding of the exclusionary cultural norms at play, and both drone footage and wildlife cameras offered insight into the beavers' behaviour. After this, target points would be chosen where we would try to improve the relationship of humans and beavers, spreading knowledge about the beavers throughout the Facebook page and implementing management strategies to prevent further conflict.

After having surveyed the area to establish the major points of conflict, it became clear that one of the primary areas of contention was what is known as the rainbow bridge. This bridge is the primary crossing point from the Farm (where the homebase of MTB is) to the trails in the forest. Beavers discovered the creek going underneath this bridge and the convenience of living at the forest's edge and built a lodge 20 meters from the bridge. The beavers had moved here from the pond closer to the Farm and made a dam right before the bridge. Initially, the beavers tried to dam the bridge itself, but with some guidance from MTB placing gravel, the beavers stuck to their initial dam. Although this first dam caused occasional problems when it broke, it was not until the rainbow bridge beavers started to build a dam on the other side of the bridge that real problems rose. Within a couple of days – beavers work fast – a substantial dam was built, and the bridge had started to flood. MTB initially removed the new dam, but the beavers were determined and within little time, a new dam was established. This is where another hurdle in human-beaver coexistence became visible:

patience. At the time that the flooding of the rainbow bridge begun, we had been discussing building a beaver deceiver or baffler. To build this system, you make a cage out of wire mesh, insert a pipe, and put the other end of the pipe through the beaver dam to level the water (see figure 1).

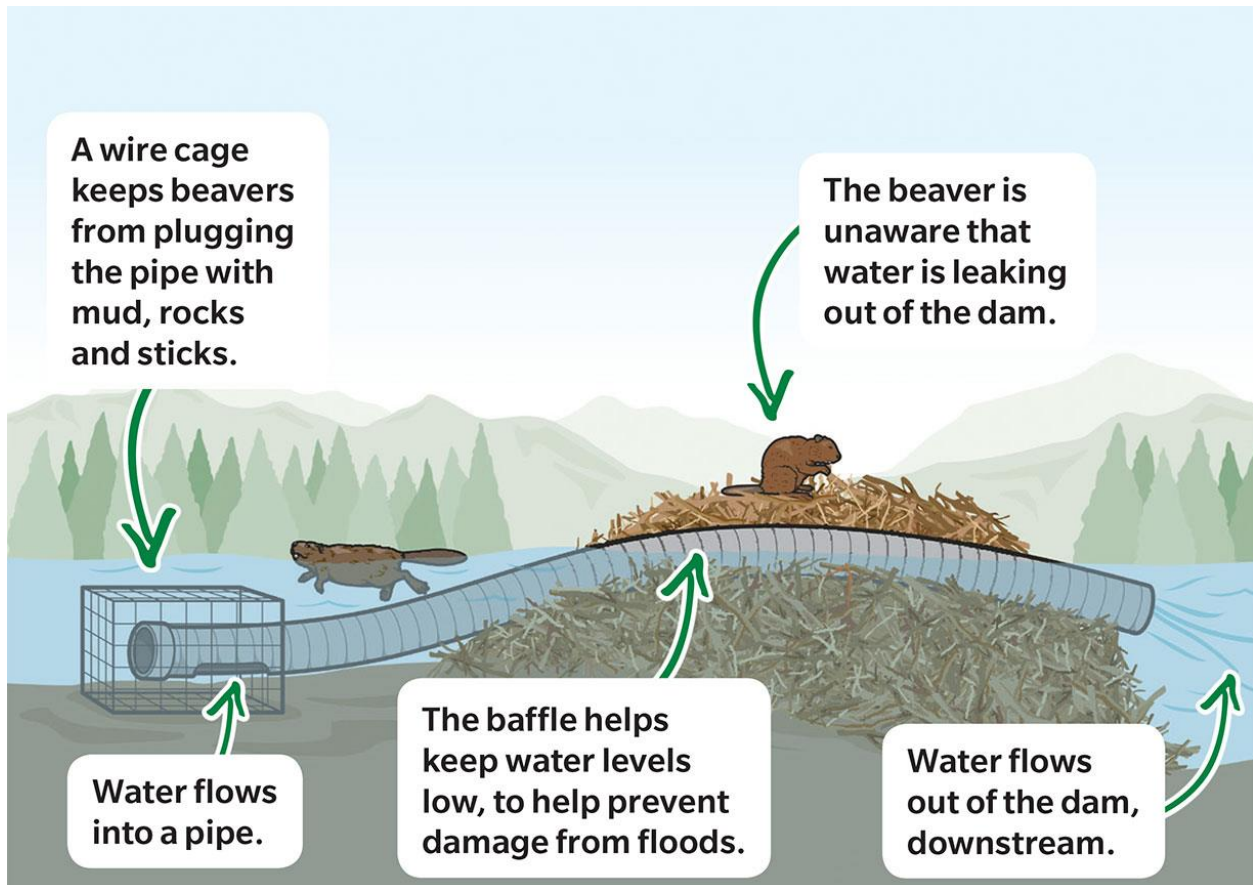


Figure 1. Cross-section of a beaver baffler

A common mistake when installing beaver deceivers is that the pipe is either placed too high in the dam or that the pipe is not long enough, resulting in the beaver noticing the waterflow and trying to dam it. Unfortunately, while we were discussing acquiring the necessary materials, the bridge flooded again, and landowners decided to use a bulldozer to destroy the new dam and remove the materials around to complicate new dam building efforts from the beavers. Patience was thus not on our side here, and with the destruction caused by the bulldozer, the beavers did not attempt to make another dam and instead focused on

preparing their winter cache. Luckily, the idea of the beaver baffler was welcomed, and materials were purchased for the next dam.

At Burbrook Road – the place where my involvement with the beavers at MTB started – there was initially less conflict with beavers, and the first year was characterized by watching the beavers strengthen their dams and lodges and prepare themselves for winter. After we discovered that beavers had been trapped by locals, not much activity took place for the rest of that year. The following spring, new beavers moved into a pond next to the one that had been raided, and soon they started building a dam.

As was the case at the rainbow bridge, the dam was directly along a trail, but this time there were some pre-existing elevated areas, and these allowed for a great opportunity for human-beaver coexistence. When the dam reached a length of 100 meters, one of the entrances towards a side trail flooded, but the elevated areas next to it remained dry, and rather than removing the dam, MTB moved their trail. As the dam was relatively new, sections of it would sometimes collapse, causing parts of the trail to flood. Rather than removing the beavers or the dam, MTB applied a form of coexistence by building bridges over the dam sections. This way the beavers got to continue working on their dam, while the riders could enjoy the trail. Moreover, the bridges allowed for riders to see the beavers and get a new appreciation for them once it became clear how much the dam meant for local flora and fauna. The dam is currently 150 meters, and the beavers in this pond have successfully reproduced and there are now 4 beavers living at the lodge.

Although bridges are not always the solution, and there is still a risk at times for the bridge to flood – or to be chewed on by a beaver if the foundations are made of wood without protection – they do offer great opportunities for human-beaver coexistence. MTB is not the only place that have built bridges to coexist with beavers, and in Hinton, Alberta, they have even created a beaver boardwalk that is elevated above the flood zone, preventing dams from

being removed once there is a risk to humans using the trail.<sup>564</sup> In addition, many animals use beaver dams as a bridge themselves, and some people even suggest that with some reinforcements humans could do the same thing. Arguments, however, can be made that this intrudes on the well-being of beavers, and as such, building beaver pond boardwalks or bridges seems to provide a better solution for human-beaver coexistence.



Figure 2. Clockwise: Beaver working on dam, bridge over dam on route '66, dam at Burbrook Road with bridges in front.

<sup>564</sup> BWCA, "Portage from Lake Superior to Pigeon River," *BWCAwild*, last updated 2022, <https://www.bwcawild.com/MiscellaneousPage/Portages/The-Grand-Portage.html#TheGrandPortage6>; Algonquin Park, "Beaver Pond Trail," *The Friends of Algonquin Provincial Park*, last updated 2022, [https://www.algonquinpark.on.ca/visit/recreational\\_activites/beaver-pond-trail.php](https://www.algonquinpark.on.ca/visit/recreational_activites/beaver-pond-trail.php); ISL, "Beaver Boardwalk," *ISL Engineering*, last updated 2022, <https://islengineering.com/project/beaver-boardwalk/>.

A big influence on the success rate of implementing beaver friendly solutions to conflict situations were the cultural norms of MTB members around beavers. Throughout my time walking and working on the trails, many people would stop to ask questions about the beavers and to share stories or encounters. Although the initial push towards coexistence came from a small number of members, these numbers increased – and still do! – as more awareness and interaction was created with the beavers. The switch from exclusionary cultural norms to that of positive cultural norms aiding coexistence – as discussed in chapter three – can also be seen in the more recent comments posted about beavers on the MTB Facebook page.

Throughout the implementation of management strategies, the projects would be recorded on the Facebook page for members to see. Moreso, images from wildlife cameras were posted for members to gain awareness of the animals they are sharing the space with, and information was presented about the behaviour of beavers and other animals. Members were often surprised about the animals that live in the space – comments especially showed surprise about snakes and otters – and members were thankful to learn more.<sup>565</sup> Over time, people's responses towards beavers altered, and rather than primarily expressing the exclusionary cultural norms discussed above, positive cultural norms about beavers belonging to the space and as part of MTB are seen on the Facebook page.

Whenever images of chews or flooding related to beavers are posted, some members still respond that the beavers should be removed. Others, however, have started to speak up for the beavers, arguing that the beavers belong where they are. Members also started to present further solutions for some of the conflicts still taking place, asking for bridges to be built near roads prone to flooding.<sup>566</sup> Even when members post in favour of the removal of beavers when a trail got flooded, others quickly commented to the posts with correct information how the

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<sup>565</sup> “MTB Kingston,” *Facebook*, accessed March 14<sup>th</sup>, 2023.

<sup>566</sup> *Idem*.

removal would not be beneficial, and that other solutions – such as the building of a bridge – should be considered instead.<sup>567</sup> Some members even expressed sentiments regarding starting a dialogue with the beavers, expressing a sentiment that beavers are sentient beings with whom we coexist and whose consent is necessary for the sharing of land.<sup>568</sup> Building on this idea, members support the idea of installing beaver baffler devices instead of removing beavers. In addition to wanting to find ways to coexist with beavers, members are also not responding as negatively about damage caused by beavers. Instead, some of the downed trees have been used to make new mountain bike features, and a couple of tree stumps have been turned into chainsaw sculptures.<sup>569</sup>

Interestingly enough, both old and new members have started to respond to those who proposed lethal methods for the removal of beavers, defending the right of the beaver to stay and discussing the history of the beaver in Canada.<sup>570</sup> Rather than portraying beavers as a nuisance, through these recent comments, the beavers' position amongst members becomes one of rightfully belonging in the space. Aside from belonging to the place itself, members also seem to display a sense of the beavers being part of the club, with comments referring to beavers being members of the trail maintenance team and beavers being residents of MTB.<sup>571</sup> In addition, being able to share the space with animals is stated by some as one of the highlights of riding the trails, with some members even stating that they would not be happy to know that an animal died simply for humans to ride a bike.<sup>572</sup>

Another positive development demonstrating changing cultural norms around beavers are the pictures and videos members post about beavers. Whereas images and videos were initially only about damage caused by beavers, such as trees being near collapsing or roads

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<sup>567</sup> Idem.

<sup>568</sup> Idem.

<sup>569</sup> Idem.

<sup>570</sup> Idem.

<sup>571</sup> Idem.

<sup>572</sup> Idem.

being flooded, members are now posting videos of direct encounters with beavers on the trails. These videos frequently show beavers crossing trails, or simply eating while watching the mountain bikers taking videos. In other cases, beavers are seen swimming, with members expressing how they love watching the beavers.<sup>573</sup> The beaver pictures and videos draw a lot of attention from members, scoring high response rates and likes. Another aspect that stands out is that many of the posts with videos or pictures have humor attached to it, incorporating the damage that beavers do, but no longer taking it as an offense that warrants beavers to be excluded.<sup>574</sup> Although damage is still taking place and interests of the mountain bike riders are still disrupted, the positive cultural norms of MTB members around beavers prevent this from developing into the desire to lethally remove the beaver.

Although all these positive responses towards beavers do not completely remove human-beaver conflict for MTB Kingston, it does reflect on the attitudinal changes that are taking place amongst its members and the club's responses to beavers. Rather than lethally removing beavers whenever there is (potential) conflict, the board of MTB and its members try to find ways to share the space with the beavers. Both the board and members look for alternative solutions to lethal removal, and actively mitigate rising conflict scenarios such as floodings and tree clearings. In the past two years, MTB has built bridges over trails to allow for beavers to dam, and plans on inserting beaver bafflers where necessary. Through the combination of increased awareness about beavers and their essential role for the environment, as well as a diminished sense of a threat through mitigation tools such as beaver bafflers and mesh wires around tree trunks, MTB is actively working on human-beaver coexistence. Doing so does not only create a better world for the beavers and humans involved, but it is also a great

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<sup>573</sup> Idem.

<sup>574</sup> Idem.

example for many other places around the world where humans and beavers (and other liminal animals) are still in conflict based on exclusionary cultural norms.

## Conclusion

When the U.S. tried to remove coyotes from cities and rural towns starting around the 19th century, the effort backfired. While coyote control programs — involving chemical poisons, steel traps and paid bounties — did in fact kill tens of millions of the species, the removal of apex predators like wolves and pumas made it impossible for the coyote control program to ever stand a chance.<sup>575</sup> Coyotes responded by taking over the entire continent and can now be found in every state except for Alaska, as well as in parts of Canada and Central America. Moreover, they have moved from the fringes of cities to urban backyards, minimizing contact by changing their circadian rhythm when living near people to nocturnal.

Coyotes are not the only animal species that have survived – and perhaps even thrived from – humans desire to remove them completely from society. Rats, beavers, deer, pigeons, and other liminal animals all have faced extensive attempts from humans to remove them from society. As for the coyote, no matter how hard humans try to remove them, their attempts have been unsuccessful. Instead, what these attempts show is that liminal animals will always be a part of human life. Yet, many people are not willing to coexist with liminal animals and continue their efforts to remove unwanted liminal animals from society. This does not only seem to be a waste of resources, but also an unfair treatment of liminal animals.

Liminal animals are sentient beings with a right of residence. The constant removal of liminal animals, however, does not present them with the ability to build or maintain their residence, and the rights of liminal animals are thus often violated. In the last decades, voices emerged in favour of protecting nature and our relationship with it. For some people this involves saving the planet from pollution and for others it entails protecting animal species from the impact of human activities. Yet, liminal animals are not often at the forefront of those species that people want to protect. Instead, they almost seem to be intentionally ignored, with

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<sup>575</sup> Peter Alagona, *The Accidental Wildlife System* (Oakland: University of California Press, 2022).

their decrease in numbers seen as a mitigation tool for human-animal conflict. Except for some species – such as bees and turtles – liminal animals are actively removed from society because they are thought of as a negative presence. This strongly contrasts the idea that all liminal animals have a right of residence, and this dissertation answers the question as to what factors contribute to the removal of liminal animals and whether these factors can be altered to create human-liminal animal coexistence.

As shown in chapter one, negative cultural norms around liminal animals are not only based on material or psychological factors but rely heavily on cultural norms of liminal animals. Cultural norms are reflected in cultural artifacts such as statues, paintings, and local folklore, but also in cultural practices such as fashion, dietary practices, and religion. Through these cultural artifacts and practices, liminal animals are depicted in ways that highlight whether they are seen as good or bad. Not all animals who are seen as bad are necessarily excluded from society. Yet, the analysis showed that cultural norms play an important role in the exclusion of liminal animals, and it is thus important to study the impact of cultural norms around liminal animals if we want to coexist with them.

To better understand how cultural norms can result in the exclusion of liminal animals, chapter two created a framework of exclusionary cultural norms around liminal animals. What this framework shows is that there are clear similarities between case studies, and that these similarities can be grouped into categories of exclusionary cultural norms. ‘Out of place’ was by far most encountered as a category and refers to a form of exclusionary cultural norms in which humans have constructed (imaginary) boundaries that are crosses by liminal animals. The other two categories were found in slightly less of the case studies, but nonetheless are important for understanding the mechanisms behind exclusionary cultural norms. Each category has its own focus point, but this does not mean that the exclusion of liminal animals is limited to one form of cultural exclusion. Instead, what the analysis shows is that there are

often multiple dimensions at play in liminal animal exclusion, and that more research needs to be done on how these categories are interconnected.

Understanding why liminal animals are excluded is not sufficient on its own for creating coexistence. Instead, we need to know whether coexistence is even possible, and what factors influence this coexistence. The case studies discussed in chapter three adequately demonstrate that human-liminal animal coexistence is possible, and that positive cultural norms of animals – even those who are culturally excluded in examples from chapter two – play an important role in this coexistence. As for the negative cultural norms resulting in exclusion, there are categories of positive cultural norms that can be identified as contributing to coexistence: ‘recognizing animals as persons’, ‘sharing space and knowledge’, and ‘spiritual and religious significance’. Positive cultural norms on their own are not always sufficient for coexistence – addressing economic interests that disrupt or foreclose relationships of respect and curiosity is often an important contributing factor – but without them coexistence is definitely not possible. As such, it is important to understand what positive cultural norms are based on and how they contribute to human-liminal animal relationships.

So, liminal animals can either be excluded or included based on cultural norms, and the transition from removal to coexistence is thus tied to the cultural norms people have about liminal animal species. Changing cultural norms is not easy to do, however, and many hurdles need to be overcome. The final chapter shows how exclusionary cultural norms around beavers changed positively amongst members of MTB. Beavers play a vital part in pre and colonial Canadian history and take up an important cultural role in Canada. Beavers are liked for their strong work ethic, but it is this same work ethic that creates human-beaver conflict. The construction of dams and the flooding of areas causes problems for humans, and MTB frequently struggled with beavers flooding or chewing down trees on trails. For 20 years, MTB trapped and killed beavers with no success, and so they decided to try different methods of

dealing with the beavers. Offering advice to MTB, I got to set up trail cameras, recording the beavers' activity and impact on wildlife. Sharing these images and instructing inclusive methods such as beaver bafflers started to alter exclusionary cultural norms of disruption and out of place towards that of the beavers as belonging and having rights.

The argument that cultural norms are important for human-liminal animal relationships is convincing, but more research needs to be done if we want to move away from conflict to coexistence. The purpose of studying positive norms for the cultural argument is to demonstrate that positive cultural norms play an important role, for example, and while this confirms the importance of focusing on cultural norms for not just exclusion but also coexistence, it by no means is an exhaustive list of all the cases of human-liminal animal coexistence. To get an even better understanding of the role of positive cultural norms more work needs to be done analyzing case studies of human-liminal animal coexistence. This may mean that research needs to focus more on areas where human-liminal animal relationships are currently ignored or not studied as much. Or perhaps we need to do more research in those communities in which coexistence is taking place.

Additionally, more research needs to be done about how we can move from exclusionary cultural norms to coexistence. What works in one case may not work in another. New tools need to be developed to target each specific category of exclusionary cultural norms. Education will play a large role as many exclusionary cultural norms are based on misconceptions and incorrect beliefs about liminal animals. Educational programs must not only target children, but also adults, as coexistence cannot be accomplished without changing cultural norms on a larger scale. I envision this as both incorporating animal studies into the school curriculum and providing workshops for children and/or adults about animals with whom we share space. Through these workshops, participants not only learn about the animal species, but also learn of ways in which they can mitigate conflict and the resources available

to

them.

Educational programs must also be tailored to the cultural context in which they are taking place. Not only does this mean that we need to understand what role liminal animals play within the cultural context, we also need to know which educational tools work best for the community and how residents can be included into the process of maintaining positive relationships with liminal animals. Research needs to be done on how this would work within communities and how communities can be actively involved in the process. Environmental education scholars have started this process, but not many of past and current projects involve liminal animals. Nonetheless, existing case studies and programs show that education plays a vital role in improving human-animal relationships.

An example of the strength of education for moving from exclusion to coexistence is the Tiger Watch project in India. When tiger numbers were dwindling rapidly, Tiger Watch was created in 1997 to protect the tiger and preserve the landscape. Realizing that punishment by law was only part of the solution, Tiger Watch created education programs for the children of poachers teaching them other ways of survival.<sup>576</sup> Children can stay in the Tiger Watch hostel where they are provided with their basic means and are given the opportunity to finish their elementary and high school degrees to gain other employment opportunities than poaching.<sup>577</sup> Aside from education programs at the hostel, teachers travel around communities to provide education about tigers and alternatives to poaching for money.<sup>578</sup> The tiger population has increased immensely in the past decade, and Tiger Watch trains local volunteers to monitor animals near the community, stop crimes against animals, and be informed intermediaries for liminal animals and humans when there is conflict.<sup>579</sup> Through these

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<sup>576</sup> “Tiger Watch,” *Tiger Watch Ranthambhore*, accessed February 1<sup>st</sup>, 2023, <https://tigerwatch.net/>.

<sup>577</sup> “Moghiya Education Programme,” *Tiger Watch Ranthambhore*, accessed February 1<sup>st</sup>, 2023, <https://tigerwatch.net/poaching-community-reform/>.

<sup>578</sup> *Idem*.

<sup>579</sup> “Village Wildlife Volunteers,” *Tiger Watch Ranthambhore*, accessed February 1<sup>st</sup>, 2023, <https://tigerwatch.net/village-wildlife-volunteers/>.

programs, residents not only change their cultural norms around tigers, but also help continue this movement for coexistence by mitigating conflict and teaching others.

Another area important for improving human-liminal animal coexistence is urban design. Most urban planners, architects, and city officials do not include liminal animals in their ideas. As such, they unintentionally often create ideal circumstances for human-liminal animal conflict, contributing to further exclusionary cultural norms. Waste depots, for example, were for the longest time established close to human settlements, out in the open, and with easy access for animals to scavenge. Yet, when animals would actually take advantage of these opportunities they were seen as disruptive nuisances or threats to humans' wellbeing. This was the case in Churchill, Manitoba, where polar bears would scavenge at the outdoor garbage dump. Being a hotspot for polar bears, tourists frequently come to Churchill to see the animals, and images went viral showing polar bears surrounded by burning piles of trash.<sup>580</sup> It did not take long for polar bears to wander through the city streets and polar bears became seen as a disruption and threat to the humans. Although polar bears were initially shot as soon as they were near the community, strategies shifted at the end of the 1970s. Now, garbage dumps are no longer in the open and preventative measures are taken to prevent polar bears from gaining access.<sup>581</sup> Additionally, more polar bear friendly measures are taken to prevent polar bears from attacking humans, with the most interesting measurement being the polar bear jail. Opened in 1982 in a former military facility there are 28 cinder block cells where polar bears coming closer to towns are held.<sup>582</sup> Around 2,500 bears have done time there so far, and captured bears are tranquilized and released at least 50 miles north across the river or on the ice so that they

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<sup>580</sup> "Bear-plagued Churchill opens 'Alcatraz of garbage'," *CBC*, published June 15, 2006, accessed February 1<sup>st</sup>, 2023, <https://www.cbc.ca/news/canada/bear-plagued-churchill-opens-alcatraz-of-garbage-1.626340>.

<sup>581</sup> Edward Struzik, *Arctic Icons: how the town of Churchill learned to love polar bears* (Markham: Fitzhenry & Whiteside, 2014).

<sup>582</sup> Amelie Arvesen, "When Polar Bears Break the Rules in Churchill, They Go to Bear Jail," *Backpacker*, published May 13<sup>th</sup>, 2018, accessed February 1<sup>st</sup>, 2023, <https://www.backpacker.com/stories/churchill-polar-bears-be/>.

can survive on their own and prevent them from coming back.<sup>583</sup> Aside from capturing and releasing polar bears, residents and tourists are also educated about how to prevent polar bear attacks and what to do in case of a polar bear sighting in or near town.<sup>584</sup> Not only current urban designs need to be adjusted to accommodate human-liminal animal coexistence. New designs and systems need to be developed to incorporate the interests and needs of liminal animals. To do so appropriately, liminal animals need to have representatives that are given a voice in the policy making of urban design. These representatives do not only express the interests of liminal animals, but also make sure that new designs do not cause harm to liminal animals. What this means is that representatives can prevent actions that obstruct liminal animals, and instead allow for spaces to be designed in ways that accommodate liminal animals and mitigate potential conflicts. Existing developments that allow for coexistence with liminal animals are green roofs that offer great animal habitats in urban landscapes, bat friendly bridges which integrate spaces for bats to roost during different seasons, and wildlife fences along busy roads to prevent roadkill. More options are available that do not alter the lives of humans drastically or conflict with the interests of humans while at the same time benefit liminal animals and reduce the potential of conflict and thus the removal of liminal animals.

Change will not come easily, and it will take years to improve human-liminal animal relationships. Even when change is taking place, setbacks will occur, and new solutions need to be found. Walking along the beaver ponds at MTB makes me realize, however, that no matter how difficult it will be, liminal animals deserve to be given a voice. A voice to protect their rights and a voice that will not only speak but also listen. With the sun setting, one of the beavers in a newly inhabited pond is swimming around in circles along the dam. Cautious of me and Jay, and yet not so scared to slap their tail and go back underwater. For a while we stare

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<sup>583</sup> Idem.

<sup>584</sup> Idem.

at each other, watching in silence, trying to figure out what to do. Other sounds have started around us, the world of diurnal and nocturnal animals slowly waking up. Jay has moved on, bored with my inactivity, and more interested in smelling the deer tracks further down the path. The beaver silently goes back underwater, the ripples on top the only indication they were just there. I know that they will be back, strengthening their dam, improving the landscape for themselves and others. And rather than facing the risk of exclusion, these beavers are safe to be themselves. For at least, here, beavers and humans coexist.

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## Appendix

### GREB Approval TRAQ # 6038375



March 17, 2023

Mrs. Daphne Brouwer  
Queen's University

Title: "GCUL-131-23: From Conflict to Coexistence: A Study on the Impact of Cultural Attitudes on Human-Liminal Animal Relationships;" TRAQ # 6038375

Dear Mrs. Brouwer:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GCUL-131-23: From Conflict to Coexistence: A Study on the Impact of Cultural Attitudes on Human-Liminal Animal Relationships" for ethical compliance with the Tri-Council Guidelines (TCPS 2) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405), your project has been cleared for one year.

You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at <http://www.queensu.ca/traq/signon.html>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Annual Renewal/Closure Form for Cleared Studies"). Please note that when your research project is completed, you need to submit an Annual Renewal/Closure Form in Romeo/traq indicating that the project is 'completed' so that the file can be closed. This should be submitted at the time of completion; there is no need to wait until the annual renewal due date.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one-year period (access this form at <http://www.queensu.ca/traq/signon.html>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at <http://www.queensu.ca/traq/signon.html>; click on "Events;" under "Create New Event" click on "General Research Ethics Board Request for the Amendment of Approved Studies." Once submitted, these changes will automatically be sent to the Ethics Coordinator, GREB, at University Research Services for further review and clearance by GREB or the Chair, GREB.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

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Chair, General Research Ethics Board (GREB)  
Associate Professor and Distinguished Faculty Fellow of Marketing,  
Academic Co-Director (Business), Master of Digital Product Management  
Smith School of Business  
Queen's University  
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