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At Home With Coyotes: An Exploration of Human-Coyote Relations in the Los Angeles 'Ecology of Selves'

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Doctor of Philosophy in Environment and Sustainability

by

Chase Alexander Niesner

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ABSTRACT OF THE DISSERTATION

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Professor Christopher M. Kelty, Co-Chair

Professor Daniel T. Blumstein, Co-Chair

Urban coyotes (*canis latrans)* have increasingly made their homes in American cities like Los Angeles and ongoing research into their flourishing has taken on new urgency due to the reported rise in human-coyote conflict. Using a mixed methods approach for understanding the urban ecology as a natural-cultural system, the following dissertation attempts to think across scales and to grapple with the epistemological challenges of studying a highly adaptable carnivore in an immensely complex urban environment like Los Angles. Utilizing the tools of movement ecology, anthropology, and experiments with imagistic multi-media praxis, and sometimes writing with collaborators across a variety of disciplines, this work adds to the current research paradigm for urban coyotes by highlighting the necessity of thinking with human-coyote r*elations* towards a more capacious understanding of the urban ecology as an 'ecology of selves,' one constituted as much by coyote foraging habits and movement patterns as by the perspectival formations occurring through online social media applications like Nextdoor and the municipal

policy documents known as “Coyote Management Plans.” Central to the aims of this work is to politicize the study of urban ecology, but also to “ecologize” our contemporary understanding of urban politics. How can we imagine the imperatives of housing justice for humans and questions of urban coyote belonging together? How do representations of urban coyotes come to inform human-coyote relations, and through the materialization of our thinking, other kinds of human-human relations in the urban ecology too? Does urban coyote “management” offer an opportunity for anti-colonial experiments in service of furthering sovereignty for indigenous peoples in cities like Los Angeles? In “At Home with Coyotes,” the necessity of living together with coyotes offers the inspiration for imagining biodiversity and environmental justice as a unified project and holistic ethical practice.

The dissertation of Chase Alexander Niesner is approved.

Ursula K. Heise

Aparna Sharma

Daniel T. Blumstein, Co-Chair

Christopher M. Kelty, Co-Chair

University of California, Los Angeles

2023

To Mom, who inspired my first field study at Rocky Oaks

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VITA

2013 B.A. (History), Yale University

INTRODUCTION

Origins

The beginnings of my interest in urban coyotes are strange, even to me, and though I've long felt called to wonder about coyotes whenever I saw them, my vision for a more formalized foray into research began 5 years ago in a cemetery in East Los Angles. At the time, I had not spoken to my Uncle in many years, and when we finally did reconnect, he told me he was in Evergreen Cemetery in Boyle Heights feeding coyotes. I was not surprised, but I was interested: there are coyotes in Boyle Heights? Having lived in the city for all my adult life, I had seen coyotes in the hilly neighborhoods and on the urban-wildland interface, but I hadn't realized they permeated the dense snarl of fences and freeways to make their home in one of the densest neighborhoods in Los Angeles. I immediately planned to meet my Uncle at Evergreen and to investigate.

For his part, my Uncle had visited this cemetery to make a pilgrimage to the grave site of the Pastor William Seymour, who was the catalyst for a particularly fervent, early 20th Century Pentecostal movement known as the "Azusa Street Revival." First settling in the Westlake neighborhood of Los Angeles, Seymour's boisterous congregation was far too interracial for the times, and so when the city evicted them, they then moved to the outskirts of the city to be near the salvific waters of the San Gabriel River in Azusa. My Uncle thus stumbled upon the coyotes living between the tombs and under the shade trees there at the cemetery somewhat by accident, having heard some other call. On my own first visit to the cemetery, I met him at White

Memorial Hospital where his wife, my aunt Ruth, worked as a nurse, and then we walked together down Caesar Chavez Boulevard, past the shop fronts selling kitchen wares and cowboy hats, past the anarcho-feminist community organizing center previously known as La Conxa, with a brief stop at McDonalds to by some Big Macs (without mustard or ketchup), until we finally arrived at the oldest cemetery in the city to feed coyotes. As one review on Google Places has it, "LAs finest architects, rebels and historic legends lie here," and I would oftentimes find myself Googling the names on the gravestones, tumbling down one rabbit hole after another.

Evergreen, being ancient by comparison to most of the surrounding man-made structures, is also home to some of the only vestigial California Live Oak Trees (*Quercus agrifolia*) in the city, and with its tall tombstones and sometimes overgrown grasses, it makes for good habitat for a variety of critters. Along with coyotes, other Southwestern grassland species, such as Western Meadowlarks (*Sturnella neglecta*) or the Cassin's Kingbird (*Tyrannus vociferans)*, can sometimes be found at Evergreen, and on many trips there over the years I would see Red-tailed Hawks (*Buteo* jamaicensis) soaring overhead, or a pair of the continent's smallest falcon, the American Kestrel (*Falco sparverius*), perched on the back of an Angel's wings set in stone. Evergreen thus proved a veritable biodiversity oasis in a city of pavement, as well as a catalogue of historical actors since the city's founding, both well-known and anonymous. On the southeastern side of the property, near where the newly dead are laid to rest, there is a large plot known as the "Potter's Field," where the city lays to rest its unclaimed dead.

But of course, I also found many living people at the cemetery. On any given day during daylight hours, I would see mourners sitting in chairs around the graves of their loved ones, sometimes

watering the grass with hoses or bearing other gifts, such as food or music, and I'd meet unhoused people taking respite from the hot summer sun on the grass in the shades of the many tall and widely hewn trees; the groundskeepers too were always working, or resting between bouts of "weedwacking" and digging graves. These men who worked at Evergreen became some of my first informants about the whereabouts and habits of Los Angles urban coyotes, and I would often ask them about their relations with the specific coyotes living there, their histories and their interactions. I noticed in their stories a fond ambivalence for these wild dogs, how these men would leave out receptacles under the dripping spigots to catch water for the coyotes to drink in years of drought, and yet show little concern if the coyotes would disappear for days on end or develop sarcoptic mange. How they would sometimes release live chickens in the cemetery, but then would fill in the holes they'd find between the graves that they supposed were the coyotes' dens. There were also signs in the cemetery encouraging visitors to beware of the presence of coyotes, and yet nobody I talked to seemed to mind their mostly furtive presence. In first speaking with various kinds of people at Evergreen about the coyotes living there, I not only began to develop my nascent practice of asking people about their relations with coyotes, showing up week after week looking for scraps of information on the groundskeepers' lunch breaks, admittedly, quite like a coyote myself, but it was here that I also began the process of refining a line of questioning about what it might *mean* for coyotes to live in a city like Los Angles in the first place. The cemetery was both in the city but somehow on the outside of it too, a "heterotopia" in the terms of Michel Foucault (Foucault, 1986), a place that is also a "no place". The relations that inhered within the cemetery, between people and coyotes but also between people and the absent dead, seemed to defy binary logics, between nature and culture, evolution and ontogeny, between the wild and the domestic, and between the material and the

immaterial world. And so, like the crystal of a hologram projected outwards across the landscape, Evergreen thus became the source and inspiration of many of my enduring questions about urban coyote ecology, as the logics I began to notice there attuned me to the patterns of coyote flourishing across the cityscape writ large.

A photo of Evergreen Cemetery, from my photo essay "Life, Death, and Coyotes at Evergreen Cemetery," with KCET (June 7, 2018): https://www.kcet.org/shows/earth-focus/life-death-and-coyotes-at-evergreen-cemetery

How should I think about humans and coyotes together, not only as species on the evolutionary ladder or as culture bearing mammals, but as both at the same time, as a system by way some humans and some animals learn to live together over many years and multiple generations (Oyama, 2000; Van Dooren, 2016)? How should I think about the difference between the insides and outsides of cities, of domesticating logics, of self and other, and about how the disrupting of

these borders and linearities creates anxiety but also the space for political possibility (Norton, 2015; Crawley, 2016)? What are the playful absences in the very real and fleshly formulations of human-coyote relations, and how do these absences help to constitute not only our relationships with coyotes, but also other humans in the city as well (Bateson, 1967; Kohn, 2007)?

An anecdote from Evergreen might help to give a better picture of how these questions comingle there between coyotes, humans, and others amongst the tomb stones and shade trees. On many occasions visiting Evergreen, I would notice mourners who would visit the graves of their deceased loved ones only to leave some favorite foods out on the graves as offerings: pizza and pop, candies, beer bottles, sometimes chicken or peanuts. And I would take pleasure in imagining how, if these mourners were to return the next day to find these tasty offerings taken, it might be thrilling for them to imagine how these gifts had indeed been visited, and consumed, by their deceased loved ones on the other side of life. Of course, a more likely story would be that the coyotes living there snatched up these gifts meant for the absent dead, and on at least one occasion I asked a visitor to the cemetery who I regularly saw leaving edible gifts, whether he ever considered the fact this food was oftentimes gone when he returned. He knew it was the coyotes, or other creatures, who were eating his offerings, and yet he returned multiple times each week to commune with his family members who were laid to rest on the Evergreen grounds. By mostly remaining out of sight, these coyotes appeared to participate in the very human ritual of mourning. What emerges at Evergreen is thus more than an ecology, more than a science or a belief system, but a way of telling stories about coyotes, and also about ourselves, by way of the mental and material associations arising anytime we step into relation with others who we can ever only partially understand. Into this opaque whole, I've followed urban coyotes,

and what I've noticed is an ecology greater and far more complex than either humans or coyotes on their own terms.

Methods and Cultures – An 'Ecology of Practices'

From the heights of the hills at the Griffith Observatory one can trace almost a straight line to the Port of Los Angeles, down Western Avenue and then the 110 Southbound freeway, with its heavy traffic, and periodic, spiral interchanges. And to the east, snow melt in the San Gabriel mountains flows downhill fast and arrives at these same salty waters of global exchange, but from a different direction and a higher elevation. Long before development extirpated the native ecologies of the basin, the Los Angeles River would sometimes wriggle across the landscape, one year entering at the Port and the next year releasing into the Pacific Ocean above the Palos Verdes to the North. Sometimes the water would pool there behind the uprising of the Peninsula and hold in the low-lying marshes and vernal pools of the coastal prairie, remnants of which are hard to find excepting a few vestigial marshlands in Torrance and wetlands along the coast from Ballona and to the South Bay cities (Longcore, 1997). With little evidence remaining of the ways of life existing in these lands before the "sedimentation" of the current settler civilization (Whyte, 2018), it's difficult to imagine truly the changes wrought on this landscape in only the last 200 years. And yet despite this almost unfathomable environmental destruction, all of this vast cityscape, to this day, still remains coyote country.

In his work on the relationship between critical anthropological thought and the radical political imagination, the Anthropologist Ghassan Hage argues for the ongoing importance of 'alterity,' of the kind of disorienting differences that allow us to think outside ourselves, to incorporate new

concepts in an ever-homogenizing world. And yet, the differences Hage sees as increasingly important are not necessarily dwelling in those places found far from "home," as was the case with earlier strains of cultural anthropology, but within the folds of modernity itself (Hage, 2012). For Hage, this kind of radical alterity must be "other" enough such that it cannot be incorporated into sameness, and "same" enough so that it can still speak to us, to transform our ways of thinking and being in the world. The purpose of this kind of critical engagement is thus to invest in the belief that 'we' – anthropologists, but also our societies, however they might be constituted, and wherever they might be located – "can be radically other than what we are." And yet within this kernel of possibility for political transformation lies the paradoxical truth that "'we already are' other than ourselves" because "our otherness is always dwelling within us: there is always more to us than we think," (Hage, 2012: 6). Whenever I encounter an urban coyote, I am captivated by the wonder of this otherness dwelling within, that the city, and myself included, is radically different than what I've come to expect of its patterned forms, forces and human habits of its all-too-human world-making processes.

At the risk of speaking for the greater 'We' of a city as fragmented and fragmenting as Los Angeles, I'd like to offer the coyote as one such radically "other" thinking companion to the settler colonial structure of the city's hegemonic political structure. By attending to the ways these wild canids continue to flourish in Los Angeles, I've come to notice how their lifeways offer a map of the City's outside within itself, and how this map is critically important to the radical political imaginary for the way it shows us potential sites, spaces, and relations of "resistance" to settler colonial domination (Alvitre, 2015). The places in the city where humans and coyotes behold each other across the human-animal divide can be understood as

"equivocation zones," in the terms of Marisol La Cadena, and they are representative of where one world ends, and another world begins (La Cadena, 2010). The urban coyote thus shows us how the city can be other than itself, and how we can be other than ourselves, too, for better or sometimes for worse, an ambivalence highlighted in coyote storytelling cultures beginning with those of indigenous American mythology and extending to those of science and technology scholars, science fiction writers, and feminist theorists of identity (Hyde, 2017; Haraway, 1988; Le Guin, 1983; Phelan, 1996).

And if the topography of urban coyote space use somehow represents an outside of the city, then by mobilizing the tools of anthropology, the coyote becomes a kind of outside to the anthropologist, or his "anti-twin," in the words of Roy Wagner in his book *Coyote Anthropology* (Wagner, 2010). To conduct an ethnography with coyotes then is not exactly to attend to coyotes as if they exhibit signs of human culture, although the possibility of something like a coyote culture existing still seems important to me, but rather to attend to human-coyote relations "recursively" through making my own relations with coyotes something firstly to consider (Salmond, 2017). In an anthropology attuned to "the anthropology of life," it's the diversity of human-coyote relations that I take as my object of study (Ingold, 200). This is not to say that everything is relational, or relative, but to acknowledge the power of *comparison* to refresh our thinking, and by way of practicing anthropology, for these comparisons to extend outwards into the material world as finite relations, or analogical knots (Silverman, 2009). One purpose of doing an anthropology of life, then, is to "rematerialize our thinking" in the webs of relations constituting complex ecologies (Kohn, 2013). As Marilyn Strathern defines the practice of Anthropology, its work lies not only in taking "the relation" as our object of study, but in

thinking through the "relations of relations," and this for the purpose of "creating new friends and new connections" (Strathern, 1995). To relate, whether between "selves" or between thoughts, is thus a practice for inviting the fertile grounds for cultivating entirely new webs of material and metaphysical associations.

What's perhaps astonishing in moving from studying coyotes to studying human-coyote relations is the way the species-specific categories of fur-bearing wild dog and language bearing biped are broken up into pieces of almost innumerable complexity. Although it might be difficult for anthropologists, or scientist for that matter, to register the differences between individual coyotes, the tools of ethnography have been developed for the purposes of capturing the effects of nuanced human differences. In anthropology, we can say a lot with just a little data, and so whether one coyote might stand in for the rest of the species is precisely not the point because we might also ask whether the coyote you see from your perspective is the same coyote I see from mine. There are as many kinds of human-coyote relations in the city as there are "kinds" of humans, and in a city as diverse as Los Angeles, the cultural differences constituting these more-than-human webs are almost innumerable. In practicing what the Anthropologist Eduardo Kohn calls an anthropology "beyond the human," in my fieldwork in Los Angles over the last five years or more, I've thus tried my best to notice and describe the many different ways individual persons are relating to coyotes (Kohn, 2013). My own catalogue of human-coyote relations is by no means exhaustive, and it's composed by my own interests, intuitions, identity, and unique ability to access people and their complex and contingent worldly relations. In this way of moving across the city by my own inspiration, my multispecies ethnography is as much as representation of my very own web of relations in the urban ecology as it might be reflective of

something of a larger, Los Angeles human-coyote 'We." In search of interesting human-coyote relations, I've looked as near to home as my immediate kin for questioning, but also as far from intimate familiars as the fleeting passage of strangers in the night.

If my ethnographic project began in Evergreen Cemetery, then its tendrils have extended outwards, leading me to speak with homeowners, wildlife biologists, unhoused persons, pet owners, co-existence activists, indigenous tribes and even the coordinator for the city' sustainability office, just to name a few of the many kinds of people I spoke to about urban coyotes. In Los Angeles, almost everybody has a coyote story, and so there weren't many places I could go where I wasn't compelled to add another anecdote to my coyote "carrier bag" (LeGuin, 2019). Seeing as I was always sort of working, which is the upside and the downside of doing an ethnography of human-coyote relations in the city where you live, the quality of these conversations ran the gamut from semi-structured interviews to passing questions and quick commentaries. Although no piece of coyote information was too small a morsel for me to collect, the bulk of the anecdotes in my analysis are the result of sustained relations with my informants, sometimes lasting over many years and sometimes even existing long before I formally decided to study coyotes. Others, due to happenstance and the complexity of the urban ecosystem, lasted no longer than a single conversation or maybe even less, although these glances were often no less fruitful, if not to form a particularly "thick" description of a human-coyote relation, then to tune my intuitions and to open my mind to speculation. In a city as complex as Los Angeles, and in working with coyotes who are somehow both everywhere and nowhere simultaneously, the ethnographic demands of a small-scale, site-specific study was not always feasible, and so I opened my "trap" wide in an attempt to "capture" any and all traces of coyote presence (Jiménez,

2021). And if the story of coyotes furtively feasting on the offerings left at graves in Evergreen is any indication, "not seeing" coyotes is also a powerful force for guiding our urban ecological imaginary, and so I've tried to see these absentual logics of the "non-encounter" working to mediate other's relations with coyotes, but also to recognize the productivity of this void in my own ethnographic record for myself (Hartman, 2008). For better, or for worse, we can say a lot about coyotes with only a little data, and even their absences should, and do, speak to us.

Although I did spend quite a bit of time following real, flesh and blood coyotes across the city, ones my collaborators and I had radio collared and tracked, or others who my informants would take me to in order to show me something of their relationship, or still others I would happen upon by accident on a drive or a walk through Elysian Park at night, even still, I found the vast majority of my analysis focused on sites where coyotes were present as *representations*. This focus on coyote representations is both a factor of their ghostly nature in the urban ecology, which besides their fleet footedness and decidedly famished disposition, is maybe their most defining quality, but also due to the intense explosion of urban coyote discourse in recent years. As I began my research on urban coyote ecology in 2018, human-coyote conflict in the city was reaching a fever pitch, and so too were conversations about coyotes, in newspapers, on social media, in city council chambers, and in community gathering places across the Southland. These tensions are still very much present today,[1] but so are the municipal Coyote Management Plans (CMPs) that have proliferated in the wake of these rising tensions. As much as there were, and still are, calls for cities to eradicate local coyote populations, there are also those who came to

[1] See: "Inside the war against Southern California's urban coyotes. "Horrific' or misunderstood?" by Louis Sahagún in the LATimes: https://www.latimes.com/environment/story/2022-09-20/southern-california-coyotes-population-escalating-war

support these coyotes' right to live in this urban habitat. Ultimately, for cities, the cheapest fix was to make the conflict go away, and so CMPs and co-existence programs were utilized in conjunction with the rather rare, albeit rapidly spreading, localized trapping and killing programs. As such, in the years following this perceived spike in human-coyote conflict, a vast techno-scientific assemblage emerged for the purposes of understanding coyotes, and picturing them, whether scientifically or by the public, and these new epistemological entanglements have generated forces all their own that my research seeks to better understand.

The question for me, as an anthropologist of human-coyote relations, ultimately became: what does all this talk about coyotes *mean*? And here I've taken meaning to be loosely composed of another larger question, posed by the logician Charles Sanders Peirce, who says meaning can be construed from the *habits* a given meaningful phenomena supports (Peirce, 1992). To begin to answer this question, I first analyzed hundreds of conversations on the local social media application Nextdoor, and together with my collaborators, Professor Chris Kelty and Spencer Robins, we came to understand the coyote conversations occurring there as largely about supporting certain settler colonial ways of relating to them, a tendency afforded by the design of the application itself, but also to the users who were biased towards its use (See Chapter 1, "The Coyote in the Cloud"). First by scraping the website of hundreds of these coyote conversations, we then analyzed the narratives being utilized by these human users of Nextdoor, and offered theories for how these accounts of brief coyote interactions grow into something much larger, both literally and metaphorically, into the creation of what we've come to call the "cloud coyote." How these coyote "representations" on Nextdoor contribute to the fashioning of a more collective ecological imaginary, but also how these human-animated coyote avatars are related to

the real flesh and blood coyotes themselves, are questions I would continue to work through by others means and methods in my research. What's clear is that these representations do not stay on "the cloud," but rather they trot freely from online comment sections to city council chambers, and sometimes with deadly consequences for coyotes and other forms of life.

I next turned to CMPs, which though largely living inert on municipal websites as PDFs, excepting those occasions when they would be animated by a co-existence practitioner or city officials, are hardly passive at all. Rather, in close reading their prescriptions of human-coyote relations, and following these prescriptions into the field to see how they're implemented, I've come to find the meaning of the CMPs is not simply limited to reducing human-coyote conflict, but rather is deeply invested in creating a broader topographic and psychic landscape that works over the ecology as a whole and many of the actors within it, coyote or otherwise. In looking at CMPs, I've more specifically come to think deeply about the twin forces that these plans revolve around, both *hazing* and *feeding* coyotes, and how these relational forms come to swirl across the city in perhaps surprising ways (See chapters 4 and 5, titled together as "Coyote Plays Itself").

Both these sites, the conversations on Nextdoor and the graphic prescriptions of "proper" human-coyote relations found in the CMPs, are thus anything but pure representations, or story, or literature; rather they are mythmaking processes through which human residents of the city are concretely relating to the urban ecology and the human-coyote relations that inhere in this web (Levi-Straus, 2021). Although these two sites live in "the cloud," they involve practices of learning to "become sensitive" to the whereabouts, behaviors, and tendencies of urban coyotes (Latour, 2004). As such, they contribute to what Thom Van Dooren and Deborah Bird Rose call

the "multispecies storying" of cities, a process that gains its significance by the way it invites meaning-making to occur between the people and the creatures that make a home in any particular place (Van Dooren, Bird Rose, 2012). This is a process that involves the interaction of social contexts and biology, Haraway's "naturecultures," and this trading of signs is not only for humans (Haraway, 2008). Just as we might make field guides for the purposes of attuning ourselves to "mole writing," or the ways creatures like moles leave traces of their livelihoods on our shared landscape, so too are coyotes looking to us, smelling our trash, or our fears, and making sense of the human forms and forces that so intensely transform the habitat of the urban ecology and which they need to understand for their survival (Hinchcliffe e al., 2005). How these processes of representation, then, whether in text or as an image, in data or as a story written on the landscape by critters or floating in the mind's eye, how these pictures of the world are then relatable to the world itself is another such critical question for understanding urban coyote ecology. Towards beginning to refine my intuitions of these exchanges, I've sought to utilize theories of representation in cinema studies and to undertake my own practice of experimenting with multimedia assemblages. When does "the cloud" touch the land? How does a story make the world? What's the relationship between the word "coyote" and the coyotes in the city?

Along these lines of thought, I've produced a podcast episode for the Labyrinth Project at UCLA, whereby I tried to demonstrate the *interpretative* dimension of human coyote-relations, which I sought to communicate not only through a scripted narrative but also by inviting the listener into a sensory experience of the semiotics of human-coyote relations.[2] In this episode, I

[2] "How to See Coyotes," *The Labyrinth Project* (2022): https://podcast.labyrinth.garden/1919755/9885011-how-to-see-coyotes

recorded myself walking through the night as coyotes howled in the distant darkness, and invited listeners to imagine a coyote eating from a domestic dog food bowl left out by pet owners by incorporating close-up sounds of a feeding coyote eating kibble at a dish. These disorienting, sensory dimensions of the work were intended to heighten my episode's kinesthetic effect on the listener, a gesture towards the indexical distance between a representation and its reference, the way a sound can sometimes feel like a touch, but also an experiment I hope speaks to the emotional charge of intimacy that occurs in a practice of embodied awareness with other-than-human creatures like coyotes (Macdougall, 2019).

Moving away from sounds, elsewhere I've tried to similarly understand the relationship between representation and the world by analyzing camera trap footage, both as a scientist but also as an artist, filmmaker and media scholar. Camera traps are useful because they allow for their human operator to harvest images of animals without their knowing; they capture life unawares. With this strange admixture of presence and absence, the camera trapper hopes to capture something more like a coyote and less like a human-coyote relation. Whereas the posts about coyotes on Nextdoor, where someone describes a coyote as "large as a wolf," for example, is a representation of a coyote infused with the fear colored lens of someone trying to make sense of a fleeting encounter with a wild dog in their neighborhood, the representations that appear from camera trapping carry far less distortion, and in fact, seek to represent the coyote as "objectively" as possible by allowing for the human observer to all but disappear. In theory, this view from the camera trap is not human, not machine, and not animal, but rather a blending of all three agencies in a complex system of "dislocation," "entrapment," and "non/encounter" (see Chapter 6, "Human-Coyote Representations at the Edge of Encounter"). By leveraging my experiences as

a participant in camera trap studies and in assembling visual experiments with camera trap footage, and by reading theories of the trap in parallel with theories of the ontology of the cinematic image, I've been able to productively confuse but also to make better sense of what it means to capture something, and to be captivated by something, whether as an ethnographer, a scientist, a filmmaker, a pet-owner, or even perhaps, as a coyote (Azoulay, 2010; Bazin, 2005; Cavell, 1979; Chow, 2012; Gell, 1996; Mulvey, 2006;). What has emerged is a personally newfound relation between the symbolic and the material that is not exactly pure idealism and not exactly sheer positivism either, but rather, a complex developmental system whereby seeing, interpreting and becoming is as integral to doing science as it is to human-wildlife conflict management, sexual reproduction, and even to self-discovery, in relation to each other and to our environment (Maturana, 2000; Oyama, 200). Thus, deconstructing the boundary between the sign and the signified, between representation and relation, between art and science, turns out to be another method by which to interrogate the specious distinction between nature and culture that the urban coyote is already crossing by its way of flourishing in urban ecosystems.

But how are urban coyotes different than their rural counterparts (Breck et al, 2019)? What exactly are coyotes eating in Los Angeles (Larson et al., 2020)? What city spaces are they using as habitat (Niesner et al, 2021)? Is there something different about the ecology of big cities rather than small or medium sized cities (Uchida et al, 2021)? Whereas anthropology is good for understanding coyotes from within human-coyote relations, some urban coyote questions are better explored through scientific methods, and so I've come to add a third dimension to my "ecology of practices," in the formulation of Isabelle Stengers. I've gained much over the years from working with and besides scientists, formulating hypotheses, looking for patterns, and

trying my best to see coyotes as they are flourishing in the urban ecosystem on their own terms. If not too often leveraging a data set towards some positivist conclusion, I more often used the tools of science to do what might be called a "natural history" of the urban coyote present. In collaboration with the National Park Service, I tracked urban coyotes in the darkness of night using telemetry equipment, through which I was able to observe their foraging habits and their interactions with landscape structure, other animals, and of course humans. Also with the NPS, but in collaboration with scientists across the country, I participated in a nationwide novel-stimuli testing protocol intended to determine if urban coyotes might be more "bold" than their rural counterparts. And finally, in collaboration with UCANR biologist Niamh Quinn, I supported the trapping and collaring of urban coyotes in Los Angeles County in an attempt to better understand how their movement patterns across the city might be related to various factors of the urban landscape, whether regimes of human hazing, infrastructure, pollution burden, or wealth inequality (this is an ongoing collaboration with the Schell lab at UC Berkeley). The data we collected initially resulted in a concept paper in collaboration with my peers in the Blumstein lab, where after noticing how coyote movement patterns conformed to show the shape of an "infrastructural signature," my colleagues and I theorized how infrastructure likely offers unique habitat affordances to urban wildlife, such as foraging opportunities, connectivity, but perhaps more importantly, respite from the human gaze in the urban ecology's "geography of attention" (See Chapter 3, "The Wildlife Affordances of Urban Infrastructure"). These scientific forays allowed me to utilize new techniques, technologies and ways of knowing how urban coyotes are surviving in the urban ecosystem, both to attune myself more intensely to the material reality of their world, but also to think critically about how scientists are themselves actors who "see" coyotes in the urban ecology to great effect.

For Isabelle Stenger's, disciplinary ways of knowing should not be overly concerned with "Truth," but rather exist in relation to one another as the rabbit exists in relation to the grass and the coyote in relation to the rabbit (and all three related in obligation to one another), so as to foster a kind of adaptable, "social technology of belonging" (Stengers, 2005). In my own "ecology of practices," I've tried utilizing the tools of my three disciplines – Anthropology, Ecology, Theories of Representation – in a polyphonic practice where each becomes vulnerable to the other without losing the essential qualities that make them independently useful. I see it as an ethical practice precisely because of this careful awareness of these practices' capacities, but also their outside limitations, where the central issue is not the truth of power, but rather the transformative potential of "cosmopolitcal diplomacy." As Stenger's writes:

"If there is to be an ecology of practices, practices must not be defended as if they are weak. The problem for each practice is how to foster its own force, make present what causes practitioners to think and feel and act. But it is a problem which may also produce an experimental togetherness among practices, a dynamics of pragmatic learning of what works and how. This is the kind of active, fostering 'milieu' that practices need in order to be able to answer challenges and experiment changes, that is, to unfold their own force. This is a social technology any diplomatic practice demands and depends upon." (Stengers, 2005: 195)

Whereas Science might be said to ask, "what *is* the matter"? And politics, or anthropology, might be said to ask, "does it matter"? "Cosmopolitics" can be seen as asking "what matters"? And what matters between people and coyotes is a product of scientific, anthropological, and representational modes of relating. Through thinking with this concept of cosmopolitics, I've

come to understand how it necessitates the "fostering of a milieu," or a culture, whereby ecology is not so much politicized, but the wider politics of the urban environment is "ecologized" (Hinchliffe et al., 2005). Thinking with coyotes through these various practical methods has also made me realize how "mattering" is not necessarily something we have to create in an institution or invent in a lab and then export to the world; although we can cultivate an "ensuing ethics of belonging" within the University, the poetics of belonging are also a product of the wider world, whether ecologically or politically inflected. The aim here is decidedly not domination, but rather, "collective continuance," for more and various kinds of selves (Whyte, 2018).

In his book, *How to Live Together,* Roland Barthes makes a keen distinction between a method and a culture (Barthes, 2013). For Barthes, a method is a manner of proceeding towards a goal, a protocol of operations with a view of achieving a specific end; it evokes the idea of a straight path. A culture on the other hand, is the result of the productive engendering of differences, the registering of forces (but in such a way that is hostile to power); as opposed to a method, a culture evokes the idea of an eccentric path, and the navigation of boundaries between fields. Although my "ecology of practices" might be composed of methods, the scientific method and ethnographic method being but two of these tools, the overarching "milieu" I've tried to cultivate is certainly more eccentric than straight and narrow. When I set out to work with and between science, anthropology, and theories of representation, I did not know exactly where these forces would take me, nor did I know how their differences might engender new kinds of thinking along re-articulated, yet safely guarded boundary lines.

For example, I could never have predicted how developing a new framework for understanding the importance of scale with scientific colleagues in the Blumstein Lab would later rhyme with

my anthropological forays into utilizing "the relation" as an analytic device as part of the more anthropology inclined Labyrinth Project, organized by Professor Chris Kelty (See Chapter 2, "Biodiversity and the Importance of Scale). By imagining scientifically how ecological processes might change across cities of different sizes, I became attuned to the ways similar multi-scalar, functional changes might occur within urban ecologies as well, which later allowed me to make sense of the many mixed metaphors I was finding in my hyper-local ethnographic fieldwork. And after working to unpack the phrase "evict coyotes" with the tools of anthropology, when I later went on to trap and radio collar urban coyotes with scientific colleagues for the purposes of studying their movement patterns, I was able to notice how their movements appeared to conform to the shapes of urban infrastructural patterns, and so too the places in the city where many unhoused residents, pushed to the margins, were also making their homes (See Chapter 3, "The Wildlife Affordances of Urban Infrastructure"). This coincidence across disciplines then allowed me to look anew at the urban ecological commons, and to theorize a sometimes-overlapping human-coyote geography less rooted in a monolithic notion of "the human," and more prone to equivocations and fragmentation across species and all-too-human political fault lines. And finally, after beginning my research analyzing conversations people were having about coyotes on the social media application Nextdoor, I end my dissertation with a theoretical and practical discussion of the images collected by the scientific practice of camera trapping. And further, by attempting to utilize these images for the purposes of making an experimental art film, I was able to articulate a more complete picture of how the nature of representation, whether vernacular, scientific, or artistic, comes to inform the nature of our relations. To be able to say theoretically that representation and relation are part of the same process is one thing, but to intuitively explore and then rearticulate what this means in practice using a variety of

methodological frameworks has been one of the more productive benefits of undertaking an interdisciplinary course of study.

There are of course many more instances of surprise and serendipity that resulted from my fostering of an interdisciplinary milieu over the course of my research at the Institute of the Environment and Sustainability (IoES), even if its still not entirely clear to me how these new sensitivities and novel coyote associations might have led to a modestly expanded urban ecological imaginary. Hopefully, with further reading, and by continuing interdisciplinary dialogue with colleagues, this work will continue to have a life of its own.

Theoretical Frameworks

Providing the intellectual atmosphere to my practices, I've also drawn on a variety of theoretical frameworks for the purposes of analyzing the material I've gathered in my years of fieldwork. The lines demarcating these bodies of scholarly work are not always concise, but I will attempt to sketch a brief description of their figurations to give a sense of their utility.

The first theoretical framework I draw on in my work is from the field of multispecies anthropology (Kirksey, Helmreich, 2010). Although "the animal" has long been a locus of concern for anthropologists, and perhaps was even one of the first ways by which humans proposed meaningful differences between themselves (Berger, 1980), the multispecies field has crystalized in recent years and seen a boon in production as the exigencies of the Anthropocene have called for the development of more refined ethical practices with other-than-human creatures. For my purposes of trying to think with urban coyotes towards reimagining of urban

ecology, Eduardo Kohn's call for an anthropology "beyond the human" has proven especially inspiring, and I've also taken stock of the work swirling in the before and after of his book *How Forests Think,* both the historical antecedents of Donna Haraway and Deborah Bird Rose, and those coming after as well, including Harlan Weaver and Thom Van Dooren (Haraway, 2003; Bird Rose, 2011, ; Van Dooren, 2016; Weaver, 2013). At this point in the state of multispecies anthropology, there are far too many names to make an exhaustive list of the contributors, but here I've focused on the works that speak directly to my general interest in more-than-human storytelling and human-canid relations.

Essential to the identity of this field in recent years has been the considerable amount of critique leveraged against some of its most naïve strands of thought. And this critique is leveraged against many other "posthumanisms" too, as it begs the question of why we should "open" the category of the human to other kinds of "beings" before the humanity of the vast majority of human residents on this Earth have still yet to be fully recognized, protected, and honored (Cattelino, unpublished lecture; King, 2017). Despite these critiques, or perhaps because of their lucid warnings, I've come to see the engagement with multispecies world building as critical to the purposes of inviting further justice for humans; it is not that this field is attempting to project human qualities or "rights" onto other-than-human creatures, but rather, in attending to human-animal relations, I believe the light of our humanity as a whole grows brighter. The ultimate answer to the question of these critiques, then, is not to choose one or the other (the human or the animal) as the locus of our thought, but rather to investigate anew how we should think about the animal and the human together for the purposes of inviting more environmental justice for all (Pellow, 2016). According to the philosopher Giorgio Agamben, the "caesura" between the worlds of animals and the worlds of people also cuts across all human being, seeing as we are

but highly evolved animals, and so the very navigation of the fraught category of "the human" is the result of this strange, and often politicized, incommensurability (Agamben, 2004).

And these divisions, once material and now metaphysical, between the human the animal within us, so to speak, are precisely the boundary lines on which some humans have come to enforce the subjugation of other humans by laying claim to one side and not the other of the human-animal divide. Conjuring "the other" as more beastly has long been a tool of the oppressor and thus far in history, it has most often been the white, Western, "rational" man that's fit the human mold, cut from the cloth of his own image (Boisseron, 2018). This type of human *being* is called "Man1" by Sylvia Wynter, and following her lines of though/flight, I've come to see how looking to human-animal relations is one way of "unsettling [his] overrepresentation," and as a way of inviting more and various "genres of being human" (Wynter, 2003). If undertaken with care, exactitude, and with the ultimate purpose of inviting more justice for more kinds of people too, then multispecies relations can be exceptionally potent sites to reimagine our more-than-human political worlds. Multispecies anthropology, then, is an ethical practice fit for this time of ecological devastation known as the Anthropocene, but also for addressing the looping catastrophes that have already visited much of humankind on this planet in the wake of wave after wave of ongoing settler colonial violence (Whyte, 2018).

Taking neither humans nor animals as my object of study, but rather human-coyote relations, the analytic object of "the relation" itself has become critically important as both a site of analysis and point of comparison, but also as a central conceptual style in my thinking (Glissant, 1997). By attending to relations, my aim is to try to understand how the general categories of "the human" and "the coyote" are unstable, impure, and sometimes mutually constitutive of one

another in the contact zones of "encounter" (Faier, Rofel, 2014). This philosophy of "becoming" has its roots in European continental materialist philosophies, and it's proven particularly useful for the purposes of multispecies anthropology as well (Deleuze, Guattari, 2013; Haraway, 2008; Kohn, 2013; Latimer, 2013; Reis-Castro, 2021). In this body of work privileging human-animal relations as particularly fertile sites for illuminating how worlds emerge simultaneously together, I've taken inspiration from these works to leverage for myself theories from fields like psychoanalysis, gender studies, semiotics, and play; these analytic tools have offered me a way not just to understand these relations as "whole," or ideal, but to understand them as composed of parts in motion, or "relata," and to attune myself to the ways these actors must learn to get along, to make sense of one another, and to communicate in ways that proves useful if not also captured by the dynamics of power (Butler, 1997; Ahmed, 2014; Althusser, 2006, ; Mulvey, 1975; Malabou, 2022; Kohn, 2013; Bateson, 1967; Bird Rose et al, 2019; Debaise, 2017). As Donna Haraway writes in *When Species Meet* (Haraway, 2008: 221), the possibilities of multispecies relations lie in the processes determining where we might be going as part of a complex, material-semiotic system: "Who are you, and so who are we? Here we are, and so what are we to become"?

According to Marilyn Strathern, the relation is also useful for the way it allows our thinking to across scales: the logic of the relationship governs everything from human-animal relations, to the firing of synapses in the brain, to the circulation of cold planets in space around distant stars. Thus, there is something of the relation's logic that is *holographic*: its usefulness lies in its invitation "to imagine one can make connections anywhere," whether with kin members, the association of concepts, or between the conscious and unconscious mind (Strathern, 2017: 18). And by mobilizing relations, one invokes this very "between," and so we must consider

difference, too, or *complexity*. Since nothing can relate solely itself, only to something outside of itself, even if these outsides are on the inside, fundamental difference eventually gives rises to the emergence of complex systems, which in turn, exhibit the scaling properties of the holographic principle (Bohm, 1980). By attending to human-coyote relations, and to the relations of these relations with other kinds of human-human relations in the city, I've found it tremendously productive to think of the urban ecology as a system, albeit one crossing the nature-culture divide. And by taking a "systems view" of the actors within this ecology, by looking at a coyote or an unhoused person, for example, first from my own view and then from how these actors might appear from the perspective of a single family household, a neighborhood, a city, or the National Parks Service, for example, by rising on these perspectival updrafts, I've come to take seriously and to notice the possibilities of an "ontological anarchy" in the urban ecosystem (Vivieros de Castro, 2009).

Let me briefly try to demonstrate what I mean by "ontological anarchy." Over the course of my fieldwork, I often noticed people using "mixed" metaphors to describe their relations, whether of kin or of something more distant. For example, anti-coyote activists would often call on the city to "evict coyotes," or pet owners would refer to the domesticated dogs and cats as their "furbabies." Admittedly, at first, I dismissed these misnomers as products of hysteria, delusion, or histrionics, but like any decent anthropologist, I eventually began to take these claims seriously, and to try to understand them from within the cultural logics of their production rather than with the tools available to my own analytic sensibility. And I've come to notice how a coyote is not a coyote is not a coyote, and the same can be said for humans and for cats and really for any other actor in the urban ecology as well (Kelty and Lynch-Alfaro, 2021). Our being is at least partly constituted by the context we exist in, and how we see ourselves exists in

relation to the processes of how others beings are seeing us as well – this way of understanding the self through webs of ecological relations is what Eduardo Kohn calls the "ecology of selves," which has proven a particularly salient concept for me in thinking through the urban ecology, even if it's provenance lies in Kohn's work in the Amazon (Kohn, 2013). Despite their obvious differences, cities like Los Angeles and forests like the Amazon are similar in one crucial regard: they both exhibit an astonishing complexity of different kinds of "selves," of unique perspectives, which exist by virtue of their relations to one another. This kind of ecological dependency of relations might be more obvious in a forest than in a city, and yet we can make sense of cultural differences, too, by appealing to the sum totality. As the Los Angeles based co-existence educator Dan Stengl once told me, for a coyote in the urban ecology, "every backyard is a different universe," and this complexity not only invites strange and interesting ecological arrangements, but due to the preponderance of possible figure-ground reversals, it's a good context for *thinking* as well.

I believe we must take seriously people's claims that coyotes can be unhoused persons and domesticated animals can be human children. And this isn't to say we should honor these perceptions as a valid form of "belief," but rather we should seek to understand how these perspectives constitute the very "being" of the very actors these mixed metaphors are perceiving. For example, I don't mean to say some people in the city are "seeing" urban coyotes as unhoused persons, but in appealing to their city council members to "evict coyotes," they are suggesting the very real possibility that from the perspective of the city, coyotes are persons who need to evicted from their "home" ranges within the city's limits. And a similar logic is perhaps at work with the term "furbabies": within the system of the family, children hold a special place in relation to their parents, one that others can step into if left vacant or never filled. In the context

of a home without human children, other beings can become "like children," and this becoming is not just metaphorical, but material and affective, and so constitutive of who these animals and humans are in relation to one another. There are many other instances of this kind of ontological *blurring* occurring in the urban ecosystem (related to the perspectives created by systems of housing justice, policing, citizenship, and even scientific practices), and as I've traversed these urban ecological systems, doing my best to take a "systems view" of the behaviors I've found there, this more capacious sense of being in relation has subtly come into focus to reveal a city (and individual actors for that matter) to be much more diverse than they might appear at a single glance. Considering these transubstantiations, perhaps these systems are much less "modern" than we've believed (Latour, 1983). By importing this concept of the "ecology of selves" from the Amazon, Los Angeles appears as the antipode of Kohn's forest. In both places, nature and culture are productively confused by residents for political ends, and yet with some crucial differences. In Los Angeles, there is no spirit realm of the forest, but here, the long arm of State power potentially plays a similar role in the arbitration of ecological fates.

These phrases, then, like "evict coyotes" and "furbabies," are far more than just metaphors, but they indicate the perspectives that inhere within very real ecological assemblages. And the dissonance that might arise from "our" point of view as anthropologists, but really as anybody who does not come from the world of the speakers of these metaphors, is ultimately the sign of some kind of break between their worlds and our own. It's this break, also, which ultimately proves to be the engine of anthropology's "perpetual motion machine of thought" (Vivieros de Castro, 2017). In addition to the difference between myself, the anthropologist, and my subjects, innumerable differences are also breaking across the city as a whole: there are cities within the city, just as there are worlds within worlds (Charbonnier, Salmon, Skafish, 2017). And by

attuning myself to the places in the city where coyote trouble occurs, I've created a kind of topography of "equivocation zones," to use a term deployed by Marisol de la Cadena, who borrowing from Eduardo Vivieros de Castro, describes such moments of incommensurability as "when one thing comes to mean different things to different people" (de la Cadena, 2017). Thus, one person's human-coyote conflict is another person's origin of the universe, as can be generally said for the white settler and Tongva worldviews, respectively (McCawley, 2009). Coyotes mean different things to different people, just as domesticated cats mean different things to their owners as they do to coyotes. And creating a coyote cartography of Los Angeles is not only to see where coyotes move and how they're surviving, but to see the boundaries and outlines of these many worlds by tracing the contours of the greater whole's "equivocations." Where human-coyote conflict occurs, does the white settler Los Angles end and something else begin? Is this something we can nor should attempt to "manage" or "mitigate" away?

Thus, urban coyotes trouble the settler landscape and disrupt the settler worldview's common understanding of the distinction between the wild and the domestic realms, and between the domestic realms and the realms of the state as well. According to William Cronon's deconstruction of the wilderness myth, the idea of wilderness has been used for pernicious ends, to create environmental sacrifice zones and to reimagine the large swathes of this country without the markings of Western civilization to have been forever devoid of people, when in fact these lands were stewarded by indigenous peoples for millennia (Cronon, 1996). Following this argument to the end, I tend to agree with Cronon that we need less respect for "wilderness" and more respect for "wildness." By flourishing in cities, and sometimes picking off domesticated pets for easy meals, urban coyotes introduce an element of wildness that literally, sometimes, unsettles urban human residents' ways of life (See Chapter 1, "The Coyotes in the Cloud). These

wild dogs index an urban ecology that is not necessarily standing in reserve as a resource to be used for white settler futures of comfort and control (Liboiron, 2021), but rather they show themselves to us as examples of native ecology's ungovernability, which agentively rejects that mode of being in world the anthropologist Ghassan Hage calls the white settler fantasy of "generalized domestication" (Hage, 2017). Much of the anti-coyote politics that have spread through the city as of late can be seen as an attempt to deal with the destabilizing forces of coyote flourishing, both affectively, but also in ways that serve to reify the settler landscape structures of the single family home, the city park, and more generally, the white settler fantasy that comfort, above all else, must be extracted from the land (Tsing, 2019).

A war on urban coyotes escalates in the Southland

As eradication efforts grow, critics say coexistence is more realistic

By Louis Sahagún

Kristin Muller said she was sickened by the sight of the half-eaten remains of her cherished cat, Milkshake, on a neighbor's lawn.

Security camera video, she told the Manhattan Beach City Council, revealed that Milkshake "was ambushed and killed from behind at 3:46 a.m."

It was one of three cats her family believed were lost to coyotes in just two months in the city's Liberty Village community, despite desperate efforts to protect them by dousing the yard with gallons of wolf urine.

"You can't stop these horrific coyotes," she told the council in June. "They remember. Then they come back and keep coming back every single night until they eventually catch their prey."

The an- [See Coyotes, A8]

Wesley Lapointe Los Angeles Times

RESEARCHER Chase Niesner looks for coyotes in July. "Locals don't seem to mind" them, he says. Elsewhere, they are being hunted.

Jessica W. Lynch

A COYOTE roams Evergreen Cemetery in Boyle Heights in 2018. A pack may have moved in 10 years ago.

Pictured in the Los Angeles Times looking for coyotes at Evergreen Cemetery in Boyle Heights, in an article by Louis Sahagún (September 21, 2022)

Goals

In the blending of my interdisciplinary research agenda, I've attempted to utilize scientific ways of knowing coyotes alongside social scientific analytic tools useful for understanding the wider political context of cities in such a way that does justice to the "ecological" nature of urban political systems. There have been many waves of scholarship attempting to elucidate how animals have come to live in cities, and thinking about cities as natural-cultural systems in recent years has recently proliferated as well (Wolch, 2022; Alberti, 2016). Scientists have studied urban coyotes, asking about the seasonality of their diet, the variability of their behavior, and drifting of their genetics, and wildlife managers have attempted to better understand how people's perceptions of urban coyotes might impact the tenor of human-coyote relations, for example, by studying their receptivity to the practice of hazing (Larson, 2020; Weaver, 2023; Breck, 2019; Adducci, 2020; Young, 2019). Less common, however, has been the attempt to understand the intersubjectivity between humans and coyotes that emerges within the crucible of human-coyote relations, and how these perspectives, both human and animal, are in part fashioned by semiotic logics and a complex media landscape as well. "Human-animal relationalities need not be rooted in direct sensory experience or be particularly close-knit to generate landscapes in which humans and coyotes become mutually entangled," writes Christian Hunold and Teresa Lloro in their astute analysis of the media surrounding human-coyote conflict (Hunold, Lloro, 2019: 161). My work seeks to contribute to this line of transspecies medial theorizing, and then to take up the further call of these authors and others towards imagining how we can better theorize questions of urban biodiversity and social justice together (Schell, 2020).

What would an abolitionist urban coyote management plan look like? How can we invite anti-colonial experiments in urban wildlife management, ones with a keen interest in seeing more

autonomy for the indigenous peoples still living on land that was stolen from them? These questions might still be at the margins of the study of urban ecology, but they are ripening in other disciplines like geography, critical race theory, and settler colonial studies, for example (Roy, 2017; Rodriguez, 2019, McKittrick, 2013; Liboiron, 2021). For my purposes, the coyote has proven an especially fruitful thinking companion for inviting these conversations into the fold of urban ecological theory making and practice. With my focus on human-coyote relations, rather than with humans or coyotes independently, I've been able to see how anthropological analysis usually pertaining to human cultures on their own can in fact be extended outwards and "beyond the human," by the study of the "relations of relations" (Kohn, 2013; Strathern, 1995). The dissolution of the nature-culture dichotomy follows close behind.

We share the landscape with other creatures, who are agentive, desiring, and with whom sometimes we will inevitably come into conflict. And so, despite the "vicious sedimentation" of settler colonial dominance on the landscape today, the presence of urban coyotes, and the trouble that sometimes follows in their wake, are small signs of the unfinished nature of the structure of settler colonialism (Tuck and Yang, 2012). In the popular imaginary, cities are not typically considered to be places of anti-colonial resistance, although increasingly the dynamism of their political structuring is being cast as an opportunity for activism and intervention (Porter, Yiftachel, 2019). If we follow the coyotes and attend to the ways they too are exploiting the seams and grafts of the settler lifeways, other worlds become possible, and in fact, are already here. Human-animal relations do not always need exist on a linear path between "wild" and "domestic" (Swanson et al, 2018); there are other models, such as the "tame" wild animal described by Marcy Norton in her history of the "the Iegue" in Amerindian cultures (Norton, 2015). Otherwise modes of multispecies relating, whether between humans and coyotes or

between humans and other creatures, are emerging right now in Los Angeles, however tentative and contingent they might still be.

Urban wildlife management today attempts to reify this boundary between the wild and the domestic by attempting to "keep coyotes wild," as human-wildlife conflict specialists say. There are practical reasons for these interventions, and yet despite these efforts, manifold forms of human-coyote relations continue to proliferate in ways that seem beyond the controlling logics of domestication informed "management" regimes. My aim is not to dismiss human-wildlife conflict work, but to critique the dominant management paradigm so that we might better understand the meanings and purposes of its prescriptions, especially those that might remain outside the conscious awareness of its practitioners. I also hope to give my breath to the embers of those human coyote relations that are surprising and strange, or one might say "wild," but perhaps pointing us to ways of being ecological otherwise (Crawley, 2016). If thinking with our relations is a good way of thinking, then by attending to new kinds of emerging human-coyote relations in the city, I believe we can lay the ground for thinking new thoughts, ones which expand our ecological imaginary away from logics of domination and domestication and more toward the logics of mutualism and reciprocity. This is just one way to cultivate ethical practices across the ill-fated dualism of nature and culture such that politics and biodiversity can be lived together, synergistically. Into this opening, we can let our relations with coyotes be our guide.

CHAPTER 1

The Coyote in the Cloud

Chase A. Niesner, Spencer Robins, and Christopher M. Kelty

Introduction: Summoning Cloud Coyotes

> */Coyote alert / Coyote Pack Alert! / Coyote sighting / Coyote Sighting Alert / Coyote spotted 9:34am / Coyote Just Now! / Coyote on 16th street / Coyotes on 14th and Montana / Coyotes! / LARGE COYOTE / Coyote Season / Coyotes at it again / Another day, another coyote…/*[3]

This is how coyotes move on Nextdoor. At once keyed to specific places and untethered in a ghostly digital space, coyotes circulate in the homely precincts of "the app where you plug into the neighborhoods that matter to you." Nextdoor is a location-based social media application that allows users in specific neighborhoods, defined by the app, to communicate directly with one another. Relations of territory, ownership and domestic belonging are built into the platform; "neighborhoods" are demarcated by an algorithm, and determine who can speak where and thus who should feel propriety over what spaces.

Nextdoor has become famous for enabling rich white communities to practice constant racial surveillance of their streets (Kurwa, 2019; Lambright, 2019; Payne, 2017). This atmosphere of racist paranoia has led critics to describe Nextdoor's "neighborhoods" as "digital gated communities" and "the app version of the midcentury suburb" (Levin, 2015). The company

[3] Unless otherwise noted, all quotations come from a database of archived conversations available on Nextdoor. They are anonymized here in keeping with the requirements of the Human Subjects protocol that governs this research (IRB #17-000297 and IRB #22-000060).

has tried to discourage such posts, but to little avail (Hetzner, 2021). Nextdoor users carry the territorial thinking and volunteer surveillance practiced on the app into their relations in physical space, creating an ongoing carceral and surveillance infrastructure (Benjamin, 2019; Bloch, 2022; Bridges, 2021).

In Los Angeles, Nextdoor is also a tool for residents to police coyotes. They do this not by directly interacting with the animals in question, but by summoning up what we call *cloud coyotes*. Los Angeles is coyote territory, and anyone who lives in the city can, if attentive and patient, catch a glimpse of one trotting down the street or furtively darting into darkness. But thanks to platforms like Nextdoor, it is also now *cloud coyote* territory, where a vividly animated cloud coyote posted by one user can convince hundreds of commiserating neighbors that they too have seen a real coyote, even if they have not. Nonetheless, cloud coyotes are *also* real, and even a casual acquaintance with Nextdoor will demonstrate how often heated debates involving coyotes erupt on the platform.

Summoning cloud coyotes has material consequences for real coyotes in the increasingly contentious coyote debates unfolding in LA and other cities like it. Cloud coyotes don't stay on Nextdoor. They trot from camera phone to neighborhood council to city government to other social media platforms, and furbound coyotes can die as a result. Groups with names like #evictcoyotes and "Coyotes out of Downey" bluntly connect the politics of racist exclusion and housing insecurity to these matters of nonhuman co-inhabitants; some residents demand action from local politicians. In response, city's develop "coyote management plans" that encourage humans to change their ways: from managing waste and potential coyote habitat, to "hazing", to creating coyote sighting reporting systems, to programs for the outright trapping and killing of the local coyote population (Strauss et al., 2020).

Urban wildlife biologists also enter the fray, cautiously offering information about where urban coyotes are living, what they're eating, and whether their home range sizes might be changing (Bucklin et al., 2020; Larson et al., 2015, 2020; Mowry et al., 2021; Niesner et al., 2021; Sugden et al., 2020). Research so far is ambiguous about how urban coyotes differ from their rural counterparts, and about whether their new behaviors might pose some danger to humans (Breck et al., 2019). Cloud coyotes, by contrast, are decidedly mobile, predatory, numerous, and terrifying. They threaten the sanctity of homes and yards, they eat pets with impunity, and they even attack children. Cloud coyotes, as fantasy, are a threat to the way of life in Los Angeles, and in that way, they are diagnostic of that way of life: *a 21st century urban settler colonial ecology*.

Settler colonialism is an ongoing project of securing control in multiple ways (physical, legal, administrative) over territory occupied by non-indigenous residents (Wolfe, 2001). In Los Angeles today, this ongoing practice of settling the land is a key component of the way that residents speak and act, online and off, in public and private spheres. Crucially, this project is also *ecological*: we follow Kyle Powys Whyte in viewing settler colonialism not only as a structure of power or a legacy of US history, but a remaking of ecological relations that produces what he calls a "vicious sedimentation" (Whyte, 2018). This paper describes how cloud coyotes structure settler relations in contemporary Los Angeles. They do this by performing a threat and justifying a response that includes various attempts at extermination, containment, and assimilation, all of which—even supposedly humane alternatives—further sediment forms of settler colonialism in urban Los Angeles. This paper aims to combine expertise in coyote ecology, literary analysis, and ethnographic inquiry in the service of theorizing the cloud coyote in a settler colonial place. The three authors came together under the umbrella of the "Labyrinth

Project", an interdisciplinary research project focused on understanding and rethinking Los Angeles' urban ecologies and histories.

Three forms of inquiry have been pursued: first, it involves situated ethnographic observations and discussions with coyote experts, residents, and wildlife managers conducted between 2017 and 2023. Second, it draws on an archive of over 400 posts to Nextdoor (2016-2019). And third, it relies on a literary and rhetorical analysis of the first two sources (interviews and Nextdoor discussions) as well as some additional material collected from Facebook and Twitter. Ethnographic observations and interviews were gathered in accordance with standard anthropological methods (UCLA IRB #20-001925), and have been anonymized here. The methods and limitations for the collection of Nextdoor material extensively described in Altrudi and Kelty (2022), which used the same collection. Nextdoor conversations are not survey data, nor statistically representative of Los Angeles, because Nextdoor itself is neither a survey tool nor representative in any way. Nextdoor is designed for neighbors to ask for help, offer advice, report events. Thus, conversations have a recognizable rhetorical structure, and it is primarily this structure that we analyze here. It is, however, a structure that is recapitulated in interviews, Facebook posts, and news articles, suggesting that it is not simply confined to Nextdoor. More importantly, Nextdoor conversations are more than just representations of opinions or ideologies: conversations animate animals in particular ways, and this is what we analyze here---a process of creating cloud coyotes. These are not opinions or ideas representing beliefs, but the real effects of real conversations on real animals.

We begin by showing the most common patterns of cloud coyote debates on Nextdoor, to explain what a cloud coyote is and can do. We then turn to theories of settler colonial relations

with wildlife in the US, the distinctive features of settler colonialism as a mode of governing, and to the history of its approaches to wildlife. Cloud coyotes contribute to this ongoing structure because they participate in a fantasy of "generalized domestication": they create a renewable threat that justifies action, but one that is impossible to overcome (Hage, 2017). We show how cloud coyotes animate fear and anxiety around ownership and family, specifically with respect to pets and pet keeping in the yards and streets of LA. This fantasy structure is available to residents but it is also available to politicians, and we further demonstrate here how it can be taken up to justify and renew policies of extermination that are thinly veiled expressions of hatred of human as well as coyote others. Alternative practices have emerged among managers and activists, and we explore them in the final sections. We show how humane alternatives, as hopeful as they are, repeat the themes of containment and assimilation at the heart of the structure of settler colonialism. Our conclusion therefore turns to the question of what anticolonial coyote relations might look like in LA and beyond.

What is a cloud coyote?

Cloud coyotes and their human non-companions perform in patterned, predictable ways in Nextdoor's precisely delimited “neighborhoods.” Their virtual life often starts when a human encounters a real coyote: on a street, or in a yard, or sometimes on a surveillance camera.

just saw a large coyote in somones front yard… i think he is stalking our small pets.

In some grim cases, they encounter only an index of the coyote in the form of a missing or dead cat or dog. But by summoning coyotes in the space of Nextdoor, they and their neighbors then amplify the experience, fill in details, extrapolate, debate, and enable their human handlers to perform a set of scripted responses.

They are not restricted to Nextdoor, but this particular platform—widely used in Los Angeles—is especially attuned to them.

> *He came across FOUR coyotes on the 4100 block of La Salle at Braddock. They were running in pairs, obviously hunting. .*

Representing animals with digital tools can encourage certain kinds of relations, like care or commodification, and indeed, invoking a cloud coyote activates a set of relations that are structured by the platform and its role in the governmental, ecological, and historical relations of a place (von Essen et al., 2021). For Nextdoor, the defining affect is *ownership*: Nextdoor's neighborhoods are an intimate site for imagining urban space as owned by particular humans and in need of constant, vigilant settlement by them.

> *While I do not want to exterminate coyotes I believe the city should play a more active role in moving the coyotes back up to the mountains where they belong. AWAY from homes.*

Cloud coyotes prop up this imaginary precisely by threatening it, but it is a threat that turns out to be *impossible* to overcome, because cloud coyotes (unlike real coyotes) are unstoppable.

> *Coyotes don't understand the word coexist—that's ridiculous!*

[Figure: #evictcoyotes in the Torrance City Council . Photo by Axel Koester]

And cloud coyotes don't stay put in Nextdoor. Nowhere is this clearer than when those who have lost companion animals, or who have imagined losing companion animals, show up in the real spaces of city councils, wildlife hot-lines, and city streets. People in these spaces often engage in displays of grief and anger over their loss; sometimes these displays look more like therapy than political activism or participation.

> *have you lost a pet to one of these Feral Doggies? Have you witnessed your pet being carried away after her spine has been snapped? As she uttered her last bone chilling warrior screech? Followed by her final grunt as she relinquished her power to the jaws that carried her away?*

Grieving for pets lacks both traditions of its own and the legitimacy accorded human death, and thus the political and the personal are performed through cloud coyote talk (Redmalm, 2015). Residents transform that grief into political demands to strengthen practices of settlement and control, as if "closure" must lead inevitably to "enclosure."

There is a temptation to see cloud coyotes—especially for those with real expertise about real, embodied coyotes—as vectors for inaccurate or bad faith information about the behaviors of their fleshy analogues. The focus can quickly shift from the cloud coyote to the misrecognizing human in need of correction, critique, or control (Drake et al., 2020; Oleyar, 2010; Sponarski et al., 2018). The solution, it would seem, is to provide more accurate information, to counter these beliefs and anxieties with the truth of coyote behavior.

> *Check out recent studies on breeding/population replacement - the studies indicate that even if you kill the alpha male and female… the so called betas step up their breeding… the overall population increases due to additional coyotes moving into the pack from outside in the absence of those alphas being gone.*

But summoning a cloud coyote on Nextdoor is not a way of making claims, true or false, about coyote behavior. Rather, it is a way of activating and reinforcing affects that, in turn, structure inhabitants' relations with land.

> *Coyotes do not share our natural habitat, because cities are not natural habitats. Nature, for the most part, is not allowed to rule in cities because man imposes his will on an area to create cities.*

Cloud coyotes are not misrepresentations; they are performative or imagistic, in Eduardo Kohn's sense. They are, following Kohn's extended, more-than-human account of semiotics, signs in a network that reverberates in lively ways. If they represent anything, it is not a coyote but a

particular idea about human-coyote relations, which in turn draws on and resonates with human-human relations of various sorts. There is evident pleasure when Nextdoor users animate a cloud coyote, imagining its unstoppable power to stalk and kill, to hide and survive. Cloud coyotes have “worldly effects” not reducible to their referential relationship to the material human-coyote encounters that set them in motion (Kohn, 2013: 34).

> *Maybe you guys should start a post that's against coyote sighting posts and type all your grievances there amongst each other.*

Nextdoor in particular, facilitates in its very design the settler logic by which cloud coyotes operate. It activates a particular conception of free speech structured around territorial sovereignty by settlers. To act and speak on Nextdoor one must have a door—literally. It is impossible to join the platform without providing proof of a fixed address in the "neighborhoods" which determine the shape and relations of who can speak and where. These arbitrary boundaries are built on ideas of settler sovereignty over an intimate *domus* (the homestead with its yard), which cannot accommodate the complexity endemic to cities. As such, they are doubly designed to police certain kinds of people: migrants, unhoused people, criminalized people, and in our case, non-human animals. Cloud coyotes are settler coyotes because their behavior is shaped by these design affordances and animated by the desire for private property, dominion, exclusion, and the need for an ever-renewing threat that justifies the maintenance of these protected spaces.

> *It is up to humans, who have taken out their natural predators (wolves and mountain lions) to cull the herd. What do you think Animal "Control" does every single day of the week? You know that's a euphemism, right? Why is it okay to kill cats and dogs and not coyotes?*

Over time, the comments involving cloud coyotes start to organize themselves into some basic categories: coexist, kick out, or kill. Even the apparent exceptions—posts telling coyote stories, sharing coyote data, imagining LA through coyote eyes—tend toward one of these three options. In debates across the platform, users entertain these various coyote ends and proffer theories of who should be responsible for bringing them about. The question being worked out on Nextdoor is *what should be done* with coyotes—by the state or by settler-homeowners themselves. Residents debate because they want to know how to govern not only the coyotes, but themselves, their pets, and other people. Cloud coyotes are, ultimately, a tool for shaping distributed practices of settler colonial governance.

#evictcoyotes

Coyote debates refuse to be only about coyotes. The language of coyote eradication moves in striking parallel with anti-homeless, anti-migrant, and anti-Black rhetorics. In Los Angeles, anti-coyote activists often explicitly invoke images of both legal and racial exclusion, including eviction specifically, as in names like “#evictcoyotes” or "Coyotes Out of Downey” (modeled on a previous group that called itself “Gangs Out of Downey”). Cloud coyotes animate desires for eradication, containment, and assimilation of human and non-human alike.

The language of eviction is particularly salient, especially in a city with a growing population of un-housed people and a long history of race and class-based exclusion from housing. Ananya Roy, for instance, has recently theorized eviction as "racial banishment" (Roy, 2017), a legal mechanism for policing a racialized category of personhood that depends on the right to claim property. That a comparable logic of banishment operates on Black people, unhoused people, and coyotes suggests that the spatial questions around which coyotes debates

are organized—Are coyotes "moving into" the city? Do they belong here? Can we kick them out to where they do “belong?"—are part of a broader project of defining and defending an exclusionary conception of the human. Given in the name “evict coyotes,” for example, is an attempt by these activists to socialize nature in such a way that simultaneously places themselves above coyotes in a political hierarchy of belonging, but also above housing unstable residents of the city as well. For this reason, it would be difficult to imagine an unhoused person joining a group by this name, which is then not just a metaphor, but a way of activating very real relations through the operation of analogy with very real, material effects. In her paper Afro-Dog, Benedicte Boisseron calls this form of negative association “becoming against,” where becoming suggests the mutual construction of both terms of the relation as “bad beings” (Boisseron, 2015: 20). In this case, both coyotes and unhoused persons are cast as “bodies out of place” within the fortress of Nextdoor because their existence within supposedly poses a danger to property and person (Ahmed, 2014: 124). They are “stranger strangers,” who cannot be assimilated.

In cases of the eviction politics of racial banishment, institutions of state and city power (banks, courts, police, or housing authorities) identify particular peoples as in need of assimilation or as a threat to be controlled or evicted. Seen from this perspective, *coyote* politics would seem to be an issue of similar state and city power: in the US context, this includes the National Park Service, the United States Department of Agriculture, state Departments of Fish and Wildlife, or local Animal Services departments, the agencies responsible for the lives, death, and movement of wild animals.

While these government agencies are important, in the case of cloud coyotes, residents play a much more central role, one best understood through the frame of settler colonialism. Settler colonialism describes a historically specific ongoing project of removing indigenous

people from the land and replacing them with settlers endowed with new legal and juridical forms of exclusionary ownership (Whyte, 2018; Wolfe, 2001). It is, in Wolfe's formulation, better understood as a structure, not an event. As such "its history does not stop" with the end of explicit frontier violence. Instead, its logic "transmutes into different modalities, discourses, and institutional formations as it undergirds the historical development… of settler society" (Wolfe, 2001: 402).

Under settler colonialism, the choices and decisions about how to govern a place are delegated to individual settlers, backed by, but not directly executed by, the settler state (Veracini, 2013). The forms of this delegated power are violent, bureaucratic, economic, and, vitally, ecological: to settle is to transform the landscape in vital ways that sustain settlers and displace relations/arrangements already in place. Settling includes bringing in forms of property, enclosure, and fencing as much as it does new ways of cultivating land, raising livestock, planting things settlers like to eat, and all the forms of management necessary to maintain these new ecological relations.

The Potawatomi philosopher Kyle Whyte describes the settler colonial project as a "vicious sedimentation" of one ecology over another:

> *by seeking to establish their own homelands, settler populations are working to create their own ecologies out of the ecologies of Indigenous peoples, which often requires that settlers bring in additional materials and living beings (e.g. plants, animals) from abroad.* (Whyte, 2018: 135)

Coyotes are part of that ecology, and their status, their behavior, even their evolution is therefore, both part and legacy of the ongoing settler colonial project (Bacon, 2019; Schell et al., 2021). The consequences are not only ecological: alongside the deaths of real coyotes, vicious

sedimentation "damages settlers' inclinations for consensual decision-making with Indigenous peoples"—which makes recognizing colonization and imagining decolonization of these relations extremely difficult (Whyte, 2018: 139).

While urban ecologists and biologists talk of coyote "habitat", often discussing the ways coyotes adapt and move between "natural" or "rural" environments and urban or built environments, such naturalizing language misunderstands the way that ecological remaking is part and parcel of the historical and biological transformations wrought by settler colonialism. More than just a "natural" or "unnatural" habitat, urban or rural, coyotes inhabit a landscape held in place by ongoing practices of settlement which not only displace the coyote but also specific kinds of people—native inhabitants, un-housed people, illegal migrants, and others—for specific political purposes. The very taxonomy of "native" and "invasive" species are inextricably bound up with settler states (Cattelino, 2017).

Cloud coyotes are new entrants into this project. They are part of this structure through which settler forms of governance are enacted by residents, with the help of social media platforms and the forms of organizing and response they enable. The ecological governance intrinsic to the settler project might not require centralized state action if residents desire for a safe domestic space, clear property boundaries, and a sense of ownership could take its place. Urban coyotes unsettle this project by refusing to comply with settler's attempts to transform the ecology; but it is cloud coyotes who really pose the threat—they are the coyotes who overflow, persist, will not stay put, and which in turn creates the desire to strengthen and police the boundaries and relations in question.

The cloud coyote thrives because there is a ready-made fantasy of viability and threat that underwrites the ongoing practices of settler colonialism, one that Ghassan Hage describes as

"generalized domestication" (Hage, 2017). Generalized domestication is a structure of desire, an affective correlative of concrete processes of domination and extraction: “a mode of inhabiting the world through dominating it for the purpose of making it yield value.” It is the fantasy that the world can be made "homely" and one's existence "viable" through escalating acts of "aggression and domination” (Hage, 2017: 92–93). Critically, the notion of “domestication” here is loosely used to describe the control or extermination of any potentially dangerous or ungovernable social force, for “what is true of the logic of domestication in relation to one species is also true in relation to the environment as a totality,” writes Hage (87). Coyotes, unhoused persons, racialized immigrant others — all of these settler relations and more are potentially unsettling, and so lie within the clearing ground of the domesticating subject.

Crucial to the project of settlement is that settler subjects *desire* to remake land for their own use. The inexhaustible threat of the cloud coyote drives this desire out of the virtual biome and into the yards, neighborhoods, council hearings, and landscapes of the city. They renew a desire for domestication that enlists settlers as agents of the state in intimately re-making ecology: the *domus* (the house and its yards or fields) is the site of ecological (as well as political and family) practices of domination. A real coyote might come and go in this space, creating a periodic upheaval. Cloud coyotes, however, *never go away*. They cannot be contained, nor can they be assimilated. As such, the demand for extermination can constantly renew itself. In the next section we demonstrate some of the ways that cloud coyotes exemplify the desire at the heart of generalized domestication, and sustain ongoing practices of settler colonialism.

Pets are the new livestock

For much of the 20th Century, settlers, with the help of the United States government, waged war against North American predators like wolves, bears, mountain lions, and coyotes. States paid bounties to private citizens who could prove their kills, the cost of which at one point made up two-thirds of the total Montana state budget. It was common practice for federal employees throughout the West to shoot a horse, lace its carcass with poisonous strychnine tablets, and wait (Flores, 2016). One of the US government's prominent predator hunters reported the possibility of killing up to 350 coyotes in less than ten days by these methods. Exceedingly efficient killing of large carnivores and other pesky vermin animals is one of the most striking signatures of settler colonialism in the US.

Though wolves were essentially eliminated from the lower forty-eight states by mid-century, the coyote escaped extirpation. In fact, thanks to their remarkable behavioral and biological adaptability, coyotes have spent the century expanding their range. Once occupying the plains and deserts of the North American West and Southwest, coyotes can now be found across the continent (Hody and Kays, 2018: 81–97), including in cities as densely urbanized as Los Angeles and Chicago.

Despite, or because of, their flourishing, coyotes continue to be targeted by campaigns of organized killing, with several key differences. In place of the US federal government, it is now private homeowners and municipal governments that work to bring about a world without predators. And whereas in previous decades, protecting ranchers' livestock provided the main impetus for killing coyotes, today it is settlers' beloved cats and dogs who represent the front lines of settler colonialism. This transition—from livestock to pets—is not simply a material replacement of one valuable creature for another; it comes with new fantasies, desires, and

anxieties as well. Whereas earlier settlers may have mourned the violent attack on a valuable animal, and demanded the extermination of a predator, pets activate different values and anxieties. These values appear in a striking and surprisingly common word-image that circulates in Nextdoor coyote posts:

> *As I was walking with my mother I noticed a deceased cat or body parts of a black & white cat [on a street corner]. Most likely done by the coyotes in the area. Not my cat. In case someone was missing their beloved cat.*
>
> *We see far fewer squirrels in my neighborhood and have found cat parts in our yard. Twice. Fact. Ask the boy [on a nearby street] what he thought about hearing a cat being killed then went outside to check and saw it.*
>
> *Hyperbole to you, until you have lost pets, or find pet body parts on your lawn.*

Such images mark the passage of the cloud coyote. The pet's dismembered body, oftentimes a cat, laid on the front lawn, as if on display. The horrific simplicity of this picture—the flat, homogenous background of the grass, simultaneously a surface and a screen onto which to project a fantasy, and a pet once recognizable as whole, now in parts—gives this image its wide-ranging currency and emotional impact. As if operating by the logic of nightmare, and carrying the supposed facticity of the picture—even though it is almost never an actual photograph, which would be too much—this image courses through the imaginary of the Nextdoor community, eliciting nervousness and sympathy in equal measure.

There is no doubt that the main emotional and affective vector of settler politics around coyotes is the family pet, the companion animal (Haraway, 2003; Shell, 1986). "Furbabies" and "furkids", inducted into the space of the family, collapse the distinction between human and pet, standing as the perfect victim for imagined attacks and thus demanding the extermination or

banishment of the coyote. As with the necessary vigilance of the rancher or farmer, this relation encourages a kind of "nervous" reading of the landscape, an affective quality long noted as characterizing the settler colonial atmosphere (Byrne, 2010; King, 2019), shifted here from the rural frontier to the urban domains of house, yard and neighborhood.

The threat the cloud coyote poses to the furbaby is a complex intertwining of fear, anxiety and grief that cultivates a dangerous ethical orientation toward pets by imagining them as children. Donna Haraway, who otherwise defends a rich relating with companion animals, argues: "these beliefs are not only based on mistakes, if not lies, but also they are in themselves abusive—to dogs and to humans" and later warns that, "to regard a dog as a furry child, even metaphorically, demeans dogs and children—and sets up children to be bitten and dogs to be killed (Haraway, 2003: 33, 37). The confusion of pet and child puts both in actual, physical danger, as Haraway makes clear, and constant, imagined danger too. Selective animal kinship locks family, ownership, and animals in discursive relation: the family as threatened, the predator as threat, and assertions of ownership as the desire to protect some animals and exclude others.

If the rancher's loss of livestock to a coyote could be valued in terms of the loss of income or food on the table, the loss of a domestic pet implicates a different set of values: not only the loss of a loved one, but the free and fair use of one's *own* backyard. Post after post mentions backyards and the painful idea of being unable to extract value from it just the way individuals desire–including individual dogs and cats, who are increasingly recruited into settler relations as *owners* via a kind of insistent pet primogeniture:

> *Dogs and cats should be able to be in their own fenced backyard to go to the bathroom and play… Wild coyotes roaming for food do not belong in the city.*

It is obvious that you've never had a loving dog or cat, a member of your family attacked in their own home, a place where one should be able to feel safe and secure from predators and yet it's happening every day. Coyotes are jumping into people's backyards and attacking poor pets!

Domestic pets should not have to be locked during the day so wild coyotes have free use of our streets.

However, following the structure of the impossible desire, the fence is both necessary and inadequate at the same time:

I have had a coyote in my backyard twice now. It went through an open gate the first time, but the second time, it jumped a six foot fence

Three coyotes jump six foot wall and enter backyard. What is important, they show no fear of multiple motion sensor lights or the home owner yelling at them. They also went up to the upper level patio as well.

Coyote rollers (a device designed to prevent coyotes from jumping fences) are frequently mentioned, as are motion-sensor lights, sprinklers or alarms. The fortress mentality of gated LA, described by Mike Davis and Eric Avila pushes in two directions in these posts: on the one hand it fantasizes about a city without coyotes (or certain human others), but it also emphasizes the seemingly unstoppable capacity of the coyote to penetrate the fortress-yard, to renew the necessity of fortifying the legal and material structures of settlement (Avila, 2004; Davis, 1999).

Settler control of the city is not confined to the backyard. Ownership is not just a question of property boundaries, but of propriety more generally. Take, for instance, the leash. The power of the leash is to produce a kind of roving human-animal, family-property assemblage that privatizes public space as it navigates through the city. Normally, the leash, like the fence, is a

technology of protection. Heated debates on Nextdoor center around whether an animal that a coyote killed was on a leash or not, often framing the pet owner as the responsible party.

But as with the fence, the power of the leash also brings a vulnerability that Nextdoor coyote watchers frequently lament:

> *I have seen them on [a nearby street] now and then and a pet was attacked a few years ago at [a nearby intersection] while on a leash.*
>
> *As far as leaving your pet alone or not it makes no difference, coyotes will snatch your dog right off its leash as you are walking them down the street because the coyotes are not afraid of us or anything since we do not pose a threat to them so pets on a leash is a easy opportunity for a easy meal.*

The leash is a frequent point of contention on Nextdoor, a site for the moralization of pet ownership: maybe you weren't paying enough attention to your pet. One self-proclaimed "coyote co-existence coach" says she recommends dispensing with extension leashes because, at the outer limits of the leash, sometimes fifteen or twenty feet from the owner, too much anxious attention is required to ensure the pets' safety.

Unless, of course, the anxiety is the point. As Hage explains, no single event can create an "ungovernable" entity. Classifying something as ungovernable is

> paradoxical in that it indicates on one hand an inability of governmental forces to relate to it and yet also implies a historically acquired familiarity: it denotes a relation paradoxically marked by a certain intimate lack of relationality, a relating to something through a recognition of the permanent inability to relate to it. (Hage, 2017: 75–76)

Real urban coyotes have very few relations with humans, and even fewer humans cultivate sustained relations with urban coyotes. Anybody who uses Nextdoor, however, will have relations with cloud coyotes, and the attention-grabbing behavior of *these* coyotes is pretty much guaranteed to be a nuisance, even as the behavior of real neighborhood coyotes remains mostly a mystery. The ungovernable cloud coyote who leaps six-foot fences and snatches dogs from leashes is capable of a constant incursion into would-be-homely space.

Cloud coyotes, then, are saturated with the paradox that Hage locates in the ungovernable: "a relating to something through the recognition of the permanent inability to relate to it." The cloud coyote is a vicious, unstoppable predator with no remorse and an insatiable appetite, a kind of serial killer that targets furbabies and possibly even human children, dismembers them and arrays their body parts on the lawn as evidence of its evil. The yard and the leash extend modes of settler space-making up to the point where they are threatened, and must be asserted again and again. Pet owners therefore insist repeatedly on the right for their furbabies to poop unattended in their yards or to have *free rein* from the leash; they insist on the infinite but incomplete extensibility of human-pet-property relations. In the settler imagination, city space must be made safe for such relations.

Make our Lawns Great Again

In a polarized media landscape, charged images—like dead cat parts on a lawn—are powerful tools for organizing. So if, in the wake of your loss of a beloved pet, you turned to Facebook, you'd find a political landscape waiting for you to choose sides: You could join pro-coyote groups like “Coyote Clan” and “Protect Our Coyotes” or, because you are angry and afraid, you could join anti-Coyote groups “Coyote Hunting” and “Evict Coyotes.” Whereas Nextdoor coyote

posts are about disagreement and to some extent, about information-sharing, Facebook groups bring like-minded people together for a purpose:

> This group is for people wanting to bring down the coyote population to much safer levels. We are not here to discuss both sides. The only side we discuss is how to get our government to do their job and start Evicting Coyotes. … This group is meant for individuals that want to see the coyote population culled. If arguments arise from opposing views, you may be removed from the group. The group is meant for like-minded people wanting to find solutions to the coyote issue. We do NOT support Co-Existence, period. (Evict Coyotes | Facebook, n.d.)

In another group, from another city:

> This group is for people wanting to bring down the coyote population to much safer levels. … No coyote huggers are allowed. You can have respect for them. But going around causing problems or saying they were here first wont be tolerated. It will get you kicked out and blocked. (Evict Coyotes West Covina, Walnut and surrounding cities | Facebook, n.d.)

And another, from yet another city:

> This group is for people wanting to bring down the coyote population to much safer levels. … #EvictCoyotes #WearRed (Evict Coyotes - Downey California | Facebook, n.d.)

The striking similarity of these descriptions might convince you that there is some kind of grassroots movement taking shape. And to some extent that's right—clearly, these groups speak to, and likely amplify, a shared fear of coyotes. Their goal is to convince local governments to adopt “trap-and-kill” programs to reduce coyote populations. Supporters have turned out at city

council meetings, wearing red “#evictcoyotes” shirts and demanding action. They convinced one city to adopt a program to cull coyotes for 5 months out of the year (Green, 2019).

But these groups can also be traced entirely to a single person: Torrance City Councilman Aurelio Mattucci. In 2016, Mattucci sensed “the pain in people's hearts” and made a Facebook page called “A Coyote Killed My Pet in Torrance” despite having never seen a coyote himself. Afterwards, Mattucci says, he saw coyotes everywhere. The Facebook page became a popular community gathering space for "coyote criers"—people who feel intensely that the presence of coyotes in their neighborhoods is a problem. Mattucci used the momentum to run for Torrance City Council on a strong anti-coyote platform.

In our interview with Mattucci [9/19/2019], conducted at his real estate company's office, he admitted the likelihood of a coyote attacking a human was slim to none and that there are small adjustments people can make to keep their pets safe.[4] But this is not his public message:

> As cute as these animals are, we must remember that they are ruthless and vicious killers and would have no issue attacking a young child right in front of an adult. (Evict Coyotes post of April 22, 2020)

And for Mattucci, the question of what is at stake is also clear:

> Enough is Enough.
>
> We want our backyards back. (Evict Coyotes post of August 10, 2020)

Although Mattucci used coyotes to build support, they are just one part of his platform. He's fighting, in his words, for "A Cleaner and Safer Torrance.” As a politician his platform is pure American conservativism. He calls Black Lives Matter a “terrorist organization.” He calls homelessness “a Cancer” and says it's “spreading,” language decorated unconvincingly with a

[4] There were 367 attacks between 1970 and 2015; of which 3 were fatal (Baker and Timm, 2016). By contrast, an estimated 4.5 million people are bitten by dogs every year (*American Veterinary Medical Association*, n.d.).

rhetoric of concern: “as for the homeless, may they be given viable options, because we care and our streets shall no longer be their permanent residence.” “Cleaning up” Torrance is a cipher for strong police who keep the borders impermeable, and homeless people, immigrants, Black Americans, and also, coyotes, out of the American yard.

Mattucci exploits settler desire: he invokes the cloud coyotes as a threat to ownership and control over the city. So although settlers are deputized to remake the land, and to assert ownership over it, this work also comes with fear and anxiety. Coyotes *do not belong* in these non-wild places, and the possibility that they might enter them engenders fear and surprise. Mattucci recognizes this threat and offers, as an agent of the state, to take care of it. He offers to step in, as a kind of delegated apex predator:

> Hey, I'm not going to argue whether they're here first or not. Well, now humans are here. Okay. And we deserve and want a safe place to live and coyotes aren't making it safe. (Balestra and Terry, 2019)

Mattucci recognizes the implicit demand of residents to do something about the coyote problem, and offers to be a kind of backstop to their settlement. The cloud coyote is absolutely central to this offer, because it must appear to be impossible to even consider some form of co-existence with coyotes in the city. One Nextdoor poster makes this clear:

> *How do you propose we ‘coexist' with wild, dangerous predators? Lock up our family pets & young children 24/7? We're not talking about an animal that only comes out at night anymore; that stays out of our backyards so that we can use our backyards for our own enjoyment safely with our children and pets; and an animal young children can safely pass on the street during the ‘day.' Coyotes are out to kill, hunting for food day and night. Coyotes don't understand the word coexist – that's ridiculous!*

The apparent impossibility of living with coyotes – the “ridiculous” proposition, here made all the more palpable by the incessant activity of the cloud coyote—provides an opportunity for the state to demonstrate its capacity and necessity. Torrance’s city council has, in fact, killed coyotes, even as Mattucci continues to depict them as a multiplying threat (Green, 2019, 2021; Hixon, 2021).

Mattucci’s success demonstrates that the cloud coyote is a powerful resource for reactionary politics: its inexhaustible threat can constantly be invoked to renew the promise of control. Cloud coyotes generate political capital enabling Mattucci to advance his other projects of control too: his promise to cleanse Torrance of trash, of the homeless, of Black activists, of other othered populations. The cloud coyote’s crystallized image of a human-coyote relation is therefore also at work reshaping human-human relations in greater Los Angeles, and so its propagation emerges not only as a site where settler colonial structure is maintained, but also where multiracial and multispecies environmental justice work can occur (Pellow, 2016).

A kinder, gentler settler colonialism

Alternatives have emerged among LA’s wildlife managers and activist groups to the exterminationist program represented by Mattucci. Many agencies and coyote groups have turned to coyote management strategies premised on "coexisting" with coyotes.

Despite the name, Coyotes Out of Downey is one representative of this newer and more humane approach. The organization, an outgrowth of an earnest community-facing City Hall, educates residents about what to do to avoid getting into conflicts with coyotes in the first place: secure trash at night, encourage residents to keep their pets on a leash; keep cats inside. Coyotes Out of Downey turns municipal attention toward coyotes, not in the form of violent

interventions, but by funneling residents' anxieties into a version of community policing, an ecological analogue of Neighborhood Watch.[5]

The ambition of these more humane approaches is much broader than protecting cats from the occasional predatory coyote. These plans reorganize urban ecologies, beginning with human-coyote relations, in order to produce coyotes whose use of space no longer overlaps with that of homely human property. Making such coyotes requires not just behavioral interventions on coyotes, but careful management of human behavior, too; because the two are intertwined. As a Coyotes Out of Downey representative put it:

> *They're actually really fearful of humans… they're very observant animals. And so when they see humans and all they're doing is taking a photo or videotaping it… all you've taught to that coyote is, 'Oh, that person isn't scary at all. They just took a photo.' And so I think little by little, their inherent fear of us is changing because they're not constantly getting hazed or scared. And so they're like, 'Oh, it's not so bad here. And there's food out here. So why not?'*

Coyotes Out of Downey is, roughly speaking, on the side of coyote coexistence, but a more distant kind of coexistence, one premised on the possibility that, if people could discipline themselves, coyotes would no longer be a problem. By working with residents to change their behavior and undo the problematic coyote association of humans with food, this kind of "coyote" management hopes to retrain coyotes to keep their distance from equally well-trained humans. It's coyote management in a biopolitical mode: through self-discipline and self-governance, humans can in turn discipline and govern coyotes. Coyotes Out of Downey is part of a larger shift. Coyote managers increasingly recognize extermination policy as a failure; the City of Los

[5] The California Department of Fish and Wildlife in fact runs a program called "Wildlife Watch," which consults with cities on their coyote management policies: https://wildlife.ca.gov/Wildlife-Watch.

Angeles stopped killing coyotes in 2004.. Coyote expert Eric Strauss (LMU) puts it bluntly: " Lethal management of wildlife as a first recourse is part of an outdated paradigm" (Lynn and Strauss, 2014).

Instead, municipalities across LA County have started creating "Coyote Management Plans" —or more often, simply cutting and pasting these plans from one city government website to another. In place of killing, these plans offer a range of practices in line with the mutual disciplining advocated by Coyotes Out of Downey. Increasingly, therefore, it is human behavior that is the focus of wildlife managers' work: cleaning up trash, reshaping urban habitat to be less coyote friendly, and above all, *hazing* as a central, though unproven, practice. The idea is that residents should actively threaten or scare coyotes, using a variety of techniques like yelling, waving or throwing things, in ways that do not harm coyotes but, somehow, convince them not to return.

None of these non-lethal plans and techniques, however, address the central question of where the coyote should be. Once hazed, where exactly should newly-distant and afraid coyotes go? Out of the city entirely? To different neighborhoods? Or should they remain nearby, but out of sight? Coyote Management Plans don't say. If the idea is to discipline coyotes away from human habitat, then the implication is that there is a non-human outside to the city where coyotes can 'return' to 'natural,' non-urban ways of life.

Such approaches still work according to the same logics of containment and assimilation, enforced by the settler desire for generalized domestication and backed by the threat of eradication. Containment means keeping coyotes out: create reserves, build fences and walls, innovate "coyote rollers" or wolf urine spray bottles; create roving, space-owning human-animal pairs that haze coyotes; encourage coyotes to hunt elsewhere by securing food, cleaning up

clutter etc. Assimilation means knowing coyotes better: studying and learning about their movements and behaviors, collaring and tracking them in order to learn more, creating coyote-sighting apps to know when and where they pose a threat, hazing them. Assimilation, like surveillance, works on a logic of strategic intervention: rather than indiscriminate killing, killing happens, so the argument goes, only when absolutely necessary because one can more precisely predict the risk.

Invasion is a structure, not an event. Coyote Management Plans, hazing, and non-lethal management of coyotes thus emerge not as alternatives to settler colonial domination but as disciplines within it. This is a kinder, gentler settlement—one that demands changes, perhaps quite small, in both individual and collective behavior. But the settlers are not leaving.

Conclusion: The Land and the Cloud

> *I don't know or care if they were here first; we're here now and any threat to us and ours should be met with as much force as it takes to eliminate it. This is how humans have survived and prospered for tens of thousands of years I see no reason to stop now. We are the Big Dog, we should act like it.*
>
> *They adapt quickly, breed quicker and have no predator enemies… except man. We need to stop abdicating our position at the top of the food chain. They need to be shot.*
>
> *They have a natural predator and something that has been "invading" their own homeland!!! It's called "human beings"!!!*
>
> *Humans are the most invasive species on this planet. We make kudzu look like microgreens.*

Here we see the symmetry of Nextdoor's apex "we": co-existers and coyote criers alike imagine themselves as representative of a human species whose destruction of coyotes and their habitat is biological and inevitable. The trope illustrates how grand species narratives serve to assuage settler anxieties. If the destruction of lives, land and relations is not colonial, but human, then *we* cannot be held responsible. Eve Tuck and K. Wayne Yang show how the idea that "We are all colonized" serves as a "settler move to innocence," a way of relieving the "settler of feelings of guilt or responsibility without giving up land or power or privilege" (Tuck and Yang, 2012: 10). The idea that we are all *colonizers* can do the same emotional work. Mattucci offers his followers precisely this move to innocence:

> I don't subscribe to the idea that they were here first so we need to somehow play by their rules. We humans need a safe environment of our own and technically, no matter where we go, we are somewhere where something else was there before us. (Evict Coyotes post of May 6, 2021)

Technically, says Mattucci, "we humans" are all settlers—thus absolving actual settlers of their complicity in actually existing settlement. A necessary step toward breaking out of the settler imagination that suffuses cloud coyotes is to recognize the ongoing structure of settlement in US cities for what it is: to disavow this species "we" and recognize specific relations of complicity, and the ways violence flows downstream from them.

We, the three white settler authors of this paper, hope to demonstrate rather than erase the tensions that arise when attempting to critique settler colonialism from the inside. Even as we embrace the imperative to imagine possibilities of anticolonial experiment—here, in the contexts of urban wildlife management and human-coyote relations—we also acknowledge that we don't necessarily know what anticolonial relations look like. An anticolonial future for cities might not

involve us and likely won't involve the settler state at all. But we also believe there is important deconstructive work for settlers (and settler scholars) to do in making visible the affective and material practices that serve to undergird the ongoing sedimentation of the settler project. That said, we are cognizant of Max Liboiron's warning that though anticolonial practice "requires critique…mostly it requires action" (Liboiron, 2021: 6). Tuck and Yang, too, insist that "decolonization is not a metaphor," warning against the risk that "dressing up" minor revisions to the status quo "in the language of decolonization" constitutes "a form of enclosure, dangerous in how it domesticates decolonization" (Tuck and Yang, 2012: 3). We learn from them and other scholars of sovereignty that decolonizing only means one thing: to return sovereignty over land to the Indigenous people from whom it was stolen. We hope our critique of the settler structure and ecological imaginary around coyotes, Nextdoor, and urban wildlife management makes space for the return of land and sovereignty to those whose relations already stand outside the always-incomplete structure of colonization.

For some thinkers, the ongoing presence of coyotes in cities like Los Angeles indexes this very outside. The Gabrieleno-Tongva thinker Cindi Moar Alvitre finds in the movement of coyotes across the settler city something she calls "coyote space," an alternative mapping of the city: "coyote space is about making visible what others cannot, or choose not to see. Arbitrary political boundaries become meaningless." Whereas the cloud coyote inspires settler fear at the revelation of settlement's porous boundaries, for Alvitre, tracing coyote trails across the city inspires joy at the knowledge of a still resistant outside to the settler city. Alvitre suggests that the practice of moving with or like coyotes can reveal the city as a place of Indigenous survivance. While we don't claim that settler city dwellers can see the city and the land it's based on in the

same way, we take inspiration from her claim that "creating a cartography of coyote space is an act of resistance" (Alvitre, 2015).

Indeed, by attending to sites of human-coyote conflict in the city, or rather, settler-coyote conflict, we can trace a kind of map of settler anxieties, of the places where the porous boundaries of the settler structure are weak but also consistently regenerated. These cracks, or multi-species zones of "equivocation," are productive places for imagining anticolonial experimentation (De La Cadena, 2010: 350). In particular, we point to two sites where anxiety and sovereignty intersect in the figure of the cloud coyote: first, in the material and discursive state practices constituting wildlife management, and second, in the ongoing negotiation of the relationship between environmental and digital space.

The current urban wildlife management paradigm in Los Angeles, and in many US urban ecologies, asserts settler state sovereignty over land through the deployment of documents and protocols like Coyote Management Plans (CMPs). These documents disseminate "best practices" for human-wildlife relations, with no indigenous involvement. Often adopting the coexistence paradigm described in this paper, they neither question their own infrastructural access to Indigenous lands nor foreground place-based obligations (Liboiron, 2021: 9). Instead, CMPs perform and reinforce the structuring principle of private property as the basis for urban land relations. Moreover, some cities have adopted or revised CMPs in response to political pressure cultivated on social media platforms like Nextdoor. This process illustrates how cloud coyotes animate affective circuits that knit state power, individual settlers, and digital storytelling into a governing structure whose function is the sedimentation of settler logics. The process has significant ecological effects. Many CMPs contain landscaping recommendations, for instance, that aim to maximize enclosure and visibility by encouraging residents to remove brush and

build fences over six feet in height, with little to no consideration for native vegetation or other ecological consequences. By prioritizing settlers' safety, comfort and peace of mind over any consideration of their impact on other lifeways, these documents reify domestication as a primary mode of dwelling and intimately connect state power and the private sphere. It should come as no surprise that many of these coyote management documents were originally disseminated by police departments, who were in many cases the first state agencies tasked by settlers with managing perceived human-coyote conflicts.

The drafting, dissemination, and uptake of CMPs as environmental practice demonstrates that wildlife management is a key site for the continual reassertion of settler sovereignty. By contrast, Indigenous co-management of lands and conservation practices is emerging as an important policy framework (Neale et al., 2019; Reed et al., 2020), including in California. A well attested case is that of the Karuk and Yurok tribes in Northern California, who are increasingly involved in both fisheries and fire management, and who are finding new ways to work outside and alongside settlers in the forests and rivers of Northern California (Lake et al., 2017; Lake and Christianson, 2019). Several state agencies have adopted tribal consultation policies, and in 2020, California's Governor issued an executive order directing agencies to "seek opportunities to support California tribes' co-management of and access to natural lands." But as the reference to "natural lands" suggests, these examples have taken place so far mostly in rural areas. Cities, as Libby Porter and Oren Yiftachel point out, are often imagined as places of near-total Indigenous absence, and urbanization can function as a particularly vicious form of settlement (Porter and Yiftachel, 2019; Whyte, 2018).

But Indigenous people live in cities as anywhere else, and Indigenous tribes advocate for authority over land and policy everywhere. Los Angeles maintains the largest Native American

population in the nation (Alvitre, 2015: 44) as well as several tribal organizations working to reclaim land for various purposes.[6] There's no reason why urban wildlife managers could not adopt policies that recognize the rights of the native people of the Los Angeles basin to make decisions about who belongs on this land and on what terms. There may be opportunities for state agencies and tribal groups to consult or otherwise collaborate in urban areas, where, we suggest, the insistent presence of coyotes is an example of how cities' "inherent openness" can in fact emphasize the "incompleteness" of settler world-building (Porter and Yiftachel, 2019: 180). At the same time, it's important to note that collaboration is not the only horizon for anticolonial practice. Requests for tribal consultation can function as unwelcome demands on Indigenous groups' limited time and resources, which are themselves consequences of colonial violence. Moreover, some native people may refuse collaboration as part of a broader refusal to recognize the legitimacy of the settler state (Simpson, 2014: 11) or may simply cultivate relationships with places and beings outside structures of state recognition (Simpson and Bagelman, 2018: 566). What forms anticolonial management of urban wildlife might take, and whether it might include, for example, tribal organizations rewriting, rejecting, or ignoring CMPs, is neither up to the settler state nor to us.

The second site where cloud coyotes point towards anticolonial possibility is in digital space, or more specifically, in the relationship between Land and Cloud. Cloud coyotes, as lively online images of a lively animal's more-than-coyote relations, aren't likely to go away: flesh and blood coyotes will continue to move through cities and the people who encounter them will continue to tell their stories. The problem is not that people turn to social media to perform these

[6] See for example programs of the Fernandeño Tatavism Band of Mission Indians (https://www.tataviam-nsn.us/press-release-california-celebrates-launch-of-tribal-conservation-corps-program/), the Tongva Taraxat Paxaavxa Conservancy (https://tongva.land), and the Gabrielino-Tongva Springs Foundation http://gabrielinosprings.com/wpsite/).

imagined encounters, nor that the digital creatures living there sometimes convey inaccurate information about coyotes. Actual coyote behavior is only ever a part of the image of relations that the cloud coyote represents. The issue with the proliferation of these specific cloud coyotes is due not to the desire to tell coyote stories, but rather to the structural affordances of an application like Nextdoor, whose very design shapes users' ecological imaginaries according to logics of enclosure, ownership, and domestication.

By examining how online conversions impact the governance of actual coyotes, our analysis of Nextdoor reveals the unavoidable imbrication of abstract digital space in material land relations. As Ashley Caranto Morford and Jeffrey Ansloos write, the internet is ultimately a "landbased technology," a "living space not only where ethical relations develop and exist but also where colonial harm to relationships can occur" (Caranto Morford and Ansloos, 2021: 302). Indeed, even beyond the fact of Internet technologies needing land and energy infrastructures in order to function, the existence of cloud coyotes points to the insistently territorial function of the seemingly deterritorialized digital 'commons' of the Cloud. By defining access to its digital neighborhoods according to property relations, Nextdoor models the assumption of settler access to land and the dynamics of possession and dispossession that continue to undergird the process of settlements' ongoing sedimentation. And given the histories of segregation and chronic housing injustice that shape ownership and residence in settler cities like Los Angeles, an application like Nextdoor ensures that native voices are largely excluded from these political-ecological narrative practices.

Today, most social media platforms are almost completely dissociated from the landscape, allowing users to exist in a kind of universally accessible cyberspace that is everywhere and nowhere at once. Even in the rare case where an application is locally

circumscribed or explicitly land-based, like Nextdoor, the stories being told there are often anchored in the affective imaginary of private property. There are, of course, other kinds of newly emergent digital technologies that are designed to invite further interest in land and ecology. Applications like iNaturalist, for instance, are good for cataloging, and describing local populations of neighborhood flora and fauna, but their uses are circumscribed by their narrow scientific framework and data-driven affordances. Applications for doing community science are also rarely designed for sociality, and so far do not invite, or even acknowledge, the possibility of anti-colonial storytelling practices. Other landbound, digital storytelling tools—perhaps nurtured by urban wildlife experts of all kinds, Indigenous American or otherwise—might give rise to new coyote storying practices and so other kinds of cloud coyotes.[7] Like coyotes themselves, whose phenotypic variation across biomes is wide ranging, the cloud coyotes we've found on Nextdoor are just one local expression of a widely dispersed and unruly genetic potentiality. Here and now they animate procedures of settlement. But cloud coyotes are reminders that all of our practices—digital, political, narrative—place us in unavoidable relation with other people and with land. The spaces where city dwellers imagine their relations with coyotes could be tools for anticolonial practice if they work to undo the domesticating and property logics that now define the cloud coyote.

[7] One local example of an alternative platform for coyote stories online is UCANR Coyote Cacher reporting system: https://ucanr.edu/sites/CoyoteCacher/

CHAPTER 2

Urban Biodiversity and the Importance of Scale

Kenta Uchida, Rachel V. Blakey, Joseph R. Burger, Daniel S. Cooper, Chase A. Niesner, and Daniel T. Blumstein

What Is Urban Biodiversity, and How Does It 'Scale'?

Urbanization (see Glossary) is an ongoing process of human environmental modification, and is paradoxically both a biodiversity filter and facilitator (Aronson, 2017; Murthy, 2016). Though the most highly urbanized habitats are typically dominated by a small number of human commensals, some individuals find refuge in the wide variety of natural 'city green space' (Lepczyk, 2017), while others are released and/ or cultivated by humans, occasionally forming feral populations (Dyer, 2017). The burgeoning study of urban ecology has shown that urbanization has profound impacts on both ecological and evolutionary processes as well as on humans inhabiting urban areas (Johnson and Munshi-South, 2017)]. Urban ecosystems are profitably studied from a perspective that recognizes the reciprocal links between nature and humans (Rivkin, 2019; Grimm, 2008).

Studies of urban ecology vary widely by city size, ranging from small towns to the largest megacities on Earth. An implicit assumption of such studies is that ecological and social processes scale consistently across the great diversity in city size, such that the patterns found in small and mid-sized urban areas would also apply to very large ones. Such an assumption is convenient because if there are general scaling rules of urban attributes, then the ecological, evolutionary, and social processes, that occur in very large urban areas, can be studied at smaller scales. However, there is still a lack of comprehensive understanding of how ecological and

evolutionary processes, that potentially influence biodiversity, change with city size. If different ecological, evolutionary, and social characteristics scale differently with city size, management strategies that work at one scale would break down at another, leading to ineffective efforts to preserve biodiversity. Similarly, evolutionary processes may vary in response to city size, or could be sensitive to some city size threshold where they could be absent entirely at smaller scales (Box 1). Megacities offer challenges, but also opportunities, for biodiversity conservation.

To conserve urban biodiversity, it is essential to clarify underlying mechanisms of the relationship between city scale and biodiversity. For example, as cities grow larger in extent, they may contain more and larger green patches, and possess higher environmental heterogeneity, both of which are key ecological and evolutionary drivers that underlie urban biodiversity. Within sufficiently large cities, certain natural-cultural systems that scale differently interact to form 'cross-scale functional arrangements' (Pickett, 2011). For instance, the diversity of feral populations of exotic birds, appears to be related to both abiotic factors [e.g., colonization history and gross domestic product (GDP) per capita], as well as regional diversity of native species (Dyer, 2017); and these non-natives tend to thrive in the most modified (by humans) environments (Garrett and Singer, 1998), factors which would be expected to scale nonlinearly.

From a management perspective, public agencies within larger cities may be able to contribute less funding to biodiversity conservation than smaller ones, as private nonprofit groups in large cities might 'take up the slack' with less public funding (Box 2). Or small cities, may spend far less than would be predicted, because they may present a better opportunity for native species from the surrounding area to recolonize and become established, and may resist non-native

species invasions. It may also be the case that beyond a certain size, population pressure on resources of conserved (or simply undeveloped) areas within the largest cities, may swamp attempts at protection (signage, fencing, etc.) that would work in smaller cities. Biodiversity management strategies must reflect these emergent and complex relationships that may not scale linearly. Understanding scaling patterns of social and ecological characteristics is essential for municipalities, to refine management regimes for desired outcomes.

Eco-Evolutionary Feedbacks Are Expected and May Vary With City Size

It is suggested that eco-evolutionary feedbacks (Johnson and Munshi-South, 2017) are likely to have a significant impact on urban biodiversity (Hendry et al., 2017). Modifications to the biotic and abiotic environment by urban development, creates novel selection pressures that have only existed in the past 5000 years (Johnson and Munshi-South, 2017). Thus, changes would be expected in the traits associated with survival, reproductive success, and interspecific interactions to modify population dynamics and community structure. At the same time, urban-mediated alterations of local biodiversity could influence broader-scale ecological and evolutionary processes, via changes in interspecific competition, prey-predator interactions, and genetic diversity in urban habitats. As an example of predator-prey interactions, a freshwater zooplankton community was exposed to either an anadromous or a landlocked population of freshwater fish, resulting in a shift in prey body size, total biomass, and other traits depending on the prey size preferred by the two predators (Palkovacs and Post, 2009)). Because community level eco-evolutionary dynamics have often been studied in a theoretical framework, and in experimental microcosms (Kokko and Lopez-Sepulcre, 2007), it is essential to identify these processes in actual urban environments that vary by orders of magnitude in size. There are few empirical studies examining urban-mediated eco-evolutionary dynamics (Alberti et al., 2017).

Such studies are urgently needed as cities expand and species continue adapting to changing landscapes. We must develop deeper insights into these dynamics if we are to better understand and manage expanding urban ecosystems.

There are good reasons to believe that ecological and evolutionary drivers of biodiversity may vary predictably with city size. For example, in Europe, the log of bird species richness scales predictably with the log of city size (Ferenc et al., 2017). The slope of the species-area relationship of cities was not significantly different from that of regional species richness, suggesting that patterns of biodiversity seen in 'nature' may also apply to certain urban areas. Similarly, changes in the elevation (intercept) of the scaling relationship can inform additional variation, while this may be due to geography (e.g., latitudinal gradients) rather than scale. For instance, in Argentina, the difference in urban versus rural bird diversity appeared to be greater at lower latitudes, with rural areas more diverse toward the equator, yet urban diversity remained constant regardless of latitude (Filloy et al., 2015).

Scale-Dependent Biodiversity Management

An understanding of how biodiversity scales with city size should influence biodiversity management in two main ways: (i) the opportunities and constraints for goal-setting; and (ii) the efficacy and implementation of management.

Defining biodiversity goals in cities requires distinguishing between biodiversity, biological/evolutionary processes, and the management of each. A common approach is to use surrounding or historical natural ecosystems as a benchmark, and to preserve urban genetic, species and ecosystem diversity reference levels (Hobbs et al., 2009). But while restoration of local surrounding or historical biodiversity may be a feasible outcome for smaller cities, as cities

grow, they are more likely to develop into novel ecosystems. Thus, alternative management goals should be applied to large cities that recognize these new dynamic realities (Hobbs et al., 2009). Additionally, large cities may provide opportunities to address unique biodiversity management goals with broader national or international reach. For example, Sydney, Australia's most populous city, contains the most threatened endemic plants and animals of nearly 100 Australian cities evaluated (Ives et al., 2016). Some megacities in the United States have become strongholds for non-native species that are imperiled in their native ranges (Shaffer, 2018).

Box 1. A Primer on City Scaling

Many social and ecological attributes scale with city size. Studying the multiple drivers (Figure I) of urban biodiversity requires characterizing these scaling relationships, so that cities varying in size by many orders of magnitude can be compared. The species-area relationship is illustrative (Figure I). The number of species, S, scales as a function of urban area, A, with scaling constants C and Z. Deviations in these scaling's provide a means of normalizing for city size and comparing social-ecological drivers impacting urban biodiversity. Some studies show urban environments shift the intercept, C, up resulting in higher Alpha diversity compared with nearby non-urban environments (Ferenc et al., 2014) and latitude (Murthy et al., 2016).

Figure I. Generalized Species-Urban Area Relationship Contrasting Possible Relationships in Urban and Non-urban Areas.

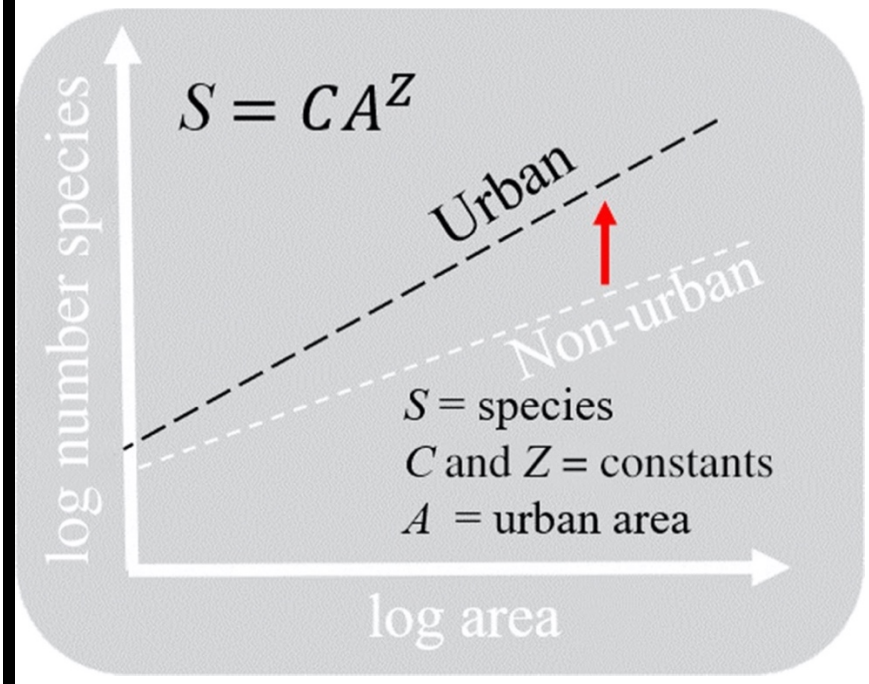


Figure I. Generalized Species-Urban Area Relationship Contrasting Possible Relationships in Urban and Non-urban Areas.

Scaling has other implications for the physical, biological, and social characteristics of cities.

Scaling relationships take power-law form:

$Y(t) = Y_o$(t) city size $(t)^{\beta}$

Where Y at time t is a quantifiable city characteristic, such as green space, or gross domestic product (GDP), Y_O is a constant (intercept), and X is typically city population size or total area at time t. β the scaling exponent reveals emergent

dynamics that take place across cities of different sizes (Bettencourt et al., 2007). These scaling relations are necessary to test the causal framework in Figure I.

There are three classes of urban scaling (Figure II).

Superlinear scaling: $\beta > 1$, resulting in increasing returns to scale with city size and is characteristic of attributes associated with human interactions, GDP, innovation, infectious disease cases, crime.

Isometric scaling: $\beta = 1$, resulting in constant per capita values in Y irrespective of city size. Most resource use and waste production (CO_2 emissions) show isometry.

Sublinear scaling: $\beta < 1$, resulting in economies of scale – a systematic decrease of per capita values with city size. This is analogous to Kleiber's law in biological scaling. In some studies, infrastructure characteristics of cities such as road surfaces and electrical cables, scale $\beta < 1$.

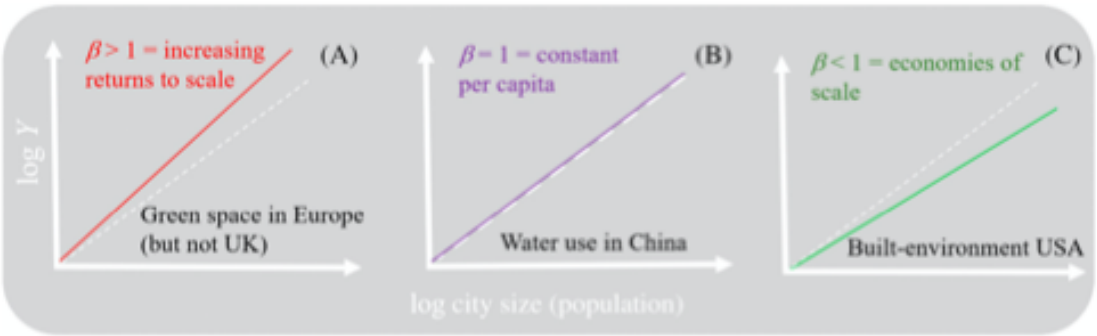


Figure II. Illustration of Three Classes of Urban Scaling: (A) superlinear relationship between population size and green space in Europe (Fuller and Gaston, 2009), (B) linear relationship between population size and water use in China (Bettencourt et al., 2007), and (C) sublinear relationship between population size and the built environment in the United States (Bettencourt et al., 2007).

Cities may now play a disproportionate role in the global conservation of threatened species and the ecosystem services they provide. For example, Australia has four mainland species of flying foxes (family Pteropodidae), large-bodied colonial roosting bats, that are critical long-distance pollinators and seed dispersers (Fujita and Tuttle, 1991), and increasingly rely on food resources within urban areas due to habitat destruction across their range (Parris and Hazell, 2005). The grey-headed flying fox (*Pteropus poliocephalus*) regularly occurs in cities across eastern Australia, and is undergoing population decline due to habitat loss, roost disturbance, culling and heatwaves (Lunney et al., 2008). However, 12% of the remaining population of nationally endangered spectacled flying fox (*Pteropus conspicillatus*) occurs within one of the largest cities in its range, where local government policies continue to endanger the species (https://phys.org/news/2020-07-laws-endangered-flying-foxes.html). In this way, larger cities have an opportunity to define unique biodiversity goals, that will protect threatened species which provide critical ecological functions such as seed dispersal and pollination services, over a much broader geographic scale than the city itself. Conversely, large cities may play a disproportionate role in the spread of invasive species or pathogens, due to their transport and trade networks (O'Malia et al., 2018).

The relative benefits of different biodiversity management strategies may vary with city size, and in the way biodiversity is measured (Box 2). Depending on the management goal, different forms of urban development may result in different biodiversity outcomes. For example, in a study of butterfly and ground beetle diversity around Tokyo, Japan, land sharing (green space interspersed) resulted in larger target insect populations in smaller cities and rural areas, while land sparing (green space clustered) resulted in larger populations in the largest cities and in highly urbanized areas (Soga et al., 2014).

Box 2. Scaling Applications to Biodiversity Management

Variations and deviations in city scaling's will have major consequences for management (Box 1). For example, socioeconomic factors such as income may drive variation in water use in cities across countries. A particular city with greater water use than expected for its size, may also have greater waterfowl and aquatic plant diversity, thus revealing direct management implications that can lead to desired outcomes. Moreover, it may not be possible to use insights from studies of smaller cities to man- age biodiversity in the largest cities (see (Bettencourt et al., 2010) for examples of city scaling and deviations from expected values). Larger cities may host both greater economic and social capital, as well as open space, to achieve higher level biodiversity goals. For example, as cities expand in extent, conservation projects (such as the number of habitat restoration workdays across the urban area) may become more numerous, effective and widespread, since the pool of people interested in conservation is sufficiently large to support

multiple active conservation groups. Or, perhaps conservation activity doesn't scale predictably, large cities have many other things people can do, and such groups are most active in small and mid-sized cities. This is likely to vary in different parts of the world, with higher-income nations promoting more active, expensive projects, like brownfields restoration and creation of wildlife corridors through parkland acquisition, and lower-income countries promoting more passive biodiversity restoration such as leaving slivers or even large blocks of habitat undeveloped, because they would lack the resources to develop them. However, it is recognized that integration of local scale and regional scale biodiversity goals (cross-scale management), and research on this integration, remains limited (Borgström et al., 2006).

From a management perspective, large urban areas tend to have multiple agencies responsible for the management of large urban green spaces (the Los Angeles River, for example, has USA Federal, regional, state, and municipal agencies and utilities, as well as dozens of local non-profit community groups, all devoted to flood control, biodiversity preservation, and water quality). This 'alphabet soup' of stakeholders, exceeds that typically seen in more rural areas where there are fewer (often only federal) entities, such as the USA Forest Service, or the USA Bureau of Land Management, which controls most of the surrounding and interstitial open space around small cities (and thus, its biodiversity). Whether these differences, as influenced by city size, result in different patterns of biodiversity conservation at different scales is a critically important question. For example, would a city ten times the size of another city, require ten times more agency funding to maintain high biodiversity levels?

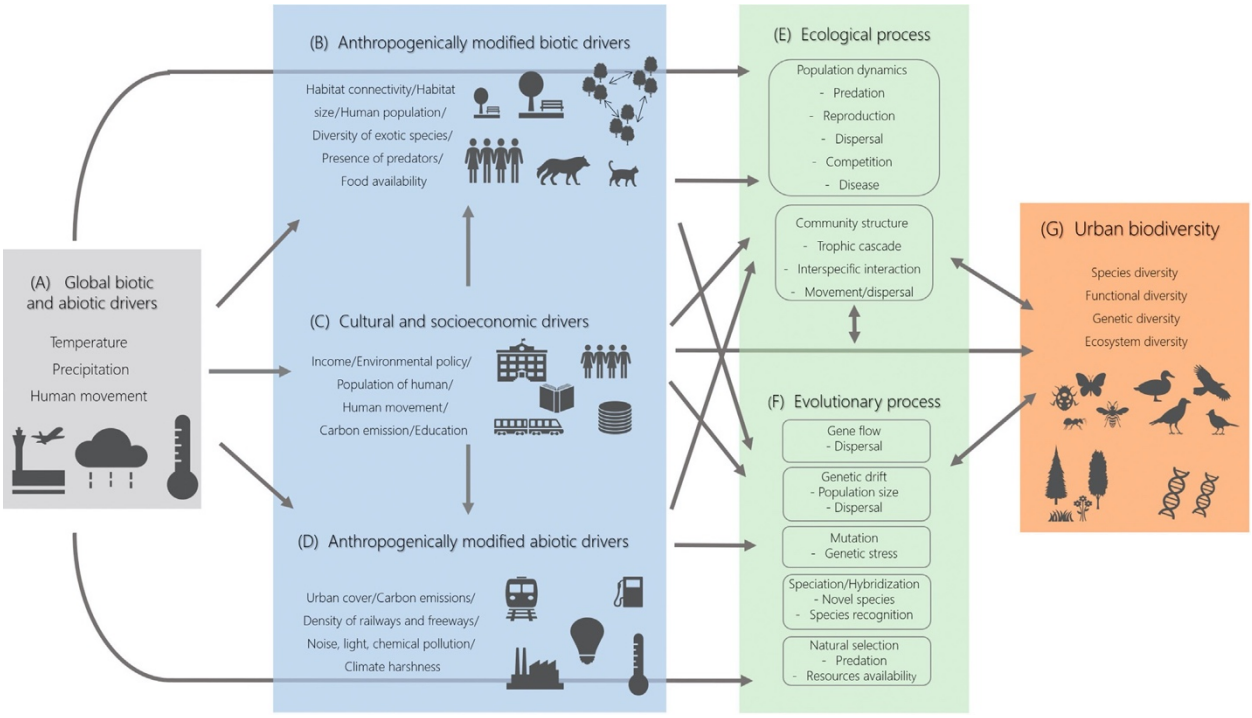
Recognizing the value of novel resources for biodiversity management, includes integrating networks of private gardens into conservation strategies, which has been done in the USA, the UK, and Australia, with the involvement of community science projects (Gonzales et al., 2020). Scaling is relevant to garden networks, given that mobile taxa are likely to be more strongly associated with habitat availability and configuration at scales larger than a single garden (Smith et al., 2006). Care must be taken with small habitat patches to avoid them becoming ecological traps (Bruce and Richard, 2006), given that introduced predators (e.g., domestic cats) also inhabit urban gardens. Biodiversity management approaches that maximize biodiversity outcomes in megacities, for example, opting for 'land-sparing' rather than 'land-sharing' strategies in more urbanized areas (Soga et al., 2014; Caryl, 2016), may increase the inequity in bio- diversity access between socioeconomic groups and also build upon the inherited and ongoing ecological disparities caused by systemic racism, such as redlining (Schell, 2020).

A Mechanistic Model of Urban Biodiversity

Illustrated herein, is how anthropogenically modified abiotic and biotic drivers, as well as cultural and socioeconomic drivers, act through ecological and evolutionary processes to influence urban biodiversity (Figure 1). It is emphasized that both global abiotic (droughts, fires, the frequency of intense storms, etc.) and biotic drivers act directly on these ecological and evolutionary processes. It is recognized that there are key feedbacks between drivers and processes, and between biodiversity and processes.

Anthropogenically-modified biotic drivers of biodiversity are crucial to urban biodiversity conservation, and include habitat size, habitat connectivity, the presence of predators, food availability, and more exotic species (Johnson and Munshi-South, 2017; Alberti et al., 2017).

Urban development, for example, reduces the size of usable habitat patches and hence increases fragmentation (Riley et al., 2003). These habitat modifications reduce dispersal and the frequency of movement (Beninde et al., 2016) and drive genetic drift observed in reduced genetic diversity within patches, and greater stochasticity in allele frequencies across patches (Johnson and Munshi-South, 2017).



[Figure 1. A Causal Model of Urban Eco-Evolutionary Processes Linked to Biodiversity. The goal is to illustrate how environmental factors influence eco- evolutionary processes to drive urban biodiversity. To inform biodiversity management in urban environments, the focus is on (B) anthropogenically modified biotic drivers, (D) anthropogenically modified abiotic drivers,

and (C) cultural and socioeconomic drivers, as main factors that drive eco-evolutionary processes. Decreased numbers of natural predators, for example, allows prey species to allocate more time to foraging, which may increase intraspecific competition, and may have cascading effects which change population dynamics and community structure. These biotic drivers also modify predation pressure, and may influence gene flow through changing movement behavior of prey species. Because the urban environment is designed to meet social and economic demands, culture and socioeconomic factors drive the eco-evolutionary processes directly and indirectly, via influencing biotic/abiotic drives. Since each driver is related to more than one eco-evolutionary process, we casually connected drivers, eco-evolutionary processes, and biodiversity. We also acknowledge that (A) global biotic and abiotic drivers have an important role as direct and indirect drivers of urban eco-evolutionary processes.]

Reduced habitat connectivity may also reduce the frequency of species interactions, which has consequences for urban biodiversity, and this may vary unpredictably with scale. It is easy to envision pollination and seed dispersal dynamics being influenced by isolation within a very large city, such that gene flow and plant diversity are reduced (Hennig and Ghazoul, 2011). Yet, this might not happen in a smaller city, or within a megacity with large enough patches of natural habitat. Human activity, in some cases, may create a 'predator shield' (Smith et al., 2017)] whereby there is relaxed predation pressure in urban areas (Möller, 2012). This reduction of predation risk along an urbanization gradient, has led to a suite of phenotypic changes in antipredator behavior. For instance, many studies that quantified flight initiation distance (FID) to humans found that urban animals have shorter FIDs than rural conspecifics (Samia et al., 2015). A release from predation risk permits, in principle, animals to allocate more time to fitness-enhancing activities such as foraging and reproduction, which may contribute to higher

population densities. Although this behavioral modification may also be explained by behavioral plasticity, some studies have revealed local adaptation to relaxed predation pressure as well as to life in urban areas more generally (Lowry et al., 2013). But it is important to realize that not all cities have reduced predation risk.

Outstanding Questions

What is the goal of urban biodiversity management? Is it to sustain local biodiversity or to create a new urban biodiversity? Or is it to enhance human well-being from biodiversity? Can urban biodiversity management achieve biodiversity and human well-being goals at multiple scales (local, regional, and global)?

What are the scaling relationships between anthropogenic drivers and eco-evolutionary drivers of biodiversity with city size? How do these vary by countries and regions? And how do deviations in these scaling relationships reflect different cultures and policies?

What are the costs and benefits of urban biodiversity conservation and management (green gentrification), and how might environmental justice be integrated into urban biodiversity management at multiple scales?

How can scaling relationships, once identified, inform best management strategies applied at different scales?

How can global data infrastructures facilitate socio-ecological and biodiversity compilation, standardization, and management to facilitate the study of urban biodiversity scaling (Box 3)?

How might increasing and then shrinking urbanization influence future urban biodiversity? How do we better understand emergent properties of urban areas as new ecosystems develop? What specific scale-dependent relationships are associated with whether a species declines or expands?

While both ecological and evolutionary responses to urbanization have been studied, how are eco-evolutionary dynamics influenced by cities and how do they formally scale?

The presence of non-native species may play an important role in ecological and evolutionary processes. The loss of natural predators makes evolutionarily novel domestic cats the main predators on Australian native fauna, where cats have been implicated in driving native animals to extinction (Bonnington et al., 2013; Legge et al., 2017)]. Newly introduced species could also modify evolved patterns of interspecific competition (Alberti et al., 2017) which may create mismatches with demographic consequences.

The abiotic urban environment is remarkably different from natural areas in terms of pollution (e.g., air, light, and noise), high densities of infrastructure (e.g., roads and buildings), and warmer temperatures attributable to the heat island effect (Grimm et al., 2008). More buildings and roads inhibit movement, reduces dispersal, and are associated with direct mortality (Carvalho et al., 2018). Modified microclimates create novel challenges to animals and plants. For example, white clover (*Trifolium repens*) has proportionately less cyanogenesis along an urbanization gradient, which results from reduced snow cover and increases in winter temperatures with urbanization (Thompson et al., 2016). Artificial night lighting has significant effects on predation, foraging, reproduction, and movement in many species (Longcore and Rich, 2004;

Gaston et al., 2013)], and may influence more than one species. For instance, modified prey-predator interactions due to light pollution is likely to change local species composition where light pollution is highest (Gaston and Holt, 2018). Air pollution may drive adaptation leading to the evolution of resistant populations, as illustrated by increased DNA mutation rates in urban herring gulls (Larus argentatus) compared to those in rural habitats (Yauk and Quinn, 1996). Additionally, if noise pollution interferes with reproduction (such as by modifying mate preferences, altering song output, or preventing species recognition), it may modify sexual selection and increase hybridization (Grabenstein and Taylor, 2018).

The diversity of cultural and socioeconomic drivers (Figure 1) may have both direct and indirect effects on eco-evolutionary processes as urbanization increases (Des Roches et al., 2020). Diversity of ownership exists in urban areas (there are both private yards and public parks), and their management will be influenced by cultural demands and societal resources. For example, globally, high income areas are often correlated with higher biodiversity due to unequal distribution of resources across cities resulting from residential segregation and exclusionary zoning practices (Venter et al., 2020). Studies in the UK also found that key socioeconomic factors including house type, household size, and age, were significant predictors for participation in providing food for birds (Davies et al. 2020), which, while providing human access to biodiversity, can increase bird populations and also shift community structure towards a greater proportion of urban-adapted and non-native species (Fuller et al., 2008). Humans have strong opinions about certain animals (Soga and Gaston, 2020), and predators may be hunted or hazed in residential areas because of human's fears or anxieties (Bettencourt et al., 2007). Thus, we may see consequences for species composition and ecosystem function due to these cultural biases as large and mid-sized predators play such a key role in ecosystems.

Concluding Remarks

Despite rapid urbanization and growing cities, we lack a general framework to study global urban biodiversity across scales. This mechanistic model can guide future urban biodiversity research (Box 3) and management. Future researchers are challenged with identifying the precise relationships between city size and biodiversity, and that between city size and the drivers that influence biodiversity (Box 1). Understanding these scaling relationships and their deviations can inform urban biodiversity management across cities (see Outstanding Questions). As cities grow in density and population, green space tends to be lost to urbanization. However, as urban areas expand in extent, their amount of green space may increase, presenting unique management opportunities. Thus, future studies that develop an understanding of these scaling relationships will be essential to both predict and to conserve urban biodiversity on a rapidly urbanizing planet.

Box 3. Data Opportunities to Study the Scale of Urban Biodiversity

Investigations of biodiversity scale relationships have been hampered in the past, by a lack of consistent and globally available biodiversity data. The growth of community science, remote methods of biodiversity surveillance, and international partnerships in urban ecology are rapidly filling this data gap. Global remote sensing products are increasing in their spatial and temporal resolution, and their ability to characterize the structure and function of landscapes (Stavros et al., 2017). Remotely sensed imagery and lidar provide the means to characterize biodiversity patterns (Schneider et al., 2017), the urban environment (Alonzo et al., 2014), and even the human population densities (Wardrop et al., 2018) in areas where on-the-ground data are scarce. Global community science programs, such as iNaturalist and eBird have allowed large-scale

analyses of urban ecology (e.g., (Callaghan et al., 2020)) and have also been used to augment museum collections (Spear et al., (2017), and work towards global biodiversity monitoring (Kissling et al., (2018). Environmental DNA, community science, and remotely sensed imagery have been used in combination to map state-level biodiversity (Meixi et al., 2020) and for invasive species management (Larson et al. (2020). Combining these emerging techniques should enable us to study the underlying patterns and processes of urban biodiversity and identify scaling relationships between city size and eco-evolutionary processes.

CHAPTER 3

Wildlife Affordances of Urban Infrastructure: A Framework to Understand Human-Wildlife Space Use

Chase A. Niesner, Rachel V. Blakey, Daniel T. Blumstein, and Eric S. Abelson

Introduction: Affordance and Emergent Hybridity

As cities grow in size, novel ecologies develop where wildlife exploit the human habits, forms and land cover types that are prevalent and intense in cities, while other wildlife previously native to these areas are filtered out by similar patterns of urbanization (Cooper et al., 2021). Keeping in mind both the possibility of attraction and avoidance for specific species to urbanizing areas, we suggest that one key to understanding wildlife persistence in the urban environment is to focus on the density and scaling of urban infrastructure. “Hard” infrastructural forms like electrical wires, roads, water pipes and dams have long been classical subjects of anthropologists because they play important roles in mediating human social behavior (Anand et al., 2018). They are the physical components of the systems that enable, sustain and enhance possibilities for humans–connecting people with resources and people with each other. While wildlife are known to exploit these structures as well, for uses that include hunting, movement corridors and breeding sites (Way and Eatough, 2006; Kalcounis- Rueppell et al., 2007; Reynolds et al., 2019), rarely are these forms seen from the perspective of wildlife management as loci of a multispecies co-existence. As centuries-long infrastructural projects begin to deteriorate in unexpected ways and the promises and potential perils of “green infrastructure”

further come into focus (Tzoulas et al., 2007; Soulsbury and White, 2015), we believe attending to the ways wildlife are interacting with human infrastructural forms will invite more intentional, aware and proactive policy decisions regarding the relationship between city design and urban biodiversity, the management of human-wildlife conflict, and the possibility of complex and novel ecologies emerging as cities expand.

Many cities around the world (e.g., London, United Kingdom, Singapore, San Juan, and Puerto Rico) have been the subject of studies on urban wildlife across a wide range of taxa (Schilthuizen, 2018). Ranging from mosquitos flourishing in the tunnels of the underground metro to novel assemblages of predator and prey species forming in response to the forces of conurbation and globalization, cities offer the opportunity to attend to the details of these newly emerging ecologies (Tyler et al., 2016). Understanding the way cities might or might not provide good habitat for wildlife is a matter of learning what the urban environment affords different species and individuals. *Affordance* is a concept coined by the psychologist and theorist of visual perception James J. Gibson, and it refers to what an environment offers an individual, what it furnishes or provides, whether for good or ill (Gibson, 1986). According to Gibson, this term suggests a kind of complementarity between the animal and the environment such that a city might be thought of as a composition of many cities: coyote (*Canis latrans*) city, rat (*Rattus* spp.) city, cat (*Felis catus*) city, pigeon (*Columba livia*) city, and human city, etc. It is a way of marrying an animal to its environment by extending our conceptual reach as ecologists beyond the individual species' *umwelt* (von Uexküll, 2010) and toward something that is simultaneously a matter of perception but also a property of the physical world (Maturana-Romesin and Mpodozis, 2000). The ecological affordances of the city, then, are all the possible relationships

between animals and their urban environments, whether these possibilities are now actualized or not (Norman, 1999).

The concept of affordance is useful to the urban ecologist for two reasons. Firstly, an affordance perspective frames wildlife management in cities as a process of understanding how some animals come to flourish in the urban substrate by learning how to navigate the human conventions of urban environments. “Affordances reflect the possible relationships among actors and objects: they are properties of the world,” writes Norman (1999, p. 42). “Conventions, conversely, are arbitrary, artificial and learned. Once learned, they help us master the intricacies of daily life” (Norman 1999, p. 42). In these terms, the urban ecology is imagined as a multispecies user interface whose successful navigation is mediated by both resource availability and the behavioral flexibility (i.e., the capacity to learn behaviors appropriate for urban life) of animals transitioning from wildlands to urbanization. The city provides many opportunities, but how exactly wildlife learn to exploit the resources it may offer often remains largely unknown. Affordance frames the difference between the actual and the perceived wildlife affordances of the urban environment as a matter of sensory perception, and so highlights the role of signaling, communication, and information as important ecological drivers of urban wildlife adaptation. The city’s intensely anthropological processes are not only energetic, they are informational as well, or prone to convention in the terms of affordance, and they come to mean something to urban wildlife by way of those “differences which make a difference” in Gregory Bateson’s formulation (Bateson, 2000). How does the urban red-tailed hawk (*Buteo jamaicensis*) come to interpret the tops of electrical poles as perches from which to hunt along the slopes of freeway interchanges? How does a cemetery come to stand for a good denning site to an urban coyote and how is this decision a factor of the coyote’s understanding of which multispecies interactions

might take place there? What cues might cause urban mountain lions (*Puma concolor*) to use one freeway overpass and not another to locate potential mates?

Secondly, by highlighting *all the possible* relationships between animals and the urban environment, an affordance perspective allows us to consider potential urban ecological arrangements which have yet to occur, but which either might prove useful for conservation purposes or possibly detrimental to urban quality of life. Examining the full suite of species-specific affordances of an area can provide insights into how cities can become urban arks for the preservation of endangered species threatened elsewhere (Shaffer, 2018). Additionally, it may be possible to alter the design of cities to diminish the perceived affordances for invasive or nuisance species in an effort to stem their spread (Belant, 1997). Affordance invokes the difference between the possible and the actual and highlights the role of perception in moving our experiences between the two. Leveraging a species-based affordance perspective can open the imagination to many possible futures of cities as more biodiverse ecosystems.

Since an environment might afford many things for different species and individuals, the concept of affordance also draws our attention to the ways in which specific features of the urban landscape are the common grounds for the overlapping worlds of different species. Different features of the urban landscape can come to mean different things to different animals, whether across the human-non-human divide or between any two wildlife species (Figure 1). A cemetery means something different to a human than to a coyote than to a kestrel (*Falco tinnunculus*). For humans it is a place of mourning, and an infrastructure that provides cultural meaning in the assurance of a safe resting place for the dead. For a coyote a cemetery is hunting ground or a place to find food left behind by humans, and also a site of refuge from the daily bustle of the

city. And, for a kestrel it could be the site of the few remaining native oak trees in a city, and so an opportune place to find a tree cavity for nesting.

FIGURE 1 | Cityscapes contain different affordances for different species. While urban infrastructure is generally designed either for direct human use (sidewalks and office buildings) or indirect human use (channelized waterways and shade trees) these infrastructures also offer an array of other uses, both realized and potential, for non-human species. For example, ledges of buildings might become roosts for pigeons, trash cans provide food resources for many species, and channelized waterways serve as water sources, hunting grounds, and movement corridors that are out of the watchful eye of people for coyotes. The highlighted areas in each panel suggest possible affordances specific to each of three examples species' unique perceptual abilities and needs. Illustration by Rigel Stuhmiller.

As cities increase in size, some features of the urban landscape, like infrastructures, come to increasingly exhibit hybrid functionality for both humans and wildlife as cultural and ecological processes begin to combine in unpredictable ways (Alberti, 2016). The co-location of roads linked with ports and light rail become the vectors of seed dispersal and facilitates the movement

of invasive species (e.g., Wichmann et al., 2009). “In coupled human-natural systems, networks are not governed by either natural selection or human ingenuity alone. Emerging networks are hybrid and novel expressions, and their functions emerge from interactions among natural and social networks,” writes Alberti (2016, p. 21) in her book *Cities That Think Like Planets*. Further, while structures like flood control channels, cemeteries or railways may be present in cities of a range of sizes and human densities, in the largest urban centers these spaces are generally larger, more interconnected and may provide an important respite from human activity when compared with the surrounding areas. These factors are likely to make these infrastructural spaces more attractive to a range of wildlife within urban environments. Thus, over time, novel interactions, processes, and behaviors may emerge (Lowry et al., 2013). Within human infrastructural networks, animals are finding such varied affordances as hunting grounds, thoroughfares of their own, nest sites, or simply just a refuge from human attention (see “geography of attention,” below); while historically these hybrid spaces have been unintended and unplanned, taking into account affordances of urban landscapes can leverage urban infrastructure to support biodiversity.

In this light, the degree to which we can reasonably expect the natural world to continue undergirding our societies, to serve as the infrastructure of our infrastructure, so to speak, is also a matter of what the structures we build come to afford non-humans. In the Anthropocene, it’s no longer feasible to theorize “nature” as separate from human design, as our choices have wrought an immense impact on natural systems at both the local and the planetary scale. This increasingly obvious entanglement of the natural and the cultural is why studying “emergent hybridity” as a novel phenomenon is a critical opportunity for urban ecologists, and one with substantive management implications for wildlife in urban areas and possibly beyond. Since urban structures

are designed by humans and, as of now, are only accidentally places where a multiplicity of human and wildlife affordances come to exist simultaneously (sometimes synergistically and sometimes in conflict), a better understanding of "emergent hybridity" should offer insights into the improvisational arrangements already occurring and a window through which to imagine and realize the many future possibilities of green infrastructure as an urban ecological commons. Identifying opportunities to further foster emergent hybridity empowers urban planners to intentionally manage necessary infrastructure to enhance biodiversity.

Understanding wildlife persistence in urban areas often relies on the assumption that animals flourishing in the urban ecosystem are doing so because of their ability to create worlds for themselves apart from humans. For instance, urban habitat surveys tend to reduce the specificity of urban anthropological forms in the process of understanding urbanization's pernicious effects (Moll et al., 2019). Studies of "connectivity" often assume that dramatic human landscape changes diminish certain species ability to move around the city (Wade et al., 2015). An "island biogeography" approach usually posits urban animal habitat existing as small habitable islands in an otherwise uninhabitable sea of human modified landscapes (Johnson and Munshi-South, 2017). And a focus on the importance of urban greenspace as part of a land sparing conservation strategy does not usually differentiate between human footprint and human presence (Soga et al., 2014; Nickel et al., 2020). Unlike these approaches, our marriage of the concepts of "affordance" and "emergent hybridity" advances an understanding of the way wildlife might use human infrastructural spaces in cities by inclusively viewing the overlapping worlds of humans and non-humans together. By attending to this confluence, the success of a given species in highly urban areas becomes a question of these animals' ability to leverage needed resources from infrastructure largely intended for human use, whether intentionally designed as such or as the

result of human accident and evolutionary pre-adaptation. By viewing cities with multiple and species-specific affordances in mind, we see that urban ecosystems are richer and more complex than we might have otherwise imagined.

The Infrastructural Signature

Cities are arguably the world's most spatiotemporally dynamic ecosystems, and for wildlife living within anthropogenic systems, flourishing in the urban ecosystem is a matter of being close but not too close to humans moving through space and time. In order to persist, urban animals must learn the conventions of city rhythms.

Over the span of decades, urban growth can transform ecosystems and have evolutionary consequences for wildlife (Johnson and Munshi-South, 2017; Schell et al., 2020b). Like all environments, cities have socio-ecological trajectories; city age, cultural history and former land uses all influence the ecological response to the urban environment (Ramalho and Hobbs, 2012; Schell et al., 2020a). Within the span of days, animal movement and habitat selection are influenced by fluxes in human presence and daily rhythms (Nickel et al., 2020). For instance, temporal patterns created by commuting and those relating to human leisure often result in animals adjusting their movement patterns to accommodate the intricate human processes of daily life (Nix et al., 2018). City streets or city parks might be unavailable during the day because of foot and auto traffic, but become prime habitat in the dead of night.

FIGURE 2 | The infrastructural signature in Los Angeles, California, as shown in coyote space use. The figure illustrates GPS location data showing how individual coyotes selectively use human infrastructural forms in South Los Angeles: (A) freeway interchange, (B) power line corridor, (C) flood control channel, and (D) railway lines. Image boxes on the top row show aerial maps with coyote GPS collar locations; photos on the bottom row offer an on-the-ground perspective from locations indicated by a yellow star on the corresponding aerial map. Base map powered using ArcGIS with software from Esri, with data points provided by Dr. Niamh Quinn, UCANR. Photographs by Chase A. Niesner.

As much as urban wildlife might seek to avoid the wrong kind of human attention, human-wildlife interactions in cities are also sometimes defined by considerable ambiguity. From the perspective of a coyote, for instance, a human could be both an apex predator who might trap or kill them, a photographer who keeps their distance, or even a potential source of food or water. In fact, many municipal coyote management plans seek to address these uncertain terms

specifically by encouraging residents to stop feeding coyotes and to haze them instead, thereby re-instilling a fear of humans (see Culver City Coyote Management Plan, 2021).

For animals like coyotes, that avoid most human contact but remain close enough to exploit the resources humans might offer, urban infrastructural spaces in particular afford the opportunity to live nearby but also to remain somewhat hidden. Many urban infrastructural forms are integral to the functioning of cites and the livelihoods of the people who use them, but are rarely visited by humans unless the function of the infrastructural space is broken and in need of repair or maintenance (e.g., neglected corridor used for power lines). And since these urban forms are the physical components of a networked society, infrastructures literally connect different parts of the city and thereby afford wildlife a range of options with which to simultaneously move around while remaining largely out of sight.

By way of proof of concept, we illustrate what appears to be an "infrastructural signature" to urban coyote movement in South Los Angeles, California, one of the densest and most urban areas in LA County. Here, urban coyote movements seemingly conform to the shapes of human infrastructural forms in highly urban territories (Figure 2). While coyote space use in wildlands remains relatively consistent in shape and size, highly urban coyote territories vary, shrinking into infrastructural spaces during the day and expanding into the broader urban landscape at night (Riley et al., 2003; Grubbs and Krausman, 2009; Thompson et al., 2021). Such emerging, dynamic, and hybrid human-wildlife spaces may be critical for wildlife persistence in these areas, and studying them is an opportunity to better understand the multispecies, urban ecological commons that sustains urban biodiversity and human society simultaneously.

Comparing coyote space use over a rural to urban gradient, it becomes clear that urban coyote movement patterns become more complex and more fragmented than coyote space use on the urban-wildland interface. For example, in a city of medium density with significant green space (e.g., Denver and Colorado) coyotes spend their days resting in natural areas and then venture out into the surrounding neighborhoods at night for food, water and other needs (Poessel et al., 2016). However, in the denser portions of a larger city like Los Angeles, where many coyotes are now living, coyotes appear to spend their days taking refuge in infrastructural spaces (rather than natural areas) and then similarly steal away into surrounding neighborhoods for sustenance at night. Even though these urban movement patterns exhibit more complexity and fragmentation than those in rural areas or at the urban-wildland interface, these urban infrastructural spaces are nonetheless miniature "micro- ecologies," with their own assemblage of actors, feedbacks, and suites of multispecies interactions; infrastructural spaces provide both refuge and proximity to human resources that can be exploited by coyotes to subsist in such a dense urban area.

Different infrastructural forms might offer their own unique wildlife affordances: a freeway interchange is not the same as a flood control channel, they are distinct "micro-ecologies." And yet, some affordances of infrastructural forms might be generalizable across the entire category. What might human infrastructure generally afford urban wildlife, like coyotes?

Firstly, coyotes in cities must largely avoid human detection if they are to survive. And, in what we're calling a "geography of attention," infrastructural spaces, though intensely modified by humans, offer some respite from human presence because most people rarely visit or spend large amounts of time there. Further, these spaces are often fenced off from the public for safety reasons. With the goal of better understanding the ecological role of these interstitial spaces, we

consider geographies of attention to be similar to "landscapes of fear," which describe the spatial variation in the non-human perception of risk and their responses (Laundré et al., 2001; Bleicher, 2017; Gaynor et al., 2019). By emphasizing "attention" rather than "fear," we underscore the fact that urban wildlife are constantly interpreting human behavior and deciding for themselves whether an individual human is dangerous or not. The "geography of attention" is intended to highlight the complications arising from these more ambiguous human-non-human relations that arise in cities because of what living close to humans potentially affords wildlife: for better or for worse, not all humans are feared by coyotes, as some humans (and their commensals) have proven to be the locus of substantial resources (Hulme-Beaman et al., 2016; Larson et al., 2020).

Secondly, these spaces themselves often afford significant opportunities beyond refuge. For example, flood control channels provide a steady stream of water from local runoff in addition to connectivity with locations in the surrounding area. Cemeteries might provide a hunting ground or even the opportunity to be fed by humans who sometimes leave offerings at the graves of their deceased loved ones. And, around Los Angeles, in the cleared land under power lines often sit miles of plant nurseries, which grow a variety of fruiting trees and other shrubs that might attract coyotes and coyote prey species (Niesner, 2021, author's observations).

Finally, the infrastructural space affords the temporal flexibility that is necessary for coyotes to successfully navigate the aforementioned risks and rewards surrounding the rhythms of urban life. Though further analysis must be undertaken, it's likely that the infrastructural signature itself calcifies during the day and then loosens at night when the city writ large becomes more hospitable to urban wildlife for a variety of reasons. These spaces provide refuge and a point of departure for forays into the wider urban substrate. Although the "infrastructural signature" as

described here takes inspiration from fieldwork and observations concerning urban coyotes, we believe the dynamics described apply to other taxa as well, currently and in the future.

Cityscapes may present qualitatively different opportunities for generalist compared to specialist species; for instance, generalist species like coyotes and racoons might be more likely to exploit wholly novel urban ecosystems that were unfamiliar to their ancestors, whereas specialist species like mountain lions or kestrels might be more likely to exploit remnant habitat within urban ecosystems that are similar to wildlands familiar to their ancestors. Since generalists and specialists can impact ecosystems rather differently, and themselves are impacted differently by changing ecological conditions, any environmental stewardship of urban areas must be taken with great care and consideration of the urban ecosystem as a complex whole.

In future work on the infrastructural signature, we recommend beginning with individual species by asking what affordances they're able to register by way of their species-specific umwelt. Then, *via* analyses of movement sequences or camera trap data it will be possible to determine whether a species' space use patterns indeed conform to human infrastructural forms. This two-step process is what distinguishes an affordance-based management approach from other management strategies, in that it combines a cognitive understanding of a given species sensorium with a focus on the affordances of the urban environment offered by specific urban infrastructural forms.

Conclusions and Management Implications

The phenomena of "emergent hybridity," and more specifically the possible infrastructural signature of urban animal movement patterns, likely only emerges in cities of a particularly large size and human density. In cities of grand scales, there is more intense human presence and less

wildland space; the necessities of navigating the "geography of attention" mean that animals will come to find infrastructural spaces useful for their purposes of remaining hidden while also close to needed resources. In these highly urban contexts, human-designed infrastructures may become more desirable as habitat over time and across space, leading to the particularly emergent quality of infrastructural hybridity.

Historically, large cities have also hosted a greater expanse of built areas, and due to long standing social policy in the United States, many American cities like Los Angeles are still experiencing the ongoing legacies of segregation along race and class lines. The resulting unequal distribution of a range of resources, ecosystem services and biodiversity included, is still a present-day structural reality whose lingering effects must be understood as both a social and an ecological force (Schell et al., 2020a). We believe further inquiry into the possible emergent hybridity of urban infrastructure is one such way to understand the social and ecological together, as it draws our attention to the present and ongoing novel ecological arrangements already occurring in urban spaces long ignored by wildlife biologists and conservationists alike. As cities attempt to address inequality and create the green infrastructure of the future, policy makers must contend with the fact that large infrastructural projects have historically contributed to the problem of segregation and displacement (and may do so again if care is not taken), while also recognizing the present and possible future ecological potentials of infrastructural hybridity.

The degree to which humans might welcome the presence of wildlife in cities varies drastically across taxa and also across contexts; in many cases the future of specific human-wildlife interactions in cities is still wildly contingent. For instance, though most people would likely welcome a peregrine falcon nesting pair on the window-ledge of a skyscraper, the presence of

urban coyotes is an intensely rancorous and politically divisive topic in many urban areas across the country (Green, 2019). By attuning ourselves to the wildlife affordances of urban infrastructure, we'll soon better understand the processes by which cities attract some species and not others, and so also be guided to the mechanisms by which to manage the very human habits undergirding both positive and negative human-wildlife interactions. Though the question of how wildlife are flourishing in cities is a matter of understanding wildlife affordances, the question of how humans and wildlife might live together is a matter of the confluence of wildlife and human affordances, or what each might offer the other's quality of life, and so perhaps a question better suited for anthropologists and ecologists working together.

Once one begins to think about these ideas, and to think how the importance of urban infrastructure might vary with city size, a number of testable hypotheses and questions arise. For instance, what, precisely, is it about city size (area, density, population) that drives scaling patterns in affordances and is it the same for different species? Do we want to design urban ecological affordances for all animals or only some animals? How should we recognize the inherent unpredictability of the urban ecology, the accidents, changes and contingencies which are inevitable? Do different urban infrastructures afford specific ecological relations that attract and repel specific species? How exactly might these "micro-ecologies" be related to one another but also to the wider city? How can we leverage ecological affordances to reduce human wildlife conflict, repel pest species, and protect vulnerable species and ecological processes in urban environments? Will human residents of cities welcome relations with some wild fauna but not others, and if so, how might community co-existence education be a critical component of these urban ecosystems? What are the evolutionary consequences of emergent hybridity? Does the infrastructural signature apply to all animals? How does affordance-based management allow us

to better understand the different ways both generalists and specialists might adapt to cities or be filtered out of the urban ecology? Which traits enable adoption of the infrastructural signature? Does the strength of temporal patterns of infrastructure use vary as a function of city size? These are but a few of the questions stimulated by adopting a perspective that seeks to identify affordances and emergent hybridity. All are ripe for testing.

A better understanding of how human-designed features in the urban landscape are also shared habitat for wildlife will likely lead to improved wildlife management in these areas, and hopefully to increased access to biodiversity for marginalized groups as well. We expect strong scaling effects on the importance of urban infrastructure whereby as cities become larger and more urban, human features will play an increasingly important role in defining biodiversity. Indeed, we expect supranormal scaling relationships (Uchida et al., 2021) and this has important implications for defining wildlife management in increasingly large cities.

While different species will inevitably come to discover the various affordances of these infrastructural forms, whether we design for them or not, identifying how animals come to perceive and utilize these spaces will improve the ecological stewardship of these areas and lead to a better awareness of their role as shared habitat within the city. We hope attention to the hybridity of urban infrastructure invites further study of these discrete micro-ecologies of the city, and an opportunity to further encourage the successful coexistence of humans and biodiversity.

CHAPTER 4

Coyote Plays Itself (Part 1): Feeding Coyotes, Eating People

"Creating a cartography of coyote space is an act of resistance. Coyote space is about making visible what others cannot, or choose not, to see. Arbitrary political boundaries become meaningless."

– Cindi Moar Alvitre, in "Coyote Tours: Unveiling Native LA"

Introduction

Are coyotes significant? I believe they are, but even that I can take this for granted, I think, makes coyotes even more interesting. Truth be told, there are many places in this country where people shoot coyotes on sight like they shake their grandfather's hand, and many places in this city where people don't see coyotes, don't think about coyotes, and wouldn't care to think about coyotes either. Even many conservation biologists don't care about coyotes, for surely, they are numerous, and their range, even, is expanding. Coyotes are not at risk of going extinct. To prove my point, in Los Angeles, almost everybody I meet who's lived in the city for several years has a coyote story, and though this might just be what the exigency of small talk requires, these people always appear eager to tell me about what they've seen. Whatever their significance, the divine ambivalence these wild dogs wear like a robe never ceases to evoke, well, *something*.

In Southern California widely, coyotes are locally significant because of what's come to be known as *human-coyote conflict*, which over the past few years appears to be on the rise across the Southland. And these emerging conflicts are interesting to me, as an anthropologist, because

of the suturing that occurs between the "human" and the "coyote" in this very phrasing of the problem: the "-" is my object of study. Where does this human-coyote conflict in fact lie? Well, ask a human involved and they might say the problem is increasingly aggressive coyotes. And ask a coyote, and they might say there's no problem at all. For an anthropologist – and I take my inspiration from Marilyn Strathern's concise definition of our task as seeking to understand (without grasping) not just relations, but *the relations of relations* – human-coyote conflict in the city provides an opportunity to study emerging human-coyote relations in all their manifold forms (Strathern, 1995). Whereas Anthropology traditionally has concerned itself with human culture, I seek to contribute to what the anthropologist Eduardo Kohn calls an anthropology "beyond the human," which for me means attending to the ways humans and coyotes engage one another, and how this multispecies engagement is consequential for the cultural and political life of the city more generally. This larger web of relations extending across the human-animal divide is what Kohn calls the "ecology of selves," a concept that I'll continually explore in the writing below (Kohn, 2013). Here, in a complex city like Los Angeles, fragmented and fragmenting, always gathering itself into pieces, the flourishing of the urban coyote provides a richly diverse site to study what's newly occurring between humans and coyotes, but also the opportunity to ethically deconstruct the hyphen we often see placed between nature and culture.

In what follows, I will utilize a variety of methods, mixing scientific references with concepts borrowed from disciplines like semiotics, psychoanalysis, and political theory, all for the purposes of deconstructing the common Coyote Management Plan (CMP). These plans are now a ubiquitous feature of the Los Angeles urban ecology and are drafted and used by cities in the hopes of mitigating locally intensifying human-coyote conflict. The documents partly live inert on municipal websites as PDFs, but as I will demonstrate, they also provide inspiration for

structuring the organization of urban community ecologies. The CMPs I study quite straightforwardly intervene on the landscape by attempting to regulate two principal forces within human-coyote relations: firstly, to prevent people from *feeding* coyotes, whether intentionally or accidentally; and secondly, to encourage people *to haze* coyotes instead, which is to perform a dominant relation with the aim of keeping these urban coyotes "wild". In this, the first part of my study, I will primarily focus on the feeding dimension of these plans, and as I will describe below, there are good reasons not to feed coyotes.

Feeding wildlife can create powerful dependencies, which can sometimes prove a nuisance or even become dangerous. And yet, for the purposes of thinking new thoughts about the urban ecology, I'd like to briefly suspend my judgement of this practice, and to loosen the means-ends relations assumed between feeding and the dangers of habituation. My intuition is that by looking more closely at how and why people feed coyotes, we'll come to better understand what this activity *means* to people and coyotes alike. Afterall, there is more than one way to feed a coyote, and eating is a requirement of all the living. A wide, underexplored gray area exists between how we relate to wild animals and how we relate to their domesticated relatives, within which I believe are lessons for refining our ethical practices of living together with others, no matter the species.[8] And so, by attending ethnographically to the ways not only coyotes but other kinds of urban 'selves' are fed and come to eat in the urban ecology, too, I hope to demonstrate how the prescriptions in CMPs regulating appropriate human-coyote relations reverberate across other domains of city life as well. How does the exchange of meaning that occurs when feeding coyotes result in certain kinds of humans and certain kinds of coyotes appearing to one another

[8] For an excellent history of Amerindian human-animal relations lying outside of the linear trajectory between "wild"and "domestic," see Marcy Norton's "The Chicken or the Iegue: Human-Animal Relationships and the Columbian Exchange," *American Historical Review* (February 2015).

across the human-animal divide? And how exactly does eating and feeding produce meaning for the participants in the exchange, whether human or other-than-human? Can we learn something about the wider "ecology of selves" of the urban ecology by attending to the ways CMPs attempt to regulate human behavior and coyote foraging habits alike? In the following study, I will intersect my analysis of CMPs with ethnographic observations of the way food comes to circulate in the urban ecology amongst other human "selves," too, mainly with respect to the persistent housing crisis in Los Angeles and the ongoing efforts of undocumented activists. In describing how feeding and eating is a more generalizable relational form, I hope to demonstrate how human relationships with coyotes alse come to inform human relations with other humans.

This frame for thinking the worlds of people and coyotes together, I believe, also calls for reimagining some of the foundational approaches we take to questions of biodiversity, perhaps especially in the urban environment. What if we thought of biodiversity in the terms of *relations* across the human animal divide, rather than focusing so intently on the prevalence of individual species? By considering *diversity* more generally rather than biodiversity specifically, my aim is to briefly provincialize evolution by natural selection so that other processes of life begetting life might come to the fore.[9] If we use relations as our analytic object rather than species, and take diversity to mean "the quantifiable totality of every possible difference," in the words Edouard Glissant (Glissant, 1997: 30), then urban coyotes become more than a prevalent pest species to be managed and now the loci of immense natural-cultural differences by way of their innumerable relations with other kinds of urban "selves," whether plants, animals, or the various "kinds" of humans living in cities as well (as differentiated by race, gender identity, sexual

[9] For a parallel effort taking root in the discipline of geography, see Judith Carney's concept of *biocultural refugia* in "Subsistence in the Plantationocene: dooryard gardens, agrobiodiversity, and the subaltern economies of slavery:" https://www.tandfonline.com/doi/abs/10.1080/03066150.2020.1725488

orientation, class, housing status, etc.). This way of seeing urban ecology includes other-than-human worlds while also maintaining the possibility of critical ethical positions. It would be an exercise in what I'm calling *kindness,* meaning both the ramifications of living forms, but also the generosity of spirit required of recognizing difference as constitutive of greater wholes. *Kindness* is tricky, sometimes painful, and certainly challenging to think with, but it's also an ethical practice that might just come to feel good as well. It's a way of continuing to open the discipline of Anthropology "beyond the human," while also encouraging the ongoing survival and further flourishing of more and various "genres of being human," in the words of Sylvia Wynter (Wynter, 2015). In my mind, attending to multispecies relations is an ethical practice not just because it is difficult or because it requires sensitizing ourselves to beings who are wildly different from ourselves, but because these relations also implicate struggles for environmental justice more widely, those concerning the health, well-being, and autonomy of oppressed peoples (Pellow, 2015).

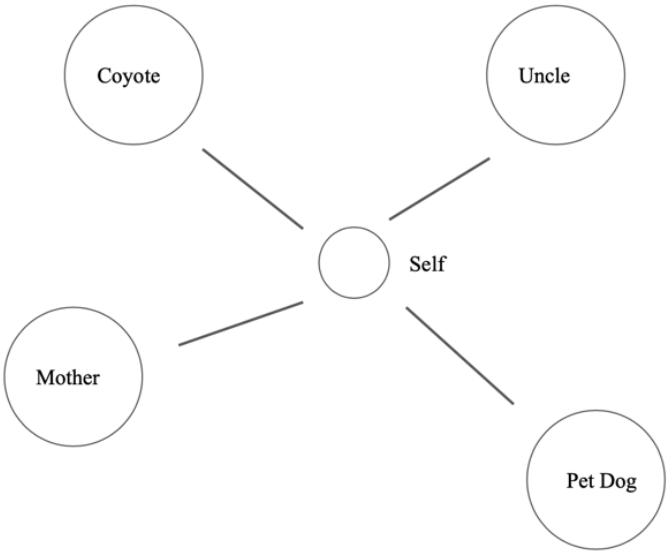
It took a long time for scientists and scholars to notice the more-than-human life thriving in cities, but I now think we struggle to notice *the city* in this very same *life*. And I mean this quite literally: there are coyotes in the city, but there are also cities in these coyotes. The web of relations that sustains them and that spans the nature-culture divide are made present by their livelihoods – within every relation are countless others, seemingly invisible in the background, eclipsed by known appearances. By this logic, the emergence of urban human-coyote relations also appears as a representation of the "all-too-human" habits, forms and forces that continue to make cities what they are, whether with regards to the historical legacy of structural racism or contemporary wildlife management paradigms (Schell, 2020). My project aims to bring this deeper political context to the fore. By following coyotes across Los Angeles, and in having

lived and worked in justice-oriented communities here for over a decade, I've come to believe that one cannot truly understand the opaque whole of the urban ecology without considering coyotes *and* the political context within which these wild dogs unsettle our thought patterns and make their homes. To be at home with coyotes, is to fundamentally reimagine our home.

Methodology: Making Kin Appear Outside the Home

Central to my method of analysis is to utilize kin-making structures to mobilize my own thinking, and admittedly, I will utilize my very own white-settler family structure to think with. Critically, I will also attempt to imagine extending these relations outwards into the wider urban ecology, one which in this case includes coyotes, friends, and strangers as well. It's important to note that indigenous Americans in the Los Angeles basin have long seen the coyote as kin, and there's a rich tradition of storytelling that includes the coyote in their cosmology (McCawley, 2015). Though I believe my own coyote story intersects with theirs, I do not claim to be doing the same thing, even as I sometimes work closely with Tongva people and surely take inspiration from their stories and scholarly work. Instead, I'd like to place myself in a genealogy of white, feminist Anthropologists who's attempts to deconstruct the foundational concepts of normative, Western society, have created space, both theoretically and literally, for new and other kinds of relations: multispecies, queer, anti-colonial, anti-racist, and even pro-cyborg (Strathern, 1988; Haraway, 2008). This is what I mean by making-kin appear outside the home, where in this case home means settler, owned, single-family and likely registered on Nextdoor (See Chapter 1, "The Coyote in the Cloud").

From this constellation of scholarship, I've learned how thinking with kin is also a tool for thinking, a sensibility I'll further develop here for the purposes of "making friends [and] making connections," in the words of Strathern (Strathern, 2017). According to Strathern, the analytic strength of "the relation" as a tool for analysis is the very flexibility of its meaning: the relation can refer to family relations, but also to the relationship between two concepts, cold planets in space, or synapses firing in the brain. By harnessing the associative logics of relations within and across different scales, my aim is for the interplay to generate meaning in personally surprising ways. I'll give a brief demonstration of how this might work below.



Each of the relations diagramed above contain me, and they also invoke different imaginaries, my image repertoire, complex and evolving, but also whole (Barthes, 2010). And this way of seeing relations as imbued with images evidences a politics of the imagination that is only ever partially visible: we're internally constituted by these relations, but the very diversity of their forms always opens us up to the possibility of transformation.

Why do we call it Mother Earth, and not Child Earth, for instance, is a question asked by Joanna Latimer (Latimer, 2013)? Or, what happens to my relationship with my Uncle, but also to my relationship with coyotes, if I now refer to him as Coyote Uncle instead of Uncle Pat? In moving between scales, the terms of the relations change, too, as the different contexts begin to influence one another. These questions are not merely semantic, they are also worldly, for their answers are found within the interplay of very real relations with children, with the planet, and with coyotes and familial intimates alike. Our imaginaries expand and our imaginaries contract, and by way of the variation and movement of these image-concepts in an ecosystem that includes *the self*, I believe we can invite an "ontological anarchy" that might prove useful for Earthly survival (de Castro, 2019). Our being is multiple, even if this metaphoric language is only a sign.

In what follows I will thus attempt to take seriously people's claims that they'd like to "#evictcoyotes," or that they're afraid for the lives of their "furbabies," and to suppose they're literally describing human-animal hybrids amongst us. One person's pet is another person's child; a coyote appears to household as a coyote, but to a city this same coyote might appear as a person who needs be evicted. As relations change scales, so do the relata change also; their being depends on the particularity of the perspectives inhering within their existences, the life histories, and social locations of the interactants in the system, on who's doing the looking and from where they look (Oyama, 2000). Humans, coyotes, and cats, too, are not static, essential beings, but rather their ontological status is always changing as they are composed and decomposed by their enmeshment in the urban ecology (Kelty, Lynch, 2021). What exactly happens to our ways of thinking when we extend this kind of multiperspectival, parallax play outwards into the wider

ecology is what I'll hope to demonstrate in my ethnographic analysis, as I develop a kind of free and indirect human-coyote subjective. Attempting to see the world from the perspective of a coyote, a pet owner, an undocumented person, or even the State, of course, is a speculative exercise, but it's one endemic to all living forms because it's necessary for survival. The question of whether one coyote can stand in for all coyotes, then, is precisely (not) the point, since it makes equal sense to ask whether the coyote you see from your perspective is the same coyote I see from mine. We can ask big questions of small data.

Though the analytic technique I use is borrowed from Marilyn Strathern's work in Melanisia, as exhaustively described in her book *The Gender of the Gift,* I believe the framework travels well because it is also fundamentally *ideal* (Gell, 1999). What I've taken from Strathern is not necessarily native to a particular cultural context, but rather it's a method for revealing how ideal categories are related to the flux of immanent materiality in such a way that is extremely useful for thinking in any context. In this sense, I do not mean necessarily to describe how things are in and of themselves, or even to lend a fully accurate representation to a phenomenon (whatever it might mean to do such a thing). I'm merely using these structures (coyote, Uncle, settler, unhoused), for now, as a kind of "toy world to tune my intuitions," in the evocative phrasing of theoretical biologist Stuart Kaufman (Kaufman, 1995). This style of thinking begins in the concrete world of experience and spirals outwards to the abstract for the purposes of speculation (Kohn, 2013). By following the way various people translate experience into thinking, Anthropology itself becomes a "perpetual motion machine for thought" (Castro, 2017), or a "cat's cradle game" (Haraway, 2016), and a practice, which if deployed in a seriously playful manner, will hopefully invite new ways of thinking in the urban ecology.

*"*Certainty itself appears partial, information intermittent. An answer is another question, a connection a gap, a similarity a difference and a difference a similarity," writes Strathern in her book *Partial Connections* (Strathern, 1991). Thus, the images I share will always contain their own remainder, my answers will beget more questions, and so much of what I will attempt to say about how my own perspective is changing is incomplete, by design, if not also for the purposes of inviting more autonomy for more and various kinds of selves. I'll let you, the reader, be the judge of whether it proves useful for these purposes.

Worldly Metaphors, Analogical Reasoning: #evictcoyotes

"When something goes missing, we say coyote took it."

Linda Gonzales, Tongva botanist at the Madrona Marsh

In her essay, "Coyote Tours: Unveiling Native LA," the Tongva scholar Cindi Moar Alvitre places the unrestricted flow of the Los Angeles River, the topography of coyote space use, and her native ancestry in metaphoric relation to one another. For Alvitre, the presence of coyotes in the urban ecology of Los Angles is a way for her to imagine the world of her ancestors, and the future of her people as well. She writes: "As unrecognized tribes, we are like ancient rivers prior to industrialization: elusive and without center. We exist in coyote space, an active, complex, and sometimes tragic domain. Controversy and curiosity abound on those rare occasions when we emerge as vessels of history and collide with the modern world!" (Alvitre, 2015: 45). Today in Los Angeles, the future of the river and coyotes both are contentious political issues, ones for

which native involvement is an open and challenging question with deep consequences for the Native peoples of this land and for the future of the settler city-state as well.[10]

What might Alvitre mean by equating coyotes with the river, by placing them in a sort of mythic relation to one another and to her ancestry? I will not claim to speak for Alvitre, nor to interpret her essay as a text or mythos, but I draw inspiration from her story because in my own fieldwork I've come to see in some small ways how the relations she weaves are grounded in the urban ecology of Los Angeles. Metaphors, I've found, are not only the stuff of story, but are indeed *worldly*, and by attending to the very real urban ecological actors and the events which compose them, we can see more exactly how the stories we tell come to inform the wider ecology, and how the wider ecology is the stuff of story, too. Claude Levi-Strauss's distinction between myth-making and art-making is perhaps prescient here*:* "[Myth] uses a structure to produce an absolute object that takes the shape of a set of events…Art thus proceeds from a set of events towards the *discovery* of its structure;" (Levi-Strauss, 2021: 31). Plying between the concrete and the abstract, I see the work of ethnography as both art and mythmaking practice, a literature of living forms in motion.

Take for example, "#evictcoyotes," a loosely composed organization of anti-coyote activists (or "coyote-criers" as they are sometimes known), which began as a community Facebook page in 2017 called "A coyote ate my pet in Torrance."[11] Evict Coyotes is by no means a broad based

[10] For more on the topic of indigenous involvement in LA River restoration and "planning," see the work of AnMarie Mendoza: "The Aqueduct Between Us: Inserting and Asserting An Indigenous California Indian Perspective about Los Angeles Water," Master Thesis in American Indian Studies, UCLA (2019).
[11] For a more thorough analysis of the history of #evictcoyotes, and also its founder, Torrance City Councilman Aurellio Mattucci, see "Coyotes in the Cloud," a Labyrinth podcast episode by Spencer Robins; or "Inside the war against Southern California's urban coyotes" in the Los Angeles Times: https://www.latimes.com/environment/story/2022-09-20/southern-california-coyotes-population-escalating-war

political movement for change, but they have been able to elect anti-coyote politicians to office and to initiate local trapping and killing policies that until recently were seen as backwards and nonsensical. Bracketing for the moment whether trapping and killing as a management strategy is effective coyote population control, I want to listen more carefully to the name "Evict Coyotes," and specifically to the evolution of its form from "A coyote ate my pet in Torrance" to what they call themselves today. Key to the power of these activists is their mobilization of the verb "evict" in the infinitive form, a grammatical structure which allows for the verb to float over the city in search of a subject and object to participate in the *action* of its meaning (Deleuze, 1969). Evict who? Evict *coyotes*. In moving from the scale of the home, where evictions usually take place, to the scale of the city, these activists are leveraging the verbal image of this activity to involve new urban ecological actors, and so invoking a much wider political context too.

The original name "A coyote ate my pet in Torrance" is surely provocative, and the group's founder, indeed, was able to attract quite a few followers and within a few years was elected to the Torrance City Council in large part because of his anti-coyote constituency, or "my red shirts," as Aurellio Mattucci calls them. Like any myth, "A coyote ate my pet in Torrance" is a good story, with a few clear actors, dramatic tension, and finally, a tragic resolution. One can clearly identify with all the characters and easily imagine it's repeatability (and maybe the possibility of vengeance, too). But in moving from "A coyote ate my pet in Torrance," to the name "Evict Coyotes," the group also moved from invoking a single sequence to one now involving an entire ecology of actors. An isolated instance is rendered decidedly *environmental*, as the domestic milieu expands and becomes saturated with aggressive coyotes (Hage, 2017). Surprisingly, by connecting this local concern regarding urban coyotes to the city-wide political

controversy of housing injustice, these anti-coyote activists are productively confusing the presumed distinction between nature and culture that is the bedrock of Western civilization, which in fact makes them not so different, in theory, than many of the world's "terrans," or those living outside the severing logics of modernity, like Kohn's Amazonian Runa, for example (Danowski, 2017). For the purposes of orienting themselves in the wider web of the "ecology of selves," both the Runa and Evict Coyotes attempt to "socialize nature" in order to situate themselves in a broader political context: where in the Amazon it is the lasting legacy of Spanish colonization that proves the context, in Los Angeles, this almost entirely white settler composed group of anti-coyote activists uses their relations with coyotes to simultaneously position themselves within the larger context of questions concerning housing politics.

In both cases, these complex webs of relations involve other-than-human creatures in our "all-too-human" political thought processes. Critically, this facility with metaphor can be quite useful, as the locally successful Evict Coyotes movement has proven. What I hope to demonstrate is not that confusing humans and coyotes is necessarily a good thing – in the case of Evict Coyotes, I think it was used for the purposes of intensifying the "vicious sedimentation" of settler colonial violence (Whyte, 2018) – but rather, I hope to show how considering our very real human and other-than-human relationships together in analogical knots is a powerful tool for rematerializing our thinking and so possibly expanding our ecological imaginary for the better. What the founder of Evict Coyotes sensed intuitively is the grounding of our thought in the very real material-semiotic "assemblages" of the urban ecology: coyotes and people, whether housed or unhoused, consequentially exist in relationship with one another in the "latent commons," and these entanglements can be mobilized towards common cause or towards something more

sinister too. "*Latent commons are not exclusive human enclaves…Latent commons are not good for everyone…Latent commons cannot redeem us,"* writes Ana Tsing (Tsing, 2015). For Tsing, it's our capacity to think with these relations, to notice both their differences, but also their similarities, that allows for an understanding of the potential to harness diverse political coalitions emerging from this space.

In Marilyn Strathern's "Connections, Friends and Their Relations," she demonstrates how situating ourselves in the terms of our interpersonal relations, within the family and beyond, is also a kind of knowledge making practice that makes use of the productive power of analogy for "making information spill out of existing categories" (Strathern, 2017: 75). For Strathern, the power of this method lies in the interplay between comparison and analogy, which invites the restricted and unrestricted flow of information respectively. In this formulation, a comparison is restrictive because it tends to accentuate difference, whereas analogy is unrestricted because it tends to reveal similarities. The name Evict Coyotes is a powerful metaphor because of the way the analogy it elicits demonstrates how an unhoused person and a coyote are in some ways *indistinguishable* in the eyes of a white-settler-homeowner. Confusion is a powerful political tool, but also a property of the world. Thinking requires noticing difference, but also forgetting.

1

Coyote : Unhoused-Person

[restricted comparison]

Coyote : Settler :: Unhoused-Person : Settler

[unrestricted analogy]

As a comparison, the relationship between a coyote and an unhoused person offers little relief, and I find myself discriminating their many, and surely, obvious, and important differences. But in the following combination of a comparison and an analogy, the comparison gives way to a multiplicity of perspectives, the ones inhering in the naming of Evict Coyotes, but also quite literally in the material relations of the urban ecology as well. Settler homeowners in Los Angeles have relations with both humans and coyotes, and the way both coyotes and unhoused persons appear to settler homeowners matters for each of these two kinds of urban selves' survival. By way of the analogy, in looking from the perspective of the homeowner at first to the unhoused person and then to the coyote, we're able to see anew how the organizing images for each of these two relations could be similarly imbued with a destabilizing anxiety, or a fear born of the desire to control the "ungovernable." It's this very inability to relate to something one finds inherently unrelatable that the anthropologist Ghassan Hage deems the engine of a mode of dwelling he calls "generalized domestication," which he claims undergirds the settler drive to extract homely comfort from their environment. The name Evict Coyotes, then, takes on another valence, mainly, the extension of the *domus* outwards in concentric circles from an actual house to the entire neighborhood, city, county, or settler space writ large. All the land must be rendered domestic for the purposes of extracting the value that in his case is comfort, and anything which stands in the way of extraction, whether coyotes or the unhoused, must be "evicted."

In *Is Racism an Environmental Threat?,* Hage argues for seeing a paradoxical tension at the heart of the settler mode of "generalized domestication": while internally harboring a desire for extermination, the settler structure requires the unrelatable other to sustain the fantasy of its own viability (Hage, 2017). For Hage, this exterminatory drive is a clear and ever-present danger, and

one he believes we must explicitly consider as we work in anti-colonial struggles. But I also believe this paradox reveals something fundamental about many of the most intractable political controversies in the city today, such as the "homelessness problem," or how to mitigate "human-coyote conflict." If the settler structure needs coyotes as an unrelatable "other" to maintain itself, then would it really want to solve "human-coyote" conflict (if this was even possible)? Perhaps this is why some municipalities are passing trapping and killing policies; even though they're proven not to work to control the coyote population, these programs do propagate the very settler logic of control by the attempt of extermination. And maybe the same can be said of the housing crisis more generally: if the presence of so many unhoused persons on the streets of Los Angeles invites the relaxing of building codes for the construction of more luxury high rise apartment buildings, are we really solving the "homelessness crisis" or are we just greasing the wheels of settler colonial modes of land development and extraction? Thus, to ask about a solution to a problem is not the right question. Maybe, firstly, we need to reformulate our problems. Afterall, a crisis rarely fails to bolster reactionary forces.

And in local contexts across Southern California, we've seen a partial realization of the exterminatory desire Hage warns about in the passage of new laws designed for the purposes of trapping and killing coyotes until there are none to be seen.[12] By utilizing the metaphor of Evict Coyotes to make new connections within this complex urban "ecology of selves," my hope is to take seriously Hage's imploring that extermination is still an active component of our ecological imaginary, and to demonstrate how within a name like Evict Coyotes, the possibility of a horrific

[12] See: "Rancho Palos Verdes City Council to Consider Options for Dealing with Coyotes," The Daily Breeze (Sept. 6, 2021): https://www.dailybreeze.com/2021/09/06/rancho-palos-verdes-city-council-to-consider-options-for-dealing-with-coyotes/

human substitution is only an analogy away. Although maybe it is already here, ongoing, and to this day, indiscriminately targeting animals and humans alike. As Alvitre writes near the end of her essay on the parallels between water, coyotes and her Tongva ancestry (Alvitre, 2015):

Unfamiliar with the city, we found ourselves driving down narrow, dimly lit side streets, where we saw hundreds of homeless people, refugees of economic and social disenfranchisement, darkened silhouettes seeking respite from the chill of winter cold along the greasy pavement. It was a haunting deja-vu-moment: our families experienced this 166 years ago. Time. unresolved inter-generational grief, and the present collided.

So, what's the use of thinking about coyotes and housing justice together? If the "ecology of selves" as an analytic tool is instructive, it works to attune our understanding of the way power flows downstream, as both the flow and the attempt to control the flow of relations between various kinds of selves, whether human or otherwise. By thinking human politics and coyote ecologies together, we can better understand how settler colonialism is not just the historical injustice of dispossessing Native Californians from their land – although this history demonstrates how they were made the first homeless peoples of the region – but also how this historical legacy presents itself today as a mode of dwelling in need of constant maintenance. I believe we must critique this settler structure of power as much as we must attend to its ongoing effects, the misery, death, and destruction continuing to flow in its wake. But I also hope to recognize the ways some people, as well as coyotes, are navigating the urban ecology outside of the enclosing forces of its domesticating logics. Coyotes are continuing to flourish in Los Angeles, and people continue to make their homes here, whether under a roof or otherwise. In this respect, attending to the web of relations in the Los Angles urban "ecology of selves"

requires a careful ambivalence about the very forces of power, if only, to recognize how "becoming a coyote" can sometimes be an immensely helpful thing.

Sitting under the awning at the nursery within the Madrona Marsh one morning, a vestigial wetland area now protected in the City of Torrance, the Tongva Botanist Linda Gonzales was telling me how the seedlings grown in the pots before us are propagated across the city, to wherever they might take root, whether public park, roadway median, or sump. Linda tells me a lot about the plants she's tending this morning: how you can make pancakes out of dried Buckwheat flowers, how the Black Willow likes its feet wet and can be made into aspirin, and how the wood of the Elderberry is used to make flutes, but that its sap can be very poisonous, which is why only adults are allowed to play these instruments. Decades previously, Linda says, she lived in Berlin where she was a professional dancer in a world-renowned ballet company.

When I ask her about the coyotes in the area, she instead tells me about her grandson, who appears mischievous, and she doesn't speak of the coyotes, only "coyote." "When something goes missing, we say coyote took it," Linda told me, "coyote" in this case, meaning her kin.

Wildlife Watch: A Settler Topography (of Land, Psyche and Future)

"It's not so easy, connecting the head with the feet."

-Niamh Quinn, UCANR Urban Coyote Management Specialist

Contemporary coyote "management" in Southern California has been forged at the disjuncture between the scientific method and the meaning making facility of kinship networks. In the last decade, as human-coyote conflict has intensified, wildlife biologists were finding it increasingly difficult to reason their way through community meetings with aggrieved pet owners whose beloved "furbabies"[13] were killed, attacked or otherwise threatened by wild coyotes in their neighborhoods. As the founder of the California state program called Wildlife Watch, Kent Smirl, described to me in vivid detail: a wildlife specialist was called in to testify about the science of coyote biology to a local city council chambers only to be subjected to two hours of testimony by thirty local residents, who, carrying crosses bearing the names of their deceased cats and dogs, proceeded to tell their stories of coyote predation and to plea for the state to do something. "You're going to be hurting, you're going to be made fun of for a long time," Smirl told me. From that day forward, his mission became clear to him, he said.

Although Kent Smirl is no longer a full-time employee of the California Department of Fish and Wildlife, he's still a guiding voice of the unfolding Wildlife Watch program and he is certainly responsible for much of the program's DNA. In the literally hundreds of pages of memos Smirl wrote outlining his vision of Wildlife Watch, which he shared with me via email, there are three explicit antecedents serving to configure the ethos of the program as he imagines it: the first is the concept of "coaching;" the second is the police-community partnership program known as Neighborhood Watch; and the third is the Servant-Leadership model of organizational psychology, which for Smirl, upon deeper discussion, contains a clearly Christian spiritual ethic. Smirl is not afraid to quote the bible at length, and though he mostly avoids this valence in the

[13] Like "#evictcoyotes," "furbabies" is another worldly metaphor which I aim to take seriously, if not entirely literally. See: Coyote Plays Itself (Part 2).

more official policy briefings he's written for the program, with me he is adamant about the spiritual dimension of his work. For Smirl, the spiritual person is one who comes from below as a servant, but who can "objectively know what and how people believe," or who can "objectively see how there are two sides to every story." If Smirl's "spiritual objectivism" sounds a little like the perspective of a talk therapist, it should come as no surprise that some of the very people trained in the Wildlife Watch program also see their roles in these very terms.

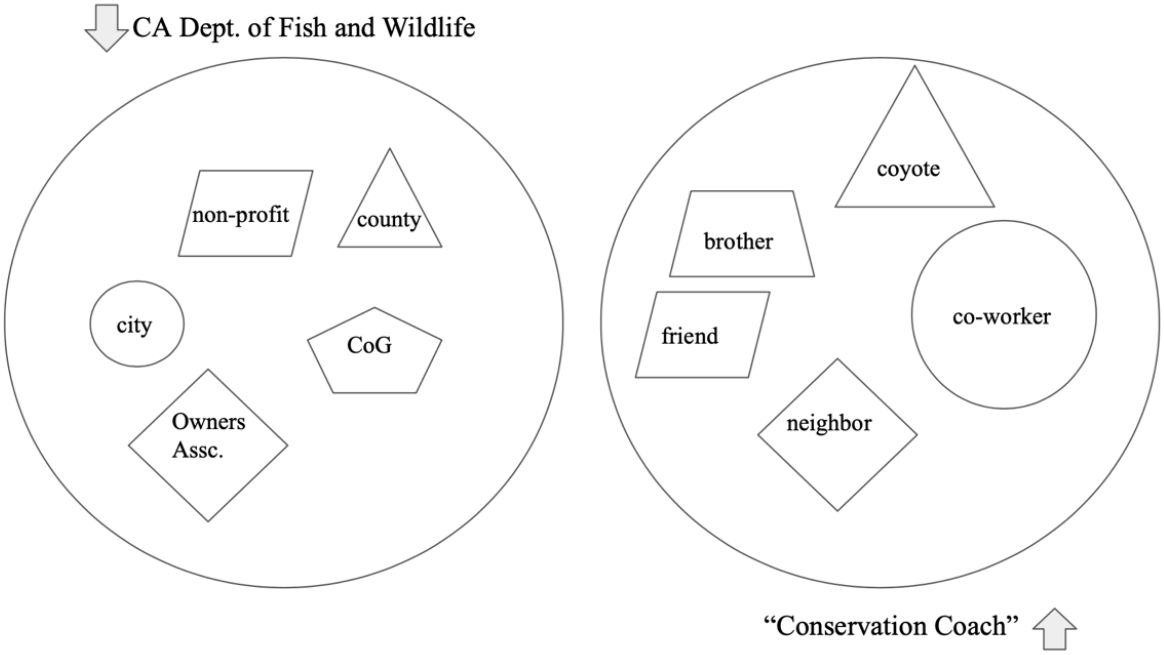
In my conversation with a young woman named Sophia who ran the "Coyote Hotline" for the San Gabriel Valley Council of Governments (SGVCoG), she made it clear how her job does not involve determining what exactly is true or not true about any given caller's coyote story, but rather to give them an opportunity to vent and be heard, and only afterwards, to supply information about coyote biology or co-existence strategies. For Sophia, the goal is to empower residents to take precautions on their own, ones which might lead them to avoiding an undesirable encounter altogether, but also towards living with less fear about the human-coyote encounters that are simply inevitable across much of Southern California. Sitting between the meaning making facility of both the scientific method and kin structure, the approach of the hot line is explicitly neutral, neither in favor of coyote presence nor coyote removal, and it's due to this ambivalence that the program appears to have gained traction. "We take what people say at face value, but also with a grain of salt," said Sophia, referring to the posture of her work.

Waxing between humility and grandiosity, Kent Smirl sees this Wildlife Watch program as a vehicle for the potentially radical transformation of society, a vision I think is both a symptom of his personal ambition, but also a clear indication of the intensified and wide-reaching emotional

impact of human-wildlife conflict today. Whether with regards to wolves in the Mountain West or coyotes in Los Angeles, these conflicts have become cyphers for intense political fault lines. And if the state's response to these controversies is to train a cadre of "conflict specialists," or to make ecologically aware "therapists" available to residents who are living in fear and anger of the predators in their area, then I think we should take notice of these emerging therapeutic relationships and to consider further the modality of this specialist perspective. Smirl's specific spiritual revivalism not-with-standing, in many ways I've also been converted into seeing human wildlife-conflict as a potential well-spring for radical political transformation, even if today its methods are still inflected by a decidedly settler colonial ideological structure. Even so, I sense an opportunity here for multispecies transformational justice because as more and more people have come forward with their stories of human-coyote conflict, the duties of dealing with these calls have slowly moved from police departments to other municipal community service divisions; 911 calls have been replaced with calls to Coyote Hotlines, and police officers in blue uniforms have been replaced with human-wildlife conflict specialists in beige uniforms. Even though what I describe is not exactly utopian, I still find myself speculating with optimism, directing my critique of this current structure towards "otherwise possibilities," and imagining what an anti-colonial or abolitionist wildlife management paradigm might look and feel like (Crawley, 2016). By looking more closely at the activity of the Wildlife Watch program, I believe the potential of human-coyote conflict as a locus of political change becomes more clear, and maybe then we can make better sense of the revivalist light in Smirl's eyes.

If wildlife management is often about "connecting the head with the feet," in the memorable phrase of urban coyote management specialist, Niamh Quinn, then the State is the head and the

coyotes themselves might be considered the feet. Emanating centrally from the State Department of Fish and Wildlife (CDFW), the Wildlife Watch program offers its wealth of scientific knowledge, but also its educational, training and enforcement capacity to encourage local municipalities to pass what are called Coyote Management Plans (or CMPs). For example, if a municipality is experiencing heightened tension around human-coyote conflict, they can invite Wildlife Watch to facilitate the training of local "conservation coaches," which entails a three-day workshop for community volunteers who must pass a background check by the local police department to participate. During the workshop, soon to be coaches learn the ins and outs of their city's Coyote Management Plan, everything there is to know about coyote biology, including how to "haze" coyotes who've become too comfortable around people, and lastly, they are given basic training in canvassing techniques and methods for speaking with their fellow neighbors. According to the current director of Wildlife Watch, Alex Heerenan, the success of the program today is largely a function of this "bottom-up leadership strategy," wherein rather than wildlife policy being decreed straight from the mouth piece of the CDFW or one of their specialists, the state is "training the trainers," those people who are already familiar with the norms of their community and who are willing to leverage their already existing social relations for the purposes of spreading information deemed important by the state for "managing" the local ecology. This subtle orientation, which evidences a kind of deixis, or pronominal logic to the form these relations take, also appears at multiple scales simultaneously, as a kind of holographic cascade (see diagram below). Within every state exists multiple relations to smaller governing bodies (counties, council of governments, cities), and within every "conservation coach" also exists other relations (to family, pets, friends, neighbors, coyotes, etc.).



Though the machinations of this training program might seem mundane and automatic, I believe there is a complicated interplay at work here in the process by which this information about the urban ecology spreads, a delicate tension between the universal and the local, between objectivity and subjectivity, between the perspectives that inhere within the knowledge making structures of science (and the state) and those of kin-making (and community). Critically, Wildlife Watch does not choose one way of knowing over the other, but rather relies on the power generated within these dualities for the purposes of propagating its co-existence messaging. What exactly is propagated here is both very specific prescriptions for how humans and coyotes should relate to one another in time and space, but also a more generalized settler ecological imaginary. As such, Wildlife Watch, and the municipal Coyote Management Plans that are its local representations, represents both a landscape structure (Tsing, 2021) but also a more generalized, settler human psyche (Butler, 1997). Just as the programing moves across scales,

from the purview of the state to the local community level, so too do its effects move, from the landscape to the individual psyches that are composed by community relations.

What the Coyote Management Plan is "managing" for, then, is a future only valuable to those white settlers and their "companion species" who fit within the structure, without much consideration of the flourishing of other selves within the wider native ecology (Haraway, 2003). "The landscape cannot support other relations, activities, or futures that might interfere with future [settler] use," writes Max Liboiron in their critique of the extractive tendencies of the natural resource management paradigm (Liboiron, 2021: 65). "Risk management, disaster plans, homeland security (and other securities) all share managerial ontologies dedicated to containing time for chosen futures," they write. In the case of CMPs, the coyotes themselves are crucially not the natural resources whose extractible use value is in question, but rather managing the conflict that sometimes arises between humans and coyotes allows for maintaining the settler's future free use of their homes, backyards, and surrounding neighborhoods. What's extracted, then, is the sense of comfort or homeliness this environment gives to the settler way of life, one which simultaneously reaffirms the ongoing structure of settler colonial domination while refusing to recognize the history of settler colonial violence (Tsing, 2019; Tuck and Yang, 2012; Hage, 2017).

Does the Wildlife Watch program work to mitigate locally significant human-coyote conflict? Surely, it does, and the program certainly deserves credit for blunting the spread of trapping and killing programs that were seemingly spreading like wildlife. But I also believe we must reformulate the question, and rather than ask towards whether the current wildlife management paradigm works to mitigate conflict, to ask what it might *mean* for these programs to work in the

first place? As Charles Peirce writes, "to develop [something's] meaning, we have, therefore, simply to determine what habits it produces, for what a thing means is simply what habits it involves." (Peirce, 1992: 131). What the CMPs might mean, then, is the foregrounding of settler habits, those reinforcing regimes of private property, domestication, and control at the expense of native ways of being. In attempting to "manage" coyotes, are we foreclosing other possibilities of assembling multispecies flourishing?

The Coyote Management Plan: Habit, Habitat, Habituation

How big are coyotes?

What do coyotes eat?

Coyotes look hungry: should I feed them?

I saw a coyote in the daytime – what's going on?

I heard coyotes in my neighborhood – should I be concerned?

What should I do if I encounter a coyote?

-The most common questions people have about coyotes, according to a Wildlife Watch presentation by CDFW human-wildlife conflict specialist Mackenzie Rich

The Coyote Management Plan today is a ubiquitous document across Southern California, appearing on the websites of local municipalities as human-coyote conflict has taken root in the surrounding neighborhoods. Much of the language in these documents is even "copy and pasted"

from one plan to the next, a testament to the universalizing logic of the "co-existence" framework codified in state programs like Wild Watch, but also to the way cities are always looking to each other for inspiration, horizontally. My very cursory attempts to produce a genealogy of the plans in the areas I'm most familiar with has led to one rather tenuous theory of local spread: Torrance got their plan from Culver City, who borrowed their plan from Long Beach, and yet, now Torrance's plan is being used as the regional model. This is a story in miniature that reveals a more generalizable quality of settler colonial domination: colonization is not an *event*, but rather, it is a *structure*, one whose holographic-like tendency for repetition at various scales makes it easily transposable (Tuck and Yang, 2012). In the following section, I will trace how the workings of this structure attempt to reify human-coyote relations, even as some humans and some coyotes attempt to make sense of each other's ever evolving presence.

Quite simply, the CMP attempts to change the ways humans and coyotes relate to one another by changing human habits, for example, by prescribing specific ways of keeping one's yard, feeding one's pets, and disposing of household trash, as well as suggesting the specific actions a person should take when they encounter a coyote. Considering the decidedly human loci of these plans, it might seem more appropriate to call them "Human" Management Plans rather than "Coyote" Management Plans, and yet, the intervention here is not being made on one or the other actor individually, but as an attempt to mediate the terms of this multispecies *relation.* The hope for many cities is thus to remake the urban habitat more generally, as one that is less hospitable to coyotes and more hospitable to settler lifeways, their children, and their pets, who constitute the central nodes of power in the urban settler ecology.

According to the logic of the CMPs, a coyote becomes dangerous to settler lifeways when they become *habituated* to human presence, a behavioral syndrome that occurs when people feed coyotes, either intentionally or unintentionally. Of course, there are many ways one can feed a coyote, the details of which will make up the bulk of my ethnographic analysis below, but most generally, we can see how a pattern presumably arises: once fed by humans, the coyote comes to *associate* humans with food, and through the repetition of this possibility, they learn how to approach humans in such a way that results in them being fed again; sometimes they become aggressive. By encouraging people to remove coyote "attractants," and even to "haze" coyotes instead of feeding them, the CMPs are assuming that we can break the material-semiotic chain of association between humans and food in the coyote mind, and to replace this link with something closer to *danger*.

The details of these plans are thus rich with meaning, quite literally, for what they attempt to regulate is the *information* by which urban coyotes come to adapt to the urban landscape, those "differences that get onto the map," in the words of Gregory Bateson (Bateson, 2000: 457). By learning the conventions, forms and forces that make the urban ecology legible as information, for example, by exploiting the affordances of urban infrastructure, wildlife comes to exploit the urban environment as a habitat as individuals learn the behaviors of city living and species adapt to life in the city (Caspi et al, 2020; Niesner et al, 2021). Regardless of whether a landscape is deemed wild or domestic from a human perspective, all ecologies are governed by this same logic of pattern generation, and learning to situate oneself in the swirls of meaning-making in a city is integral to the flourishing of any kind of life. The challenge of being in the right place at the right time is no easy feat, especially perhaps in a dynamic city like Los Angeles. And yet as

climate change ravishes the world, and human development continues to radiate outwards as sprawl, the predictability of native food webs that coyotes and others have come rely on over millennia are being destabilized. Within this wider environmental context, it's important to recognize that cities might prove increasingly "regular" as compared with the surrounding wildlands, controlled as they are by the human rhythms of work and desire, which might be another reason for the rise in human-coyote conflict in the past ten years or so (Hulme-Beaman et al., 2016). As one Southern California urban coyote trapper once told me, "urban coyotes are not surviving, they are thriving," and the successive generations of coyotes being born in cities has even led some to question whether urban coyotes are becoming a genetically distinct subspecies (Adducci, 2020).

But this question of the regularity of the urban ecology necessitates a more general conceptual understanding, mainly, the question of what exactly is a *habit*, which by way of forming *habitats,* also invites individual *habituation*? According to Eduardo Kohn, who, channeling the semiotician Charles Sanders Pierce claims that "it is the tendency of all things to take habits," habits are general forms which propagate in the world most widely, and which cause the world to be potentially predictable (Kohn, 2013: 59). Thus, habits are those bundles of relational tendencies which make up the individual humans and coyotes over the course of their lives, but also the more general forms of "the human" and the "the coyote" that result. This is a kind of proliferating generality that is a product of the world "out there," but also the means by which semiotic minds make inferences about the world, or mental guesses for survival. Afterall, if one is to predict the future by way of harnessing the efficacy of general forms, there must be an interpretative mind to do this predicting, a perceptual scheme to categorize and sort the wealth of

information needed for survival. And so, from habit (the general forms) to habitat (a constellation of these general forms), we must also consider *habituation*, which at its most basic level is a matter of the psychic compulsion to repeat successful associations. In the terms of animal behavior studies, habituation is a type of learning that allows animals to avoid costly responses in situations where there is no benefit from responding to repeated stimulation (Blumstein, 2016). In the terms of human-coyote conflict, habituation becomes a problem when coyotes lose their fear response to humans, which threatens to denature the habits of the urban ecology.

By considering the ways coyotes and humans make sense of one another's presence through these material-semiotic, associative logics, we can come to see how the CMPs attempt to regulate human-coyote relations by connecting the outer world of forms with the inner world of the mind, for both humans and coyotes. And it's these mutual habits – fashioned within the tension between desire and fear – that give rise to the general forms of each of them as species, or kinds, not essentially, but through "constitutive interaction" (Oyama, 2000). The point at which humans and coyotes see one another across the human-animal divide and attempt to negotiate their relations through the crucible of interpretation – this is where the "ecology of selves" first emerges, whereby urban residents come to understand themselves not only in relation to the State, the family, or other human cultural forces, but also with respect to creatures like coyotes with whom they're increasingly sharing the city.

In speaking with many kinds of people across the urban human-coyote ecology, and in hearing innumerable coyote stories from family, friends, acquaintances, interlocutors, and strangers, what seems the common thread to every human-coyote encounter from the human perspective is the

difficulty people have in interpreting coyote behavior. What looks like indifference to one person can come to stand for aggression to another; what sounds like 12 coyotes yipping in the darkness often turns out to be only three upon closer inspection; a coyote that appears hungry and sick to my mother, is a coyote that appears perfectly normal to me. And this interpretative fluidity, here mediating the co-becoming of humans and coyotes, is a process constitutive of life all the way down. Life is a sign process, whether at the level of DNA, or the mind, or in the relations between people and dogs (Kohn, 2007). Taking the way humans and coyotes appear to one another in the urban ecology as my object of study, I've come to pay close attention to what people see when they look at coyotes, and I've noticed there's one interpretation people tend to ascribe without much hesitation: suspicion. If you take another look at the common questions posed to the Wildlife Watch co-existence specialists above, you might notice how all of them are tinged with the latent possibility that these coyotes are up to no good. And it's true, aside from their fleet footedness and generally indescribable lightness of being, discretion is one of their defining behavioral features. Most of the time, they are here one second and gone the next. What are these coyotes hiding? Why do they steal themselves away? By appearing on the urban landscape as they do, coyotes appear to inject a sense of "wildness" into a landscape deemed far removed from the "wilderness" people often associate with the presence of large predators (Cronon). Even if the cultural forces of cities sometimes do challenge expectations in ways that can be productively disorienting to human residents, coyotes are perhaps unique for the ways they unsettle the urban ecological imaginary specifically.

In the past fifteen years, especially, urban coyotes are coming out of the shadows. And in fact, scientists are currently researching whether urban coyotes are now more *bold* than their rural

counterparts (Breck, 2019). As anybody on the Internet might have seen, today you can find countless reports on social media of coyotes acting unusually casual amongst people, or remaining fearless in the daytime, no less. Many others have reported dogs being predated upon while being walked on leash, and cats have been taken from front porches with the lights on. In the wake of this reported coyote "crime wave," so to speak, wildlife managers, on foot and in the form of Coyote Management Plans, have entered these ecologies to instruct people how to take precautions. Whether we can say for certain urban coyotes are more aggressive today than in years past, or whether the behavior seen today is by any means abnormal coyote behavior, it's become increasingly clear that many urban residents across Southern California are feeling the pressure of this wayward coyote desire. The coyotes that once slinked away are now turning to meet the gaze of these urban human bipeds, their fellow residents. As it turns out, what it means to see coyotes is closely related to another pressing question: what does it mean to be seen by coyotes?[14]

On the local social media application Nextdoor, for instance, one can read hundreds upon hundreds of posts of people reportedly encountering coyotes in their neighborhood who seem not only completely unphased by their presence, but who also might follow them home (Niesner et al). Some users claim they are afraid to go outside at all with their pets or small children out of fear of the coyotes in the streets beyond their front door. The power of these coyotes, it seems, is having a dramatic effect on the way these people live their lives, and it's this very nature of power, according to the philosopher Judith Butler, that also gives rise to subjectivity. In her book, *The Psychic Life of Power,* she recalls Althusser's infamous example of a policeman hailing a

[14] For a more in-depth exploration of what it means to "see" coyotes, listen to "How to See Coyotes," a Labyrinth Project podcast episode: https://labyrinth.garden/podcast/how-to-see-coyotes/

passerby on the street, and how in turning to recognize himself as the one who is hailed, he also recognizes himself as a social subject (Butler, 1997). It's this recoiling effect of power that causes the reflexive becoming of the subject, according to Butler. Considering the Nextdoor testimonials I've read, it would seem that urban coyotes, in addition to the law and other human forces too, are an emerging locus of interpellation in the urban ecology.

Fundamentally, to simultaneously be looked upon by the police from "above" and the coyotes from "below" is to experience oneself as part of an "ecology of selves": where "We [humans] are not the only kinds of we," in the memorable phrasing of Eduardo Kohn (Kohn, 2013:16). In this fashion, or by way of fashioning ourselves with our other-than-human relations, the emergence of human-coyote conflict in Los Angeles is not just an indicator of more coyotes on the landscape, but for many people, the emergence of a new psychic force as well. As we've seen with the Evict Coyotes movement, the means of these emerging relations can be harnessed for complex political ends – this is also what the "ecology of selves" is good for – to situate oneself or one's kind in a wider political context, but also to reify hierarchical and dominating relations if one so wishes. But I firmly believe we can do better, and also, that an awareness of the urban "ecology of selves" can also be harnessed for inviting more *kindness.*

Feeding Coyotes, Composing Relations: Uncle Pat and Betty

There's more than one way to feed a coyote. For instance, one could shoot a horse and lace the carcass with poisonous strychnine tablets, a practice initiated by the Unites States Federal Government in the early 20th Century American West for the purposes of killing as many coyotes as possible in a short amount of time (Flores, 2016). And in contradistinction to this vile,

exterminatory history, some wildlife rehabilitation organizations today are baiting wild coyotes with medicine to help treat the immune system disorder that results in sarcoptic mange. In Los Angeles generally, despite California laws against feeding wildlife, I've come to notice coyote feeding is a quite common practice, which could be one explanation for why human-coyote conflict appears to be on the rise. I even have a coyote feeder in my own family, which certainly is one explanation for the genesis of this ethnographic project.

And since urban coyotes are synanthropic animals, meaning they benefit from living close to humans, it might even be impossible *not* to feed coyotes, although the degree to which they depend on humans for their livelihood might vary across contexts (Hulme-Beaman et al., 2016). Due to the coyote's immense species plasticity, individual coyote diet can vary quite drastically across the urban landscape (Caspi, unpublished). Whether eating out of our hands, from our pantries, or in our front yards, commensal species have long exploited human food stuffs for survival, and a whole food chain emanates outwards from the *domus* and up the trophic ladder too: as prey species, such as rodents and small birds exploit anthropogenic resources, predators like coyotes will enter the urban niche to feast on this abundance of prey species. For coyotes, cities are thus wildly heterogenous environments, and throughout the year they will target different food sources, whether anthropogenic or otherwise (Larson, 2020).

Alex Heerenan, the director of the California Wildlife Watch program, told me he believes people intentionally feed wildlife like coyotes for three specific reasons: firstly, because they think they're helping wildlife, secondly, because people enjoy feeding wildlife as a kind of recreational activity, and thirdly, because people feel a compulsion or have an addiction to

feeding wildlife. According to Heerenan, the only course of action for ameliorating the deleterious effects of this feeding is through education and awareness. Although I surely agree with his reasoning and am fully aware of the dangers of feeding wildlife like coyotes, both for people and for the coyotes, in what follows I want to temporarily suspend judgment of this practice for the purposes of adding some nuance to the overall picture of coyote feeding. I'd like to consider some of the various ways people in Los Angeles feed coyotes, to understand why they do it, but also to ask what this habit of feeding coyotes might *mean* for the broader urban ecology in which these feeding interactions between humans and coyotes are part of a much larger system.

In her essay titled "Eating (and Feeding)," Marilyn Strathern revisits some of ethnographic material from her book *The Gender of the Gift.* Decades later, and she is now equipped with a newly borrowed theoretical orientation: "what difference would it make to our apprehension of relations if the activity for (in place of) describing states of being were Eating?" asks Strathern (Strathern, 2012). In answering this question, Strathern articulates a vision of the dynamic process of eating and feeding as a way of composing and decomposing relations, relations which she also places at the center of her ontological-epistemological framework. In this line of thinking, it's not what a person does or does not eat that is essential, but rather, what kind of subjects the eaters and the feeders become in the process of exchanging food. For Strathern, what's exchanged in these interactions is not only food, but the webs of relations that have given rise to the possibility of feeding in the first place. What is eaten, then, is *agency*. In the spirit of this orientation, I too will ask of urban dwelling humans and urban coyotes: "What have they seen in eating that any of us might also see?"

Seen, here, with respect to humans and coyotes, might be the operative word in Strathern's question, for many of the differences between the ways one could feed a coyote hinge on what is communicated visually through the act of feeding. Feeding is thus an *exchange*, mediated by food, which activates *appearances*, and how humans and coyotes come to see one another through this exchange is critical for the kinds of selves these various forms of feeding might produce. In Strathern's system, appearing to one another in the act of relating is critically a process of *reification*, where *the action* of relating also produces the particular forms of the relata – their appearances, but also the poetics, the style, and the overall imaginary which governs the cascading event series of exchange. Critically for my purposes, since for Strathern there are no ontologically real terms prior to these relationships, there is nothing governing the proliferation of forms other than *the relation*. This means that a Mother is not only someone who sometimes literally gives birth to a Child, but she (or he, or they) could also be someone who appears to the Child as a Mother in a process of some kind of motherly exchange (Gell, 1999). I think it would be difficult to underestimate the wide-ranging implications of this kind of ontological plasticity, which for my purposes, has proven the inspiration for imagining how in the urban "ecology of selves," sometimes coyotes can become people and people can become coyotes.

Over the course of my ethnographic fieldwork, I was connected via email with a middle-aged couple who were feeding a coyote in Nichols Canyon in Los Angeles, an upscale enclave in the Hollywood Hills that is rather sparsely populated with homes cut into the chaparral hillsides. These two lovers were both actors, prone to working and not working, and as a couple they were without children. One day, on his way to a job, the man in the partnership saw a coyote on the front stairway of their house. Together, this man and woman then decided to leave some dog food out in the hopes of coaxing this coyote back to their home, with its big sliding windows and

wooden deck surrounded by trees with hawks soaring above, as they described to me. And over the next few weeks they indeed successfully coaxed this individual wild coyote to eat from the food they placed just outside of their living room door, and after he returned and returned again, the man decided to name this coyote "Handsome," for obvious reasons. In just a few more weeks, these lovers were literally feeding their new coyote friend Handsome in their living room, and when he wasn't nearly eating out of their hands, Handsome would often lounge in the sunlight on their outdoor patio furniture.

In this case, what can we say of the way the food offered Handsome activated these participants as subjects in a drama of their mutual becoming? How did this exchange cause each and the other to appear to one another as objects of convention? I would argue that the scene conjured is decidedly "domestic," and though Handsome always to a certain degree remained an autonomous, wild coyote, never coming fully under the conscription of ownership that most pet canines experience, for instance, his naming as a form of manly identification, the fact of his literal feeding in the confines of the house, and also the way this couple accentuated his overall friendly tolerance in their description of the scene to me, all lend themselves to regarding this interaction within a kind of homely imaginary. In exchange for the couple's appearance to the coyote as a benevolent source of rather expensive dog food, the coyote was coaxed into appearing as a household pet. And in fact, when Handsome one day suddenly disappeared for good, the couple shortly thereafter procured two large, almost "wolfish" dogs, who they now sleep with nightly all together in their own bed.

3

Hollywood Actor : "Handsome" :: Uncle Pat : "The Boys"

I'd now like to compare the above story of feeding coyotes with another similar, but also rather different instance of feeding coyotes, by way of my process of combining comparison with analogical reasoning. My Uncle Pat also feeds coyotes, and has for many years now, in various forms, which undoubtedly is one reason for my interest in urban coyotes to begin with. As a child, when I would sometimes live with him and my Aunt Ruth, who like the Nichols Canyon couple are also without children, I would oftentimes steal out into the night with him to leave scraps from dinner in certain spots around the neighborhood. Upon returning the following night and seeing that the food had been taken, we would imaginatively assume a coyote had dined with us, although we could never fully know for certain. Sometimes, if we saw a coyote in the area, we could imagine feeding coyotes with a little more certainty. To this day, my Uncle continues to feed "The boys" as he calls them, but now in a wildland area near his suburban Los Angeles home. "The restaurant," as he sometimes calls the place he leaves the food, is located on a vestigial cattle ranch in the furthest westerlies of the Santa Monica Mountains, land onto which he almost daily trespasses to partake in these exchanges. When I accompany Pat on these feeding forays, we sometimes do see coyotes – once playing on the hillside above us, chasing each other through the green winter grasses, another time sitting in the sunshine on a knoll, unbothered, but more usually we see them skittishly running away from us over the shallow ridgeline on sight. Most of the time we see nothing but the birds.

Even though, it's true, my Uncle Pat does hope to see coyotes when he visits the area, I believe his expectations are tempered by a human-coyote imaginary that is decidedly without

domestication, even if it's not completely the perfect image of "wildness" either.[15] "Haven't seen coyotes in three weeks," he texts me just now, as I write these very words. And critically, even as the exchange invites a possible encounter between my Uncle and a coyote, these coyotes are not seeing him feed them; he does not appear to them in the exchange. The food itself, as the semiotic vector that is mediating the exchange, here takes the form of a "degraded third" in the logic of Charles Sanders Peirce (Peirce, 1992). For Peirce, all signs accentuate this quality of *thirdness* in the world, or the way things come to connect other things, either through likeness, by pointing, or through that peculiar form of semiosis known only to humans, language. In the case of my Uncle's feeding, the scraps of food he leaves for the coyotes are certainly meaningful, both to him and the coyotes he feeds, although what these scraps communicate is only a "partial connection" between himself and the coyotes, something given, but also opaque, or incompletely whole (Strathern, 1991). In giving away these scraps, Uncle Pat himself, as a whole person, only partially appears, and yet through this partial exchange, even still, he's able to commune with a pack of wild coyotes, and to become one of "the boys" as he says (Deleuze and Guattari, 2013).

[15] See: Marcy Norton's history of the "Igue" for a wonderful description of the non-linearity of human-animal relationships in Amerindian societies: "It makes sense to infer, as is common in the scholarship, that the taming of wild animals was a necessary prelude to "domestication" in Eurasia. However, the converse does not hold: to apply the term "semi-domestication" to the taming of wild animals among present-day "hunter-gatherers" is a distortion, as it implies a teleological and universal trajectory that is not warranted.

My Uncle Pat, pictured walking the industrial orchards near his home to collect fallen fruit that he'll use in lunches he makes for the unhoused people living on Skid Row.

4

Uncle Pat : "The Boys" :: Uncle Pat : "The homeless"

An important fact about my Uncle, which I'll once again use in my cascading series of comparisons and analogies, is that he is also a regular giver of meals to the unhoused population who make their homes on Skid Row. Him and his wife, Ruth, explicitly call this activity "giving," and this impulse they share is at least partially inspired by their Christian faith; they once met each other in a church community and are both devout Evangelical Christians. My

Uncle Pat and his wife are amongst the most dedicated philanthropists, in this regard, that I've ever encountered, and I've watched for years how they prepare upwards of 50 meals a day, sometimes five or six days a week, in their own kitchen. Undoubtedly this is a sustained, herculean effort, and one which runs in parallel to their respective full-time jobs, he an elementary school teacher in the Inglewood Unified School District, and she a nurse at White Memorial Hospital (both are recently retired as of this writing). When I've gone with them to "give to the homeless" on a few occasions, and I don't go much because they often go before sunrise and don't seem to enjoy being accompanied by an observer, I'm always struck by the fact that Uncle Pat knows so many of the names of the people who live there. When he gives, not only hot morning meals and bag lunches to go, but sometimes clothes he's gathered or even cheap tents he's bought at a discount, he names almost everyone he sees, appearing to them as they appear to him, as human, with a look into the eyes and a warm greeting, maybe even a question about their lives, or some other supportive pleasantry.

Although what Pat gives in this context is certainly not the "scraps" he gives to the coyotes, and the subjects that mutually appear to one another as part of the interactive exchange are deeply human and humanizing, the connection between my Uncle Pat and the unhoused living on Skid Row here still feels rather "partial," imbued with a curiously ambiguous mix of familiarity and unfamiliarity. It is an image repertoire that in this case is perhaps animated by love, but the kind of impersonal Christian form of love that saturates everything, everywhere as a sign of God. My Aunt Ruth imputes God's will to nearly every motion of the universe. And although Uncle Pat rarely let's his practice of giving appear to others – though inevitably it does, as when a downtown businessman throws him $100 for his daily efforts – the purpose of this activity, in some sense, is to make this work visible to God, to ensure theirs and all of our safe passage to

Heaven. What Pat and Ruth thus receive themselves in the exchange, is their own appearance as "good Christians," before the eyes of unhoused downtown residents and before themselves, but also below the watchful eye of their Lord and Savior. Uncle Pat's capacity, an agency which is literally consumed by these unhoused persons in the act of eating, is his charitable good will.

5

Uncle Pat : "The homeless" :: Betty : "The unhoused"

Two interlocking questions now arise, questions I hope to address by adding one final analogical loop to my cascade of relational comparisons. Firstly, if Uncle Pat's giving is a reflection of his capacity for charitable good will, what exactly is the stuff of this capacity? Another way of asking this question and following once again Strathern's analysis of eating and feeding in Melanesia, would be to ask about the relations of Pat's that are being composed and decomposed in the act of feeding (Strathern, 2012). What other, prior relations of his are contained within his appearance as a good Christian? And secondly, if Pat's appearance in the relationship is about how he is *seen* by the unhoused residents of Skid Row, but also by God, what exactly should we make of the nature of this "spiritually objective" outside perspective?

Aside from my Uncle Pat, another close relation of mine is also an active feeder on the landscape, and her activity I think will prove useful for further elucidating the workings of the "ecology of selves" I wish to demonstrate. Betty calls herself my Mother, but I was not born of her literally, though over the years I've been nourished by her perspective in innumerable ways, most intensely by her insights into the sphere of political activism around the issues of being undocumented in Los Angles. Betty is an undocumented activist and co-founder of an

organization responsible locally for organizing people around the DACA movement. In the past decade, I've worked with Betty to organize "Know Your Rights" trainings, where, like Wildlife Watch, we would also "train the trainers;" we've undertaken acts of civil disobedience, and I've also helped her and her organization produce videos and documentation of their organizing efforts. Today I no longer work so closely with Betty or Dream Team LA, but I still often call her for life advice, and we'll often share a meal.

Like my Uncle Pat, Betty is also an incredibly active "giver" to the unhoused residents of Los Angeles, and it was from Betty that I first learned about some of the nuanced ethical constraints rightly governing this practice. One day, Betty asked me to help her make a video to help demonstrate to people the proper conventions of giving to the unhoused, and interestingly, she wanted to communicate this information by showing herself giving in all the wrongs ways. Along with an acquaintance of hers, an unhoused trans woman named Pamela who we asked to perform with us in our production, our video playfully showed Betty collecting scraps from an unfinished meal, and taking lots of selfies as she gave these tiny morsels away to Pamela, who right on cue, feigned humiliation and displeasure. I bring up the specifics of this story of our film production because I believe there are important similarities, but also critical differences between the way Betty approaches giving and the way my Uncle Pat approaches what is essentially the same exchange. For one, Betty and Pat both hold a strong belief in the idea that when giving to another person, the meal exchanged must be whole, not in parts (or not as the scraps good for giving coyotes). For both of them it is also critical to address the recipient of the gift individually and by name if possible. Betty, however, appears to be willing to take her relationship with some people to a deeper or more intimate level, which here appears as the willingness to engage in a kind of imaginative play with Pamela. This is a mode of relating which not only takes some skill,

but also curiosity and courage with regards to meeting one another with an open vulnerability (Bateson, 1967). Play is immensely rewarding, and a wellspring of cultural possibility, but it can also be quite dangerous, and in fact, after making our video with Pamela, Pamela told Betty about a curse put on her in a Mexico City open-air market by an ill-intentioned witch, a story which affected Betty deeply.

Paradoxically, even as Betty wrote a script demonstrating the proper interactions one should take when giving food to unhoused persons that revolved quite critically around not "showing off" to people on social media, we did in fact make a video of her giving out food and we placed this video on the Internet. For now, I will bracket Betty's near-Brechtian like ability to suture various layers of meta-awareness in a single plot, and instead draw a parallel to my Uncle Pat's giving, mainly, the appearance once again of an external perspective. In Betty's story, the view from the outside is not a "spiritually objective" God, but rather the masses of Internet users who themselves are likely activists, or who are looking to improve themselves, or to generate within themselves the capacity for sensitive good will. And so, if Uncle Pat is activating his agency as a good Christian in his capacity to give, then perhaps it's safe to say Betty is activating her agency as a good activist, a capacity gained by the training she's received in the complex politics of being undocumented, and forged by the necessities of surviving in a country that for much of her life has actively wanted to kidnap and deport her. It would be difficult to underestimate the degree to which this possibility weighs on Betty's mind at all times: this threat not only animates her everyday activism, but it is also a personal experience of precarity that never goes away. In part, then, Betty's very visibility as displayed in our video is a danger to her safety, but it can also be protective, depending on how she appears. Coincidentally, the only other time Betty

asked me to film her giving out food was when she received grocery boxes from a local politician, whose representative accompanied her as she made deliveries in her neighborhood.

Thus, for Betty to appear as someone capable of giving is also a reflection of the web of relations that compose this very capacity, an agency afforded not just by her relations with her fellow undocumented community members, but also in this last case, the good will and resources of the State. For someone like Betty, Heaven and America, then, are also related, alike and unalike, and ambiguously welcoming, both real and unreal simultaneously.[16]

Betty Jaspeado, pictured on a bus trip from Los Angeles to Sacramento on an organizing trip to the state capitol with "DreamTeamLA"

[16] See: for a thoughtful meditation on the parallels between "America" and "Heaven" in the immigrant imaginary, see the experimental film "Heaven is North" by the artist Luis Motta: https://luismotta.com/heaven-is-north-1

Conclusion: Feeding Coyotes, Feeding Ourselves

6

Coyote : Fallen Fruit :: Uncle Pat : Fallen Fruit :: Betty : Fallen Fruit

When on a sunny Winter's day, I introduced my Uncle Pat and Betty to each other outside my apartment in Westlake, all they talked about was "stealing." Not the kind that will get you thrown in jail, necessarily, but certainly the kind that refuses to contribute to profit margins. Stores were mentioned, prices per slice of bread were discussed, hot dogs and guys they knew in different places who, after closing time, might meet you behind the grocery store to give you a few boxes of food left on the shelf. I've spent quite a bit of time with Betty driving across the city to various food banks or wholesale distributors looking to make arrangements to systematize her giving and allow her to bring food to more people in need. And when I was living with my Uncle as a teenager, we would often cut across the golf course nearby to walk the orchards near his house in the hinterlands of Los Angeles, picking up fallen fruit from the ground that he would then use in the meals he'd give to the unhoused living on skid row.

I further describe these relations because I believe they've represented to me something of the urban ecology's dynamic openness – just how the topography of human-coyote conflict across the city might point us towards sites of "resistance" to settler colonial domination, the web of relations around my Uncle Pat and Betty point me to the ways one might work within this structure but also towards supporting the possibility of worlds flourishing outside of it. They've shown me how the capitalist systems within the urban ecology excrete their own excess, and how these resources can be exploited not for profit or extraction, but rather towards inviting a world

with more care, mutualism, concern, and reciprocity. And these otherwise worlds, for better or for worse, are emerging from webs of relating that span the human-animal divide. Understanding how the urban ecology is composed as an "ecology of selves" is thus one way we can learn to harness these relations for good rather than for ill. When my Uncle wanders the orchards looking for fallen avocados in the leaflitter, I believe he is exhibiting a kind of controlled movement towards "becoming a coyote," and it's true, the suggestion to pick up fallen fruit from yards to prevent attracting coyotes is a ubiquitous message of the CMPs. And when Betty gives food to people in her neighborhood, whether they're unhoused, undocumented, or simply struggling to pay the rent, she might not exactly be "becoming a coyote," but she's certainly resisting the forces of violence that seek to exploit and domesticate or even to remove entirely those "selves," whether humans or other-than-human, who remain ungovernable.

In all the above, I've taken care to compare some of the many kinds of relations I've noticed people in Los Angeles have with coyotes, and to attend to the ways some of these people cultivate relations with both coyotes and unhoused people simultaneously. But I've yet to consider, however, how coyotes and unhoused residents of the city themselves are living in relation to on another, not only in the metaphors of anti-coyote activists, but in the very real fabric of the urban ecology. Considering each of these urban "selves" experiences an intense degree of hostility from many of the human residents of the city, unhoused persons through the mechanism of street sweeping and police harassment, for instance, and coyotes by way of the "hazing" suggested in the ubiquitous CMPs, there is limited evidence to support the existence of a shared unhoused-coyote urban geography, an overlapping of their time and space use (Niesner et al., 2021). What kinds of "becoming" might be occurring in this meeting place – in this "latent" commons? – and what multispecies configurations might be emerging here in support of

the flourishing and survival of more and various kinds of urban selves (Tsing, 2015)? I believe more work on these emerging relations must be undertaken, but for the purposes of speculation, I'll end by offering two brief anecdotes from my fieldwork.

On warm Summer nights, when I had been out tracking urban coyotes in East Los Angeles with telemetry equipment lent to me by the National Park Service, I'd often follow individual coyotes with names like "C67" across the neighborhoods of Echo Park and Silverlake. These coyotes seemed to spend their days in the large urban parks of the area, or within the confines of the fenced reservoir or other slivers of green space, and then at night, when most people are asleep, the coyotes would take to the streets. In the dead of night, I'd lift my antenna into the air and listen for the pulses that signal a coyote is near, and once on their track, I'd sometimes follow them up the winding streets lined with houses to where unhoused people were also making their way along in the night, with shopping carts, picking recyclable material out of garbage cans to exchange for a small price, and sometimes feeding the coyotes as they did so. What should we make of the fact that 12,000 years after the domestication of wolves, a similar process might be occurring in one of the world's largest metropolises? Is it possible to domesticate a wild animal if you are "homeless"? Will the coyote ever be domesticated, or are these urban human-coyote relations, even those predicated on a certain degree of interdependence, bound to a different, perhaps nonlinear fate? How should we recognize this hidden labor force undertaking the recycling work of the city, and how should we think of the nature of something that from one perspective appears as waste and from another appears as a gift that activates further agencies?

And when following coyotes in Elysian Park, this time during the day and by sight, I've sometimes spoken with an unhoused man named Paul who regularly feeds a coyote there he's

named “Collar” because of the radio collar he wears placed around his neck by this same National Park Service. This particular radio collar no longer works, and Paul has been feeding Collar for years now, mostly canned tuna fish with garlic powder mixed in from what I’ve seen, and he does so at least partially because he doesn’t believe Collar can hunt as well as the other coyotes with the cumbersome radio collar strapped around his throat. When Paul isn’t working at the foodbank where he volunteers down the hill in Chinatown, I’ve sometimes seen the two of them sleeping within feet of each other, Paul on a park bench and Collar lying beneath him on the cold sandy ground. Of course, not everyone is happy about Paul’s feeding relationship with Collar, and yet, as long as I’ve been observing coyotes at Elysian Park, I’ve never known Collar to be aggressive. Once, when I inquired further with Paul about their relationship, he told me how he feels it’s necessary to feed Collar because otherwise he wouldn’t survive, and he identifies with Collar’s struggle for survival: “If I didn’t feed collar, then nobody would” said Paul, hypothetically, and in fact, the food he gives to Collar comes from the foodbank where Paul works on the weekdays.

Are these instances of people becoming coyotes, or coyotes becoming people? Are these wild dogs being ‘domesticated,’ or is their selective tameness a sign of new experiments in emerging human-coyote relations, ones which don’t exactly fit the binary of wild animals and pets? I would argue there are many correct answers to these questions. It only matters from where you are looking.

CHAPTER 5

Coyote Plays Itself, Part II: The Curious Constraints of Hazing Urban Coyotes

Introduction

Across Southern California and now the country, municipal Coyote Management Plans (CMPs) have proliferated over the last decade for the purposes of mitigating human-coyote conflict, which appears to be on the rise. One ubiquitous feature of these plans is the recommendation of an aversive conditioning technique known as 'humane hazing,' wherein people are encouraged to perform hostility towards those coyotes they encounter who are at risk of becoming dangerously habituated to human presence. The thinking is that coyotes who are too comfortable around people, or who exhibit bold or aggressive behavior in the search for food or territory, pose a serious threat to individual persons, their children, and their pets, and so hazing is offered as a strategy for re-instilling the fear of humans in these wayward wild dogs. On closer inspection, however, the near universal presence of hazing as a management strategy appears strange, since there is little to no scientific evidence hazing urban coyotes works for the stated purpose of keeping coyotes habituated to human presence 'wild.'[17] Why, then, does hazing as a management strategy continue to propagate?

[17] See the LATimes: "Some say 'hazing' stops coyotes from becoming urbanized. Biologists aren't so sure." https://www.latimes.com/environment/story/2019-12-01/urban-coyotes-bites-hazing-animal-rights-advocates

Considering this lack of evidence for whether hazing urban coyotes works or not, I've taken the ubiquity of 'hazing' as represented in Southern California CMPs as my object of analysis, co-mingling ethnographic work with co-existence practitioners and wildlife managers, and leveraging a diversity of social theory ranging from psychoanalysis to performance studies to anthropology, all with the aim of understanding why hazing coyotes as a relational form proliferates in these contexts. In moving the question of hazing from the scientific domain to the domain of social scientific theory, I intend to change the focus of the question. Instead of asking whether hazing works, what if we asked: what does it *mean* for hazing to work in the first place? By asking towards the meaning of hazing urban coyotes, I intend to notice what kinds of habits hazing produces (Peirce, 1992), and to open our thinking to the possibility of hazing working in ways we might not yet understand. In the light of this new question about the potential meanings of hazing lurking just outside the paradigm's awareness, I aim to critique not just the stated purpose of hazing as a management strategy, but also to excavate its "unconscious."

Hazing wildlife as a management strategy has been studied in a variety of contexts and with different species, but there is limited scientific evidence, anywhere, for its long-term effectiveness. In both wild Stellar Sea Lions (*Eumetopias jubatus*) and urban Canadian Geese (*Branta canadensis),* for example, hazing proved useful for temporarily moving individuals and groups from a selected area, but over time it did little to change these population dynamics more generally and the degree to which hazing reduced problematic behavior remained uncertain (Tidwell et al., 2021; Holevinski et al. 2007). In most cases of human-wildlife conflict, the effectiveness of hazing depends on a variety of contextual factors, such as whether the hazing is conducted as a proactive measure on an entire population or as a reactive strategy for dealing

with problem individuals, or whether other animals, such as domestic dogs, are present in the area at the time of hazing, for example. And if wildlife managers are asking people to haze all individuals within a given population, no matter the expression of individual behaviors, then it becomes necessary to gauge people's willingness to engage in hazing, as the degree to which hazing might prove successful is likely a function of community "buy in." With respect to coyotes specifically, there is limited evidence to suggest hazing works to maintain safe distances between humans and coyotes in captivity, and no scientific studies to date have proven hazing to work on coyotes in the wild (Young et al., 2019). In the only studies attempting to measure the effectiveness of hazing urban coyotes *in situ*, Bonnell, Breck and Poessel found that many of the visitors who visited the urban parks in Denver where coyote encounters were common felt personally conflicted about participating in hazing, and that although hazing worked as short term "tool" for creating a safety buffer during a negative encounter, hazing was neither effective for changing the behavior of problem individuals nor did it reduce the activity overlap between people and coyotes in areas where human-coyote conflict was known to occur (Bonnel and Breck, 2017; Breck et al, 2019).

Despite these mixed scientific results regarding the change in coyote behavior resulting from hazing, the above studies also recognize the potential of hazing as a tool for educating *people*, for empowering residents to be more in control during coyote encounters. And I believe this necessity of considering the human and coyote together in any analysis of hazing is evidence of a peculiar paradox at its center, one for which the methods of anthropology are uniquely able to address: hazing is not only about changing the behavior of coyotes, but it's an activity that necessitates a change in human behavior as well, or rather one that works on both humans and

coyotes simultaneously. And so, to take hazing as an object of study is already to take aim at something that is not necessarily a human or a coyote, neither here nor there, but rather to consider a *relation* between humans and coyotes (or a concept). In moving from the scientific analysis of animal behavior studies, which is generally more concerned with the quality and substance of things, like animal cognition, to one more informed by multispecies anthropology, which is generally more interested in the expression and the effects of multispecies relations, I believe we can more easily see how hazing works in two directions as a relational *form*, or a style, a manner, or a mood of regulating the event of the encounter between humans and coyotes, or their mutual "becoming," as these effects are virtually prescribed by the locally significant instructions found in the CMPs (Deleuze, 1990; Debaise, 2017; Reis-Castro, 2021). The scientific method is critically useful when we can cleanly separate the worlds of the scientists from the worldliness of the phenomena, a privileged perspective troubled by the messy entanglements of human-coyote relations.

As such, in using the tools of anthropology to attend to human-coyote relations rather than to humans or coyote independently, I intend to contribute to the project of opening the discipline of anthropology to the wider ecological world "beyond the human;" this is not to treat coyotes as if they were necessarily *like* humans, with our capacity for politics and ethical consideration, but to better understand how we as humans are constituted by our relations with other-than-human creatures in an "open whole" (Kohn, 2013). If anthropology is most explicitly the study of the differences between human cultures, it is perhaps firstly the study of the differences between humans and animals, or the long passageway of many natures metamorphosizing into many cultures (Berger, 1980). Thus, the "- ," in human-coyote relations, or in the often used phrase

"natural-cultural systems," designates the neighborhood where my analysis will dwell, considering neither humans nor coyotes alone, but each of them together as constituted by their relations. As I hope to demonstrate, where the one ends and the other begins is not always as straightforward as it seems, especially perhaps in the complex web of relations making up the Los Angeles urban "ecology of selves."

When I set out on my course of fieldwork, I didn't explicitly seek to explore the dynamics of hazing on its own even though it soon became a peculiar feature of the urban human-coyote landscape. Rather, I sought to describe and analyze emerging human-coyote relations in all their manifold forms, and so I cast a wide and lightly discriminating net. This meant participating in scientific work and observing urban wildlife biologists, who themselves are cultivating scientific relations with coyotes, and supporting their studies on urban coyote movement patterns, personality traits, such as boldness, and dietary habits over a rural to urban gradient (Niesner et al. 2021; Breck, 2018). I also shadowed city and county officials tasked with responding to calls about human-coyote conflict, and I was able to observe first-hand how they handled "problem individuals," but also the growing public concern about coyotes in the region. Many people in Los Angeles also choose to vent their frustrations about intense coyote encounters on social media, and so observing these "cloud coyotes," too, became a virtual site of fieldwork and narrative analysis (See Chapter 1, "The Coyote in the Cloud"). In response to resident complaints about the presence of coyotes, many cities passed Coyote Management Plans (CMPs), and so I learned more about these programs and collected CMPs from municipalities across Southern California for analysis. At nights, I would sometimes track urban coyotes with telemetry equipment lent to me by the National Park Service, and during the days, I rode along with pest

control operatives as they laid their traps at golf courses and within gated communities and spoke with these professionals about their business models, but also about the intimacies they've cultivated with the coyotes they hunt – nobody knows coyote ecology quite like a coyote trapper. I spoke with people concerned for the safety of their pets and their children, and I conducted semi-structured interviews with people who've taken it upon themselves to be co-existence practitioners and human-wildlife conflict specialists, both with city and state agencies but also in the burgeoning non-profit sector alike. Of course, I've followed a lot of coyotes myself, too, whether in Elysian Park at Sunset or traipsing through the nearby city streets in the early hours of the morning, and all this writing, whether in my notebook or across the landscape, became the material on which I've based my analysis.

During my conversations with co-existence educators and conflict specialists specifically, a group of people who undoubtedly have devoted their lives to the well-being of the native, wild animals in this biodiversity hotspot of a region, I've often heard testament to the fact that 'humane hazing' is a better alternative to trapping and killing coyotes, a practice once out of fashion but which now is steadily returning to communities where fear of coyotes has stoked political turmoil.[18] As a California State Wildlife Watch program presentation stated: "Hazing urban coyotes is about care, not about control." Although I do not doubt there is a good dose of "care" latent within the intention of hazing, I'd also like to recognize how care and control are intimately related, entangled in ways both subtle and potentially pernicious. Furthermore, the infinitely fine line between trapping and killing coyotes and hazing them isn't always clear – selective trapping has been found to be quite effective for reducing human- coyote conflict, and

[18] See The Daily Breeze: "Torrance City Council, at behest of residents, to begin trapping coyotes": https://www.dailybreeze.com/2019/09/11/torrance-city-council-at-behest-of-residents-to-begin-trapping-coyotes/

hazing has been rejected by some members of the public for its perceived aggressiveness and violence. Just as there are many ways to feed a coyote, there is more than one way to haze a coyote as well, the nuances of which will make up the bulk of my analysis (for more on the many ways one could "feed" a coyote, see: "Coyote Plays Itself, Part I).

In what follows I do not necessarily intend to condemn humane hazing as a wildlife management practice, but rather to relax the relationship between its means and its purported ends in order to further understand its controlling (or enclosing) activity. My fear is that hazing represents a kind of "falling into form" with urban coyotes, one whose peculiar constraints of having to communicate with wild dogs without language, allows it to propagate, or *inform,* other relations across other domains of city life (Kohn, 2013). In the urban ecology, where various natural-cultural systems intermingle, interact, and arrange themselves synergistically and sometimes in surprising ways, the question of what something *is* is closely related to what something is "becoming" by way of the effects of its relations*;* hazing is thus one such incorporeal entity worth considering, not a body but a *phantasm,* a verb, an event or an activity with a life of its own, and which might go "feral," in search of its missing relata (Alberti, 2016; Deleuze, 2019). In attempting to notice the potential ramifications of the relational form of hazing as an activity, I take inspiration from anthropologist Marilyn Strathern's pithy description of anthropology as the study of "the relation of relations," and so although I begin my study with human-coyote relations, in comparing these with other human-human relations, too, I've come to notice fleshly echoes of hazing's form, as weaved by the analogical knots of relations, vibrating across the urban ecology with political consequence (Strathern, 1995; Silverman, 2009).

I will thus end this chapter with an extended meditation on my time working with political activists in the very neighborhoods where I would later come to study coyotes: urban political forces like gentrification and police violence are not only settler colonial and anti-black, but I will argue, they are ecological as well. As I describe through an extended reflection on the community organizing being undertaken in the East Los Angeles neighborhood of El Sereno, these violent, state-sponsored forces are co-occurring in the very neighborhoods where scientists today are studying coyotes and urban wildlife managers are attempting to mitigate human-coyote conflict. By attempting to imagine the urban ecology more holistically to include "all-too-human" politics in the phrasing of Kohn, I aim to not only to politicize the study of urban ecology, but to "ecologize" urban politics (Hinchliffe et al, 2005). And this towards an ethics better fit for this epoch of environmental devastation and multispecies suffering known as the Anthropocene.

My thinking for these purposes necessarily moves between and amongst scales, from the psychic dimensions of the human-coyote relations informed by hazing to the neighborhood landscape structure these CMPs afford more generally in their wake, to the city-wide feedback that might occur between systems of wildlife management and systems of organizing and ordering the human residents of the city more widely (Strathern, 1994; Tsing, 2019). This systems view, I argue, emphasizes ontogeny, or the generation of beings by no means fixed or stagnant, but always produced in the "constructivist interaction" of relations, to use the term of Developmental Systems of theorist Susan Oyama (Oyama, 2000). As such, I hope to maintain a certain degree of ambivalence about systems, and yet to recognize how urban "selves" are always caught in these systems for good or for ill. The aim of this research, then, is to become more aware of how these

systems interact, and to show how as we dilate our sense of scale, relational processes might appear similar even as the actors might appear different. As we spiral outwards from the mind, to the home, to the neighborhood, to the city, to state, this change in perspective allows for our thinking to capture something of an "ontological anarchy," where the previously held distinctions between humans and coyotes, and even between thought and matter, begin to blur in potentially politically productive ways (Viveiros de Castro, 2019).

I believe we can think with urban coyote ecology to invite more systems of care and less systems of domination or control. As the recent work of urban ecologist Dr. Christopher Schell has so explicitly made clear, the flourishing of wildlife in cities is still the product and consequence of systems of human oppression, like the historical and ongoing legacies of redlining and systemic racism (Schell, 2020). "Understanding the mechanisms that shape urban inequality and, thus, urban eco-evolutionary patterns and processes requires incorporating intersectional theories of inequality," writes Schell and his co-authors. What I hope to contribute to this line of thinking is the suggestion of waves of feedback within these systems: the way white supremacist, settler colonial, and patriarchal political forces have fashioned cities as bastions of human inequality certainly effects the wildlife living in these spaces, but also, the way we choose to "manage" this same wildlife can serve to either uphold or dismantle these same systems of ongoing human oppression. We must think environmental justice and urban biodiversity together (Pellow, 2016).

My thinking here is thus interdisciplinary by design: I utilize science, but my thinking is also *not* scientific; I utilize anthropology, but my analysis is also *not* exactly anthropological. There is freedom in the *not,* in utilizing the tools of a discipline without existing wholly within its

strictures (Ahmed, 2014). What follows is a demonstration of my "ecology of practices," where disciplines co-exist in ways that render them vulnerable to alternative ways of seeing, but without losing the basic integrity that makes them functional (Stengers, 2005). The story I wish to tell, then, is less a natural history of the urban coyote nor a cultural story of the coyote present, but rather a story of coyote *associations*, both fleshly and immaterial (Ahmed, 2014). The coyote, always ecological, is also imbued with the poetics of a creature who touches many kinds of people across the city, who lives within the ecological imaginary of the city as a whole, and who we can then follow to reimagine what's possible in a city, which is always simply the product of our evolving imaginary in the first place (Glissant, 1997).

Habituation: "Keep Me Wild"

In part 1 of this paper, I discussed how Coyote Management Plans (CMPs) both come to support a settler landscape structure in the urban environment, but also a kind of psychic topography by attempting to regulate the specific interactions between humans and coyotes. By this logic, the urban ecology can be understood as a series of interlocking *habits* existing within a *habitat*, which are sutured together by *habituation,* or the psychic compulsion to repeat. Habits, in the discipline of semiotics, are general forms propagating in the world most widely (Kohn, 2013); as such, both coyotes and humans, as species types, or generals, are considered habits, as would the general form of the Oak tree or a Kentucky Bluegrass front lawn. A habitat, then, is a constellation of mutually reinforcing habits, who exist amongst and in relation to each other, and to a certain degree create the possibility for each other's existence together in an ecosystem through "constitutive interaction" (Oyama, 2000). The niche creates the species and the species creates the niche (Maturana, 2000). Flourishing in any given environment, whether urban, rural,

or somewhere in between, then, is a matter of navigating the conventions, forms and forces proliferating there, which for an urban coyote living in an urban ecosystem, means learning to live with the humans who largely structure the patterns of the city's rhythm and design (Niesner et al., 2021).

In the discourse of human-wildlife conflict management, when an individual coyote becomes "habituated" to humans, and so according to the CMPs needs to be hazed, this means the individual coyote in question has come to positively *associate* humans with food, and so tends to approach people in a bold or aggressive manner because in the past this behavior was rewarded by feeding.[19] And yet, according to the field of animal behavior studies, "habituation" as a term does not refer to this positive aspect of learning, but rather to the dwindling behavioral effects of a negative stimulus over time (Blumstein, 2016). And this paradoxical semantic confusion at the center of the urban coyote management paradigm is revealing – technically, "habituation" here refers to the cognitive behavioral process by which the strategy of hazing should *fail*, or more specifically, why it should exhibit limited returns overtime. Unless the activity of hazing is ultimately rendered completely intolerable to urban coyotes, a proposition which seems highly unlikely, coyotes and other animals too for that matter learn to adapt to its effects, as a negative stimulus that once caught their attention recedes into the background to become the new "wallpaper," as one coyote scientists memorably phrased the human environmental context. A scientific explanation for why hazing won't work, then, was always hiding in plain sight, and in the statement of the very problem itself, no less.

[19] See: Wildlife Life Watch presentation about living with urban coyotes: https://www.youtube.com/watch?v=LbKIK-6f3Nk

In my attempt to deconstruct the behaviorist logic of the current management paradigm, my goal is to introduce thinking from psychoanalysis and semiotics into the conversation, which I believe will allow for more nuanced conceptualizations of habituation, and so the issue of "problem individuals" too. In the discipline of psychoanalysis, habituation as a concept can refer more generally to the psychic compulsion to repeat behaviors that are both good or bad for us, and this compulsion is not only shared amongst humans, but also by all of the living (Malabou, 2022). In the light of this more ambivalent understanding of habituation as the drive towards habit formation generally, "managing" urban coyotes, then, is not about "dis-habituating" these wild dogs entirely, whatever that might look like, but rather, the goal becomes changing the coyote's patterns of behavioral repetition from those which are deemed threatening to humans towards new patterns more constructive of what's considered safe human-coyote relations. Urban coyote management, then, is a little like dog training generally, but on a mass scale and with wild dogs rather than domesticates. Here, the "good dog" is trained by attempting to re-form the associations in the coyote mind that arise directly from the material-semiotic relations these coyotes cultivate in their attempt to survive in the wider urban ecology.

Thus, in reframing the conversation away from the study of the effects of the negative stimulus known as hazing, the question now becomes one of the *meaning* generated between humans and coyotes from within their relations. What do human-coyote relations mean to both humans and coyotes, and how does meaning come to influence both human and coyote behavior? Suddenly, the duality between positive associations and negative associations is broken, and more nuance is allowed for understanding why urban selves do the things they do, but perhaps more importantly, *how* these selves emerge as distinct perspectives, with tendencies and habits, styles and manner

of living, acting and reacting. By "rematerializing [our] thinking" in this way, I not only believe we can see more precisely the kinds of human and coyote habits these urban ecological relations generate for what they are, but we'll also come to recognize the critical limitations of the negative stimuli more generally; after all, it's incredibly difficult to say "no" without language, a constraint, I argue, which results in the propagation of hazing as a relational form (Kohn, 2013).

According to the philosopher of plasticity Catherine Malabou, the question of whether or not someone or something can change their behavior is a question that is posable with respect to all forms of life, for it holds sway in the tension between life and death. For Malabou, plasticity describes the nature of that which is plastic, which in the most general terms is something's capacity to at once both *give* and *receive* form (Malabou, 2022). It is a matter of changing, but also of resisting change, a dynamic which is best represented by imagining a trait that is both adaptive and maladaptive at the same time, like synanthropy, or the affinity for living with and amongst humans. Coyotes are only able to flourish in the urban environment because of their very ability to change behavior to best fit the necessities of the present moment, whatever they may be. For a coyote, to live amongst humans is to live with an apex predator, some of whom might feed you and others of whom might kill you; their ability to navigate this ambiguity is why we say coyotes, as a species, are highly plastic. Even in a relatively small urban area, individual coyote diets can vary widely depending on the resources available to them and the specific tastes these individuals develop over the course of their lives (Caspi, Tali; unpublished conference presentation). But plasticity does not necessarily mean these creatures are malleable to our human whims, as these very same individuals are also capable of *resisting* change, even if a given behavior, for the moment, poses risks for the individual coyote. Over an individual's

lifespan, the simultaneity of the preservation of old forms and the emergence of new ones, the inertia of the present and spectral effects memory, all work to fashion one's ability to form new patterns within the unfolding repetitions of the old. "Every earlier stage of development persists alongside the later stage which has arisen from it," writes Freud in *Civilization and Its Discontents* (Malabou, 2022). Or in other words, is it possible to "teach an old dog new tricks?"

Following Malabou's deconstruction of plasticity in the psychotherapeutic setting, I've come to notice a parallel blind spot in the realm of wildlife management, mainly, the confusion between the concepts of plasticity and *elasticity*. Coyotes are plastic, meaning as a species they are highly adaptable, but as individuals, they are not quite elastic, which would be to regress completely to an earlier state of things. Can a coyote that has come to associate humans with food ever fully break these chains of associations and form new ones? What exactly is the nature of these chains? If coyotes can recognize individual humans, who are they approaching, and why? Perhaps if the total environment was changed to make ambiguous relations with humans maladaptive, then hazing could be seriously workable; but considering the number and diversity of people living alongside coyotes in the urban ecology, this prospect of totally redesigning the human element seems unlikely. As co-existence practitioner Dana Stengl says, "each backyard is like another universe;" the complex heterogeneity of the urban landscape is astounding. For every one person who hazes an urban coyote, there will more than likely be another person nearby who might offer food. And so, like Freud and his "Wolf Man," whose libidinous fixations at first proved a major obstacle to therapy, CMPs are optimistic about the force of their intervention, while also recognizing the many challenges that come with turning a "sticky" individual back towards the "wild."

I'd like to end this section with a description of the predicament of hazing from the field, as reported to me by two employees of the San Gabriel Valley Council of Governments (SGVCoG) who at the time were partly responsible for managing the coyote reporting "hotline" and for dispensing information about human-coyote co-existence to residents. These two young women, recent college graduates, were well versed in coyote biology and learned with regards to their region's coyote management plan. They had also spent the last months taking phone calls from residents who were concerned about the presence of coyotes in their neighborhoods, and after hearing their stories, instructed these people about how better to protect themselves, their pets and their loved ones. These managers of the coyote hotline described a delicate balance, a sort of "goldilocks" situation, which I believe demonstrates plasticity's medium state between elasticity and stickiness within the life force of individual coyotes: hazing appeared to only "work" on coyotes who did not exhibit bold or aggressive behavior because their associations between humans and food were still quite weak and not fully formed (these coyotes could be "trained"); and yet, for those coyotes who were experienced as bold and dangerous, hazing proved largely ineffective as a corrective because their behavioral syndrome was too strong (they were beyond the pale of hazing as a corrective action). The management conundrum arises here because human residents generally do not want to haze every coyote they see (this is what's known as "community hazing"), and yet for the coyotes that do need a corrective, hazing simply doesn't work to re-instill the fear of humans. Whether this description of the problem of applied hazing is widely applicable across the urban ecosystem is difficult to know with certainty, and yet over the years of speaking with co-existence practitioners I've noticed increasing qualifications as to the usefulness of hazing as a management strategy. Unless, of course, the purpose of hazing is not

necessarily to re-instill the fear of humans in coyotes, but rather to empower humans to take control of their human-coyote relations, especially during discreet, negative encounters. If hazing likely won't work to change coyote behavior, then is changing human behavior maybe what it's good for?

Hazing: Paradox, Performance, Play

Hazing urban coyotes is strange behavior. Whenever I've encountered people conducting demonstrations or have seen people practice hazing for the first time, whether on an imagined coyote, or once on a stuffed surrogate, I've noticed a clearly discomfiting hesitation in their attempts. To haze a coyote feels ridiculous, but why? In what follows, I will attempt describe and deconstruct the practice of hazing urban coyotes as this practice has been demonstrated to me by co-existence practitioners and within the literature circulating in communities as part of locally significant CMPs. With a better understanding of what hazing as a relational form might entail, as a performance, or style, manner or mood of interacting with coyotes, we might then be able to make some guesses as to what it *means* for hazing to *work*.

To begin, hazing is paradoxical. It is a moving towards a coyote who you wish to be moved away. Where this coyote should go is of no concern. In the face of some certain degree of fear, hazing is an act of conjuring oneself as a willful subject, and yet this willfulness is accomplished by turning oneself into an object: it is a project in which the hazer projects themselves as an object (Ahmed, 2014). Hazing is the personification of throwing oneself as a "NO." It is the activity of gathering of oneself what's necessary to create a horizon, both between the human hazer and the coyote, but critically, also within the human hazer themselves. Inhering within the

subject of hazing, then, we find a kind of *splitting*: a willful subject turned into a hardened object, a rising up by way of a rising down. Hazing is thus an *orientation,* both spatially and temporally. It is to say, "now," I am "above," or else I'll be coming down to hurt you.

Hazing is an exchange wrapped in a performance. When one hazes a coyote, one becomes a clear actor in a sequence, which requires the hazer to appear before the coyote (the audience of hazing) as a single form. And yet, within this clearly defined role there is also the illusion of invention. CMPs provide a variety of strategies one can choose from to scare the coyote away – a coke can full of pennies, an air horn, banging pots and pans, a squirt gun, throwing rocks, yelling loudly, and waving one's hands, etc. – all that matters is that the hazer themself *appears* to the coyote as the source of the danger. As one co-existence practitioner stated in a presentation about hazing, "whenever somebody asks whether one thing or another will work for hazing, I say, I don't know! Give it a try!" Improvisation, explicitly, is part of the program, but even within this space of personalization, the role of the hazer is still circumscribed by their own objectification, a role that is defined a-temporally. This is what the Anthropologist Marilyn Strathern, in her observations of Melanesian rituals of exchange, calls *reification* (Strathern, 1988), wherein relations are made apparent by the revelation of *appearances*, guided by an 'aesthetic,' or a system of social conventions that indicate the nature of the relationship between the terms of the relation (Gell, 1999). Critically, these performances tend confuse *cause* and *agency*, and so the act of exchange captures the terms of the relations by way of the "automatic" quality of the worlds these rituals project (Cavell, 1979). Like genres, these relational forms proliferate with a peculiar kind of efficacy, the result of a "falling into a form" to use the memorable phrase of Eduardo Kohn (Kohn, 2013). Once inside the aesthetic conventions of the relationship,

something bigger than the two terms independently takes hold of them and propels them forward in kind, as kinds, within a greater whole.

And if hazing is a performance, then it is also a kind of *play*. Or is it play? In his essay titled "A Theory of Play and Fantasy," the anthropologist Gregory Bateson makes the case that play, wherein a "mood sign" is recognized as a signal as such, rather than "automatically" registered as the thing for which it stands, is not just a property of human culture but also the natural world more widely. As anyone who's been around puppies knows, animals can play: "the playful nip denotes the bite, but it does not denote what would be denoted by the bite," writes Bateson (Bateson, 1967). Play is thus a metacommunicative gesture, which sometimes exists amongst animals, but which is also the wellspring of much of human culture, imagination and art-making. But within the sphere of play, writes Bateson, there is another more complex form of play, which is premised not on the deployment of the mood signal "this is play," but rather on the more ambiguous signal of the question, "is this play?" For Bateson, this type of paradoxical play, which interestingly, he notes is found in the human initiation rituals also known as "hazing," often takes the form of a *threat* that must never be fully realized (Bateson, 1967). As such, a dialect arises between a statement ('this is play') and a question ('is this play?'), and the metacommunicative gesture itself becomes the grounds for a kind of multispecies game (Rose et al., 2019). The difference between "playing" and being "toyed with," or even killed, is ever-fine, and here determines the field of play as defined by a kind of mystery, distance, or holding apart of the worlds of coyotes and the worlds of people for reasons of ensuring safety.

Whereas hazing in the fraternity rushing process is meant to heighten the separation between the inside and outside of these groups in order to dramatize the possibility of inclusion, hazing urban coyotes offers no such inclusive resolution in the end because the question of whether hazing is play or not must accordingly be answered *differently* by each actor in the sequence: for the human term, hazing must always remain play, or else it would cease to be hazing, but for the coyotes hazing must never be recognized as play, or else, theoretically, hazing would cease to be effective. And so, the performance of hazing takes place under the dubious assumption that coyotes will learn by the experience of getting hazed but will conveniently stop learning before hazing might be revealed to them as a game, or a threat, which must never ultimately arrive. This fantastic paradox at the heart of the hazing practice, I believe, holds together a series of dangerous essentializations of the human and the coyote actors alike. For hazing to be practiced as prescribed in the coyote management plans, the coyotes must never come to interpret this hazing as play, while simultaneously, the humans who practice this hazing must never forget how they've temporarily forgotten hazing is anything but play. Unless of course, they sometimes want to literally kill, hurt, or maim coyotes, which is certainly also a very real possibility in the urban ecology of Los Angeles. The line between hazing coyotes, and trapping and killing coyotes is fine, and in fact, trapping is often described as offering a similar result to hazing, as a practice that successfully re-instills the fear of humans in the coyote, even if it proves unsuccessful at controlling the overall population numbers. Hazing thus represents a split, between the hazer and the coyote, but also within the human hazer themselves. It evidences a fragmented urban ecological imaginary predicated on the idea of a vast *separation* of the worlds of the coyote and the worlds of the human, where humans are the only "actors" capable of consciously wielding

the performative self-veiling required of play, and who are simultaneously and by necessity, projecting onto the coyotes the unconscious, primary mind, for whom nothing is untrue.

Interlude: Trapping Coyotes on the Palos Verdes Peninsula

A close cousin of hazing that is decidedly not playful is "lethal removal," but as I will demonstrate, there are different kinds of trapping and killing coyotes, and each gives rise to different landscape structures through the kinds of human-coyote relations they seek to cultivate. The first, trapping for the purposes of "population control," is largely deemed ineffective, and yet it continues to proliferate largely due to the way this practice is entangled with political modes of dwelling predicated on domination and capitalist modes of extraction. The second way of trapping and killing coyotes is deployed for the purposes of removing "problem individuals" from the population, the effect of which is in fact not so different than the purported purposes of hazing, or to re-instill the fear of humans in wanton coyotes who have become overly bold or aggressive. By describing and comparing these practices in detail, I hope to add nuance to the various management strategies utilized across Southern California, and to make clear how these various ways of relating to coyotes have effects beyond the wild dogs they seek to control.

Over the course of my fieldwork, I often rode along with a Los Angeles County coyote specialist named Fernando who is employed by the County's Agricultural Department of Weights and Measures. Fernando's job entails a wide range of duties related to animal control and invasive species, which often meant he was called upon to trap coyotes, whether in areas of high human-coyote conflict, or oftentimes, too, in collaboration with scientists who were hoping to trap and radio collar coyotes for the purposes of scientific study. Crucially, Fernando also exhibited a

wealth of knowledge about urban coyote behavior, and so he also often acted as human-coyote coexistence educator, delivering tips and tricks to concerned residents who were struggling to live peaceably with the coyotes in their area. On one particular ride along with Fernando, we visited a private home in the Rolling Hills Estates of the Palos Verdes Peninsula. The Peninsula is a rising hilltop overlooking the Pacific Ocean to the West and the South Bay cities of Torrance and Long Beach to the east and south respectively, and its home to other affluent enclaves like Rolling Hills that operate as small, gated municipalities onto themselves. Due to the limited services they're able to offer residents, more glorified gated communities than full functioning cities with robust systems of city services, they contract with the County for services like coyote management, undoubtedly because of their wealth and political influence as well.

On this particular morning, Fernando and I visited a large, multi-acre homesite where a depredation had recently occurred: the family who we met, composed of Mother and Father, a child under two years of age and two small dogs, told us about how a third, missing dog was believed to have been attacked and killed by the coyotes who were seen frequently and in close proximity to the home. As the wife of the household explained to us, her favorite of the small dogs ran out of the house one early morning while the ocean mist still clung to the chaparral, and barking, this dog disappeared into the front yard and down the drive. When she went to go retrieve the dog, she found nothing, except a small trail of blood leading from the base of the driveway, across the street, and down the hillside into the thick brush pocketing the ravine separating her home from the next estate. She was clearly unnerved, and saddened, by these clear signs that her beloved pet had been killed by coyotes, evidence Fernando glumly corroborated. Fernando explained to the family that there was little he could do to remove coyotes from this

area entirely, and he gave them pamphlets created by the city with instructions for how to better keep their pets safe, which included information about removing attractants from their yard and also for hazing coyotes on sight should that be deemed necessary. We discussed the possibility of a neighbor feeding the coyotes, along with other wildlife, a story Fernando had heard from others in the neighborhood he had recently visited too. At the house in question, a murder of crows hung low in the trees and sat upon the fence posts ringing the property of the accused feeder.

Inevitably, the possibility of Fernando setting some traps to try to remove the coyote who killed the family's beloved dog was discussed, a move the family, in this case, whole heartedly supported. Of course, they knew Fernando had trapped for coyotes elsewhere in the neighborhood, as Fernando was a regular visitor to these parts; I noticed he seemed to know others living nearby as we drove the streets and he stopped to chat with those who slowed their cars to greet us, recognizing Fernando's impressive County-labeled Ford "Raptor" truck. Fernando explained to the family the clear limitations of trapping in this case – there was no way to trap the "problem individual" coyote with certainty, and his laying of the trap was complicated by the fact of a few large, free roaming domestic dogs in the area who could accidentally become by-catch. Fernando also reiterated the impossibility of his trapping reducing the overall population of coyotes in the area, even as he recognized the fact that removing an individual coyote, any coyote, would possibly have the effect of injecting fear into the local pack, which might cause them to better keep their distance from the family's home. Later Fernando told me that trapping coyotes with a noose is more effective for scaring coyotes than shooting them with a gun, because in the former case the terror of the trapped coyote waiting caught in the noose is a clear and more visible sign to the rest of the pack as a warning of imminent danger. It seemed

removing problem individuals as a way of re-instilling fear contained a performative dimension, both for the coyotes, but also for the family who we were visiting. Ultimately, Fernando acquiesced to the family's desires for him to set a trap, and he explained his reasoning by the fact that the coyote in question appeared to brazenly attack the family's dog on the grounds of their property, and by the fact of their two remaining small dogs and the young toddler who were also potentially susceptible to further attacks. In this case, sending a message to the coyotes to "stay away, or else," could prove a life saving measure, so the thinking goes, both for the family's remaining small dogs, but also for their child.

Despite laying traps in this case, Fernando's blend of "lethal removal" work and co-existence education is notable for the way it contrasts with trapping efforts undertaken by private trappers working in these same areas, who due to the imperatives of running a business, are far less interested in fostering peaceable co-existence. I met one such trapper named Jimmie one afternoon in a public park in Torrance after he had completed an early morning of setting traps on the Peninsula. Jimmie has been trapping coyotes for decades, everywhere from Mississippi to large swathes of Southern California, where he is known as the preeminent private coyote trapper.[20] Jimmie knows a lot about coyotes, how to call them into a trap with vocalizations, how they sniff the rise and fall of wind drifts known as thermals as the morning Sun warms the air, how they move in predictable patterns, their hunting strategies, and the way, he says, they key into hunting domestic pets by smelling for feces – "the proverbial pie in the window," says Jimmie. Jimmie tells me how urban coyotes are not "survivors," but rather, how they are "thrivers," and how after three generations of living in cities, a given coyote is completely

[20] See: "Rancho Palos Verdes approves hiring of professional coyote trapper," in *The Daily Breeze*: LINK.

adapted to city life and will likely never leave because the country is a life they simply do not know. He even proffered an interesting theory about how the financial crisis of 2008 might have led to a boon in the urban coyote population, as these wild dogs took advantage of the bevy of foreclosed upon homes to colonize the newly available habitat of these now empty backyards. Jimmie believes the regular trapping and killing of coyotes is a necessary strategery in the tool kit of urban coyote management because otherwise their population will grow out of control due to the unending resources provided by the urban environment. Domestic pets and fresh water abound in the urban ecology, and once these coyotes have a taste of the good life, they're unlikely to leave. At least, this is the story Jimmie sells. You won't find Jimmie passing out fliers about removing attractants or hazing coyotes as a deterrent (he considers these rhetorical moves of municipalities more concerned with public relations than practicality). He drives a non-descript white pickup truck – disappearing from people and coyotes alike is a critical component of his services – in the back of which is a miniature gas chamber he uses to euthanize the coyotes he traps.

Fernando and Jimmie thus both trap and kill coyotes, but due to the exigencies of their jobs, they each go about this in very different ways, and for different reason. Fernando attempts to work within the balance of removing problem individuals and educating residents about co-existence – he seems to avoid killing coyotes when he can, but clearly feels pressure to please the residents who call on the State do something about the perceived problem of aggressive coyotes in their neighborhoods. As an employee of the state, he also serves those communities that tend to exhibit a good amount of political capital – or as Fernando says, "the squeeky wheel gets the grease." Not only is he called often to the Peninsula because of the arrangements these

communities have with the County, but these areas also provide the physical spaces that are necessary to successfully trap and kill coyotes. Due to the legal constraints dictating how one must go about trapping, it's difficult to find a good location to set a trap in some of the denser portions of the city. Of course, if there is a problem individual anywhere in the County, Fernando, or another state official, from the County, State or even the Federal level will be called in for removal. But since these agency wildlife experts are not in the *business* of killing coyotes, there is a natural tendency to resist indiscriminate and widespread killing, which is expensive, and a greater emphasis is placed on educating residents instead. Jimmie, on the other hand, is hired by individuals and increasingly by municipalities, too, who'd like to see programs for trapping and killing implemented that are more permanent and indiscriminate, this for the purposes of population control, but also for easing resident fears. The more coyotes Jimmie kills, the more money he makes, but critically, Jimmie's work is never really finished because as he is all too willing to admit, after a year, or maybe two, the coyotes will return to the places where he once trapped, removed and killed them. A pretty good business model, if you can sell it.

In comparing these two different kinds of trapping and killing urban coyotes, my aim is not only to decipher the differences between their practices and the wider ecological imaginaries each of them generates, but also to heighten the contradictions within the management strategy of hazing as well. Whether trapping to control the population, or to remove "problem individuals," or to instruct residents to haze coyotes instead as an alternative to killing, each of these strategies for managing human-coyote relations not only effects coyotes but also the wider ecology in which these coyotes exist. Trapping to control the population gives rise to a capitalist business model, one predicated upon the need to extract value from the land, which in this case, is the inevitable

repopulation of the urban coyote to these lands; trapping for the purpose of removing "problem individuals" comes with its own difficulties, of course, mostly, with regards to the process of targeting specific individuals, but overall, this strategy seems to have tangible effects on coyote behavior. Hazing, on the other hand, has been found to have little no effect on aggressive coyotes, but as I will demonstrate below, it certainly does influence the people who are undertaking the hazing. In a wildlife management discourse that often pits lethal management practices against peaceful co-existence models, I want to question this easy duality and to suggest that there are maybe ways of killing coyotes ethically, even if also perhaps, this killing is not always necessary. There is more than one way to kill a coyote, most of which I do think have been imagined by the current management strategies, much less implemented. Can we make "lethal removal" into a careful ritual that honors the livelihood of coyotes and their ongoing rights to flourish on their native soil? Killing, of course, should always be avoided if possible, but doing too much to avoid this possibility might also lead to dangerous contradictions. I think the possibilities of lethal removal, when necessary considering a given context, have yet to be fully realized. It is an inevitable fact of ecology that we live within "finite mortal knots," as Donna Haraway has said, and whether we like it or not, we cannot live outside this killing (Haraway, 2008). In adding nuance to this picture of "lethal removal," I'd like to open the conversation to further ethical consideration of this necessity of living. In this light, in some circumstances, some kinds of lethal removal might even be a more ethical stance than supporting the widespread hazing of any and all coyotes on sight, a violence in itself that works not only upon coyotes, but upon the human hazers themselves in ways I believe we don't quite yet understand. Afterall, hazing is predicated on a game that represses the fact of our finitude, and the coyote's ability to learn and to adapt. It is predicated on the ultimate ends of our ability to

communicate, positively, and to think with wild dogs. And yet, some forms of killing, if imbued with thought and intention, might even yet honor the existence of the creature's whose life we take with regret, and invite a recognition of the way we touch other creatures even as they might also touch us back.

The Work of Hazing: Man2 and The Animal

In the above close reading of "humane hazing" as a practice, what's perhaps most clear is that hazing results in a kind of splitting, or separation, both between the hazer and the coyote, but also within the human hazer themself. The question of where the coyote who is being hazed is supposed to go perhaps hints at yet another, broader scale form of separation, one which we might see in the city as a whole. There are cities within the city, worlds within worlds. What we'd like to imagine as a collective "commons" is fragmented into a tapestry of multiple worlds (Blaser, 2017), and there are reasons to celebrate this fact, but also reasons for making understanding anew how to stitch these worlds together. As the conscious mind sometimes relates to the unconscious mind, so does hazing presume that we can banish these coyotes to some unseen portion of the city for good, even though they likely aren't going anywhere.

In providing the relational form that constitutes one such kind of separation, in this case, between humans and coyotes, hazing as prescribed in CMPs are thus invoking what is projected as a "natural" order, one which serves to reify certain kinds of humans and certain kinds of coyotes in a fantasy of mutually programmed harmony. What on the surface appears as a tool to foster co-existence is also a method for understanding, and circumscribing, human and coyote *being*. In

her essay titled “Unsettling the Coloniality of Being/Power/Truth/Freedom,” Sylvia Wynter argues that a society’s understanding of the natural order of things constrains its very self-conception of humanity. In this sweeping work, she traces the grand narrative of Western history as the general category of the human is transformed from what she calls Man1 to Man2, which occurs in parallel with the broader societal transformation from a Christian Theocracy to one dominated by Science and rational economics. As a result of the power emanating from these institutions, the church and the scientific method, and the way this power is imbricated in the West’s colonial domination of the rest of the world, Wynter claims Man1 and Man2 have been overly represented and at the expense of “other genres of being human” (Wynter, 2003).

Without taking such a grand narrative sweep of global history, I take inspiration from Wynter’s argument for the feedback she describes between sociogeny and ontogeny, how the larger cultural context, creates a system that serves to validate certain kinds of being, truth, power, while pushing others into the abyss of the “Other” of civilization. On a local scale, I’ve come to think of CMPs as one such natural-cultural system, one which grows out of the long history of settler colonialism, and which serves to undergird its ongoing structural domination by way of “managing” the relations between humans and coyotes. In this story, managing humans and coyotes is not just about fostering co-existence, but also circumscribing their very natures for the purposes of maintaining a limited conception of natural order.

Hazing Tools

Noise Makers: your loud voice, whistles, bells, pots, shaker cans (soda can filled with pennies and wrapped with aluminum foil, slapping a newspaper against your thigh

Surprises: pop-up umbrella, motion-activated lights or sprinklers, garden hose, supersoaker spray gun filled with vinegar water

Hazing Tips

- **Stand your ground.** Make eye contact. Advance toward the coyote with your hazing tools (such as pans, water squirt gun, umbrella, can with coins) if there is hesitation on the part of the coyote.
- **Make sure the coyote is focused on you** as the source of danger or discomfort. Do not haze from buildings or your car where the coyote can't see you clearly.
- **Make it multisensory.** Use tools that scare with sound, light and motion.
- **Variety is essential.** Coyotes can learn to recognize and avoid individual people, so the more often a coyote has a negative experience with various hazing tool and different people, the faster he will change his behavior to avoid human contact.
- **Hazing should be exaggerated, assertive, and consistent.** Communities should always maintain some level of hazing using a variety of tools so that the coyotes do not return to unacceptable behavior over time.

Coyote Hazing

Coyote hazing simply means scaring a coyote away from you, your yard, or your neighborhood. Coyotes are members of the dog family, and just as we train our dogs to adopt good behavior, we can reinforce a coyote's natural instinct to avoid people without harming them.

Hazing Techniques

Hazing involves asserting yourself by reacting to the inappropriate presence of a coyote so that he is frightened or startled and leaves the area.

Hazing Techniques include:

- Yelling and waving arms
- Responding aggressively
- Banging pots and pans
- Using squirt guns or garden hoses
- Throwing tennis balls or rocks
- Utilizing whistles or air horns

NEVER IGNORE OR RUN AWAY!

A page from the Culver City Coyote Management Plan *(accessed August 31st, 2023)*

So, what kind of human does the activity of hazing propagate? What would the "descriptive statement," to use Wynter phrase, of ManHazer be?

Firstly, the general orientation of hazing, I believe, is one of supremacy, which fosters a general sense of man existing *over* coyotes in a natural hierarchy. Hazing is a performance, but it's also perhaps a literalization, or concretization, of this myth of Western Man's supremacy over animals (Levi-Strauss, 2021). As such, hazing explicitly pushes other "genres of being human," or ways of relating to coyotes to the outside of its structure, most obviously, those of Amerindian

cultures, who consider the coyote to be kin. For the Tongva, for example, human-coyote conflict is not at all a problem to be mitigated, but rather the source of a rich cosmology (McCawley, 2009). From the perspective of this mythology, even fostering the stated goal of peaceful co-existence is a kind of cosmological violence, to the indigenous Tongva peoples and to their coyote kin alike.

Secondly, we might describe ManHazer's sense of entitlement to land, for as much as the purpose of hazing is to re-instill the fear of humans in coyotes, it's also a matter of moving coyotes away from people's homes, where vulnerable children and pets may also reside. Along these lines, hazing can be seen as an attempt to extend the comfortable qualities of the domus settlers might experience inside the home, to the surrounding yard and more generally to the wider environment. Elsewhere I've described this process of enclosure as a mode of dwelling known as "generalized-domestication," as theorized by the anthropologist Ghassan Hage, who claims this fantasy is integral to the white settler way of life (See Chapter 1, "The Coyote in the Cloud"). The ways this entitlement to territory is also linked with notions of private property deserves further consideration, especially since notions of property ownership are so racialized in a city like Los Angeles (Harris, 1993). And it's true, much of the anti-coyote sentiment across Southern California has been due to depredations of cats and small dogs, events which are often represented by the owner-victims as thefts, if not also as murders. These anti-coyote activists then utilize their political capital, derived from their privileged societal standing, to call on the state to rectify these perceived "crimes" committed by coyotes. With these "descriptive statements" in mind – both the supremacy of man over animal inhering within the desire to mitigate conflict entirely, and the protection of property rights – it becomes clear how the

concept of hazing emanates from a white settler societal structure as an activity in support of its further "sedimentation" (Whyte, 2018).

But what about the people who are not hazing coyotes? If the above are the potential "descriptive qualities" of the HumanHazer, or what is potentially produced of the human by the prescriptions of hazing as found in the CMPs, then we should also be able to look for people who do not haze coyotes, who can't haze coyote, or who won't haze coyotes by choice, for evidence of perhaps other "genres of being human," which are also simultaneously present in the city. Afterall, the lack of "buy in" from some residents is one reason the scientists who have studied urban human-coyote conflict have questioned the efficacy of "community hazing" as a management strategy (Breck et al, 2017). In my fieldwork with coexistence practitioners and urban residents more generally who are living within ongoing relations with coyotes, I've noticed there are some kinds of people who are excited about hazing and others who are either indifferent, or even vehemently opposed to hazing, either intuitively or on principle. And I've come to see these differences as both representative of these individual's relationship with coyotes themselves, but also indicative of their more general societal context, where they might fit in the social hierarchy as evidenced by the other relations that are enciphered within their relations with coyotes. If metaphors used by anti-coyote activists, like "Evict Coyotes," are any indication, people in the city are using their relations with coyotes to understand where they stand in the wider political context of the urban ecology – fundamentally, this is what it means to exist in an "ecology of selves" (Kohn, 2013). So how might the personal decision of whether to haze coyotes or not to haze coyotes reflect these individuals' "self-concept"? Within these relations, can we see the subtle reflections of relative political power/powerlessness that these individuals wield, or hope to wield, in the

wider society? As I'll describe, the propensity to haze often cuts across political fault lines related to gender, race, and housing status.

For example, over the course of speaking with co-existence practitioners and human-coyote conflict specialists, I've come to notice how hazing as a practice seems most enthusiastically received by people who identify as women. This might seem surprising, since we usually associate the performance of dominance with masculinity, and yet, it appears hazing is useful to women precisely due to the performative element of its demands. Although there are very rare occurrences when coyotes literally pose a threat to human safety, for complex reasons, women, generally, appear to be more afraid of coyotes than men. For women, then, hazing seems less about re-instilling the fear of humans in coyotes than it is about distilling the fear of coyotes out of people. Although the stated purpose of hazing never recalls this dual action of its effects, the co-existence practitioner Dana Stengl, the founder and executive director of the urban wildlife education organization Teranga Ranch, explicitly casts hazing in these terms. For Dana, hazing is an effective tool for empowering people to take control of their relations with coyotes, and in an explicitly animalistic sense, to deploy this newly gained sense of power hazing affords to protect their "territory." "Hazing coyotes is all about confidence," Dana tells me, and in the workshops where she teaches people how to haze, she is quite clear about the forceful effect of personal belief. "One thing that's really important about humane hazing is that you have buy-in," says Dana in an educational video posted to Youtube titled "Coyotes in the Neighborhood? You've GOT this!":[21]

[21] See, "Coyotes in your Neighborhood? You GOT this!" by Teranga Ranch: https://www.youtube.com/watch?v=yXqCbG8gQQ8

"You can't just be like 'Get away coyote…get away coyote… [Dana demonstrates a tepid hazing performance]. You have to be serious! You have to be the boss in this situation. And the person who is the boss in this situation does not even need a 'humane hazing' device. If I see a coyote, and he's looking at me funny, I'm going to be like 'GAH!' [Dana stamps forward, arms raised in an aggressive posture]. That's all I need. I just need my body. But maybe if I'm a more timid person, and I don't think I have it in me, having a 'human hazing' device is helpful."

In this light, the prescriptions of hazing – the suggestion that one use a can full of pennies, or an airhorn, or an umbrella to accentuate the performance – can be seen as attempt to augment one's sense of their own power, both in the eyes of the coyote, but also in the eyes of the person undertaking the performance of hazing. This presents one of the more peculiar dynamics involved in hazing, which a focus on the relation as a whole makes clear – hazing is meaningful to coyotes, but it also proves a meaningful way to understand our relationship to ourselves, our understanding of our own power, agency and sense of control over our lives.

But not everyone requires this training in self-possession vis a vis their relations with coyotes. For example, I've seen men on Nextdoor respond to women who are expressing fear of coyotes— admittedly, with a good dose of condescension – with utter disbelief about the fact that anybody could be afraid of such scrawny and insignificantly dangerous wild dogs. Or in another case, I watched as a male police officer participating in a community coyote awareness meeting incredulously recalled a story about a woman who claimed she was unable to haze coyotes, and yet when he arrived at the scene, he reported how he was easily able to scare the coyotes away and out of sight. Of course, he didn't consider the fact that him being a man, and one in uniform

and wielding a gun no less, might have imbued him with the sense of power necessary for establishing his communicative dominance. As the saying goes, “dogs can smell fear,” and in the cases of these discrepancies in the effectiveness of the human performances of hazing, I believe coyotes are able to sense something of our societal standings as we present ourselves to their kind. Afterall, coyotes are complex, social creatures with clear sensitivities to the dynamics of hierarchies and dominance within their own packs. Is it any wonder they can potentially “smell” these same dynamics in our own social organization?

And there is perhaps an element of race in these innerworkings of hazing, too. Dr. Niamh Quinn, one of the preeminent human-coyote conflict specialists in Southern California noted to me in a conversation how the majority of people who, in her experience, are expressing concerns about the presence of coyotes in their neighborhood are white women. And from my own observations as well, this appears to be true: the ranks of “Evict Coyotes,” perhaps the most widespread and aggressive anti-coyote organization in the area, are filled almost exclusively by white people, and mostly white women. There could be many reasons for this, one being the intense attachments to small domestic pets these women cultivate, pets who are at a greater risk of depredation by coyotes. But I also believe this outspoken activism might be a product of the societal privilege encoded in these women by their whiteness. This is not to say that white women in particular are more afraid of coyotes than women of other races, but rather, that white women might feel a special degree of entitlement to State protection by the very fact of the protection of their whiteness before the law. Another manifestation of this privilege can be seen in the ubiquitous, and sometimes disparaging, vernacular categorization of white women who are quick to call the

police due to a disturbance or a perceived threat as "Karens."[22] I bring up this popular form of type-casting, one which contains the explicitly political aim to reveal the way white privilege works in our society, not at all to disparage those who might be afraid of coyotes, but rather to shed light on the inequities people experience in their dealings with state power. For example, we could imagine a woman of color who might be less inclined to call the police or to appeal to their city council chambers to do something about the coyotes in her neighborhood because historically these institutions have not been receptive to her needs, or even worse, have themselves proven a threat to her and her family's well-being. Thus, white women might appear as such common actors in urban coyote politics due to the unique mixture of precarity and protectionism inhering within their social identity, a positionality that manifests in the very particular way these women attempt to navigate their sense of agency with regards to their human-coyote relations, which is mainly, by appealing to state power.

And there is still a further ripple to the inequities revealed by hazing when we consider the place of unhoused residents in the city. In an attempt to better understand the ways coyotes move through the city, I've used data collected from coyotes that have been trapped and radio collared to make a map of coyote space use in some of the densest parts of Los Angeles. In what elsewhere I've called the "infrastructural signature" of coyote space use, I've noticed how many of the coyotes in these areas are exploiting infrastructural spaces as habitat, which are also often the places in the city utilized by unhoused persons to make their homes out of sight of the majority of other urban residents and also the police (Niesner et al., 2021). Upon visiting some of

[22] See, "What exactly is a 'Karen'? And where did the meme come from?" (July 31, 2020) : https://www.bbc.com/news/world-53588201

these spaces in person and talking to the unhoused people living there about their relations with coyotes, I've found these residents largely unconcerned about the presence of coyotes even as they also acknowledged their overlapping geography. One man in particular, who goes by the name Gordo, told me about how he often saw coyotes only momentarily, and how he believed they were using some of the same throughfares cut through the chain-linked fences that unhoused people were using to navigate these infrastructural spaces as well. Gordo told me how neither he nor anybody he knew ever felt it necessary to haze these coyotes, which is perhaps an understandable posture considering Gordo and the others living in this encampment were themselves often the target of harassment intended to unsettle their livelihoods. In fact, Gordo dressed up as a construction worker, with an orange vest and hard hat, explicitly for the purposes of avoiding harassment by the local police in the area. Despite his disguise, when I next visited the interchange where he and his unhoused neighbors lived, the entire encampment had been removed and I never saw him nor spoke with him again.

And another informant, Paul, an unhoused man living in Elysian Park who oftentimes feeds one of the coyotes he's befriended over the years living there, told me explicitly how he'd never haze a coyote because he feels hazing would be cruel, and in fact, he feeds this coyote in particular, he says, because he identifies with the challenges to survival he believes this coyotes faces (for more on Paul's relationship with "Collar," see Coyote Plays Itself, Part I). For an unhoused man like Paul, hazing coyotes, as empowering as it could be, is a practice limited by his sense of his own precariousness. He does not feel threatened by the presence of coyotes, but perhaps more to the point, he has other more pressing concerns related to his own safety and well-being, and the violence he daily experiences coming from other directions. To place himself above coyotes in

the social hierarchy of the city is thus of little value to him: no matter his entitlement, no matter his self-possession, he remains unhoused and so vulnerable to the whims of others far more powerful than coyotes. Thus, the relations he cultivates with the coyote he's named "Collar," rather than inviting a dangerous instability, proves reparative by comparison, and hazing as a relational reform forecloses the possibility of this intimacy in service of survival. And considering his identification with "Collar," the propagation of hazing across the urban ecology, as a way of relating more generally, might even threaten his own sense of safety. In Paul's case, being unhoused, then, is perhaps a "genre of being human" that hazing entirely forecloses, or perhaps like the coyotes who are targeted in the wake of this practice, a way of relating that banishes both coyotes and the unhoused persons to the "city's end" (Roy, 2017). Does the deployment of projectiles and other deterrents codified in coyote management plans come to inform some of the more violent ways the state attempts to "solve" the explosion in visibility of unhoused people in the city? Or alternatively, considering most CMPs first materialized in local police departments, can we see how the logics of policing city space have come to inform the logics of urban wildlife management through the proliferation and forceful effects of hazing rituals? Although names like "Evict Coyotes" on the surface might appear as metaphoric, by taking the perspective of the broader "ecology of selves," we can imagine how urban residents of all kinds, whether human or other-than-human, are imbricated in a politics of belonging that traffics in power differentials, and which crosses the nature-culture divide.

Conclusion: "Falling into a form," El Sereno

In the above, what I've tried to show is how hazing coyotes as a practice does not merely foster co-existence, or serve to keep habituated coyotes wild, but rather it materializes a relational form

that produces both humans and coyotes in particular ways. If to ask what something means is to ask what "habits" it produces, then what hazing means is precisely this construction of the HumanHazer, one who feels they are above coyotes in a hierarchy, one who protects their own private property, and one who, for better and for worse, is not afraid of coyotes. But if hazing as a practice works to fashion the possibilities, the affinities, and the manners of relating of this very kind of human general – the decidedly white-settler HumanHazer – then we must also attempt to understand the ramifications of this productive proliferation. Might the relational form of hazing urban coyotes come to inform other human-human relations in the city?

Communicating with wild dogs who do not share our capacity for language provides its own constraints, ones which the locally significant CMPs attempt to navigate in their prescriptions. These documents are plans, but also instructions, for how best to signal to coyotes that we don't want them around. But "how to say 'don't' without language," is a challenge that by necessity invites the paradox of play (Kohn, 2007). As Eduardo Kohn asks in *How Forests Think*: "How do you tell a dog not to bite when the only secure modes of communication available are via likeness and contiguity?" In the symbolic register, we have a word for "no," and ways of sympathetically explaining our reasoning, which provides a spaciousness that only language can provide. This is why one might go to talk therapy, for example, to find the words we're otherwise unable to find in the tunnels of our relationships themselves, and within which our not having these words amplifies the pressures felt to respond in meaningful ways. But working only within the confining logics of iconicity and indexicality, these signals of "likeness" and "contiguity," one must conform our methods of communication to a form that is understandable to another being who does not share our capacity for language, and this constraint creates *force* all on its

own. “Falling into a form”, then, in the words of Kohn, and perhaps especially in relationships that require this constraint of having to communicate without language, is a process that creates but also exceeds both the person and the animal involved. It is to exist within something that you must enter into, but that which can’t be fully described from the outside; this fact of it having an inside and an outside, I believe, means it has a life of its own as well – this is the reason for form’s “effortless efficacy” (Kohn, 2013). As such, hazing as a relation form might be crystalized in CMPs, as text in a PDF on a municipal website, for instance, or as a practice that spreads through communities by way of volunteers or educational presentations, but it came from elsewhere, and it can also go feral, to propagate across other domains of city life.

My first assignment as a coyote researcher was to setup a novel stimulus test for urban coyotes in the East Los Angeles neighborhood of El Sereno, a neighborhood I was already quite familiar with due to my time living and working nearby for many years. The idea of the study, to which I was only a volunteer, was to test nationwide whether urban coyotes were more “bold” than their rural counterparts. To measure this “boldness,” we would setup a camera trap, and in front of the camera trap we would build a small, square structure of wooden sticks in the ground, tying a thin white string from the tops of each to the others to complete the square. After putting some predator bait in the middle of our strange structure, we would leave, and come back to see what the camera captured a few weeks later. The idea, here, was a method of measuring in the form of game: the more “bold” coyotes would approach the predator bait more quickly than the “shy” coyotes, the novel stimulus being of little concern to the bold individuals. The working hypothesis was that urban coyotes would approach more quickly than rural coyotes, which would be a sign of their increasing boldness (Breck et al, 2019). I describe this study, because in the

years prior to this coyote research, within a half mile radius of the very spot where I setup these cameras, another story unfolded, and continues to unfold, which I think places the systems of wildlife management and the systems of by which the city manages peoples in the same "neighborhood," in my thoughts, but also quite literally (Heidegger, 1981).

Just two blocks away from where I setup my trail camera for the purpose of measuring coyote boldness, a young man I knew named Pedro, was shot by the police in the driveway of his friend's home. Luckily Pedro survived, but he was held in prison for the next 6 years because of his involvement with a local gang and also his alleged possession of a firearm at the time of the shooting; after his prison sentence, he was then threatened with deportation because he was undocumented. Soon after the shooting, a close friend of mine, the poet, community organizer and activist Mariella Saba, invited me to record a birthday celebration for Pedro at the sight of his shooting. Pedro was 18 years old, and he was shot the day after his high school graduation and three days after he told me he wanted to join a filmmaking class I was then teaching at a community art school. At the time of the shooting, Mariella had been working with Pedro as a mentor, as she has for many young men in her neighborhood who are to differing degrees entangled in gang life, and who face other obstacles as well, such as undocumented status, or lack of access to education and meaningful work. At Pedro's birthday celebration,[23] where his friends and other community members gathered to send up wishes into the sky for Pedro, who remained distantly incarcerated, we were constantly harassed by the police. They would drive up and down the block in their police vehicles, sometimes loitering outside in the street or gathering their police cruisers up the block. Not a word was said to us about the meaning of their presence,

[23] See "Pedro's Birthday Wishes", Password: "Pedro's Bday": https://vimeo.com/manage/videos/224007011/privacy

but their power was meant to be felt, as a threat, and it became clear that even if our peaceful gathering wasn't entirely illegal, it was certainly unwanted and being watched with suspicion. Whenever the police would drive by our gathering, Mariella would step out into the street and burn medicinal white sage, as an attempt to cleanse the space between us and the police, or perhaps to prevent the possibility that we might further "fall into a form" with them. Without recourse to conversation, for these police officers were clearly not interested in talking to us and neither were we interesting in talking with them, other measures of diffusing the tensions were required. For Mariella, the burning of sage, or even the careful use of psychoactive medicinal fungi, is a method by which one can disentangle oneself from harmful relations and to create new pathways, both of thought and personal relations, which she often put to use in her work with young men hoping to progress to more careful forms of living.

Bracketing for the moment the complex reasons a gang such as the one I am referencing comes into existence and becomes entrenched in a community, what we were experiencing this sunny afternoon in El Sereno was not at all unusual. For these young Latinx men and their families, police harassment in their neighborhood is a regular part of life, and one which became more intense in those years due to the nature of rapid gentrification. In fact, just a few blocks from Pedro's birthday ritual, I also sometimes worked for a well-known fine artist, who had recently purchased an old warehouse and converted it into artist studios, which she rented to other artists moving into the neighborhood from far and wide. These emerging relationships between criminalized youth and local police forces were thus taking place amongst the backdrop of changing demographics in the neighborhood, but as my later work with urban coyote scientists would demonstrate, alongside emerging human-coyote relations as well.

The study I mentioned, which I contributed to as a scientist-volunteer, and which took place in this very neighborhood, less than a half mile from where Pedro was attacked, but also at other sites across the city and the county, was in some part a response to rising human-coyote conflict in cities (Breck et al, 2019). In Los Angles, and in cities like Torrance and Culver City, there were already strong anti-coyote sentiments taking root, and anti-coyote activists were organizing themselves and lobbying their local governments to do something about the perceived coyote threat to themselves, and mostly, their pets. In El Sereno, however, there was no such anti-coyote constituency, even though there were many coyotes. I've seen packs lounging on the hillside in Rose Hills park, a grassy hilltop and nature preserve just to the east, and when driving through the neighborhoods at night with telemetry equipment tracking the coyotes the NPS had collared in this neighborhood, I would see cats lying out on hoods of cars or sitting atop the stucco pillars guarding the stairs leading up to front doors. In this neighborhood, of many coyotes, many cats, but also where many of the residents feel as though they are constantly harassed by the police, there is to my knowledge very little, if any, anti-coyote vitriol.

When my friend Mariella's chicken coop was raided by coyotes one night – El Sereno still has some of the rural character lost to much of the rest of LA, with barnyard animals and even a few dirt roads dispersed amongst the houses – and two of her chickens were killed, I asked her what she thought about this incident: "I am wondering if they came on this night because of the rain," she mused. In connecting my experiences in El Sereno with my research into CMPs, I've come to notice how the human-wildlife conflict specialists' dictum "conflict is contextual" is more true than ever. One person's story of human-coyote conflict might be another person's story of

ecological awareness and sensitivity to another wild creature, or perhaps more to the point, a story of a human-human issue where the people in question find themselves in the position of long targeted the coyote – harassed, criminalized, and forced out, with not a thought given to where one is supposed to go. And the point is precisely *not* to equate humans and coyotes, but rather, to recognize how the constraints we encounter when attempting to "manage" coyotes without language might come to inform the way we conceive of our relations with people, too, with sometimes needlessly fatal consequences. We do a disservice to both people and coyotes when we conflate our ways of making meaning: we can learn better to support the livelihoods of people, mainly by refining our ways of understanding each other, and we can learn better to think with coyotes, too, even if this means attuning ourselves to the iconic and indexical sign systems they also understand. Utilizing the power of positive "associations," rather than relying on the negative constraints of having to saying "no" without language, might just prove substantially more effective for creating the more ethical ecological associations of selves we hope to cultivate. In the light of these "management" systems dwelling together in a single neighborhood, I aim to take the possibility of feedback between them seriously, and to open up the space in our thinking to devise alternative systems in the service of more flourishing for more and various kinds of selves, whether human or otherwise.

Urban coyote management, then, is not just about wildlife, but is perhaps also the wellspring out of which other all-too-human systems of oppression also emerge. I believe there is immense opportunity here, to recognize the coyote as enciphering our urban politics more widely, and so providing the opportunity to transform the urban ecology of our city across the nature-culture divide. What would an abolitionist coyote management plan look like? How could we make

urban wildlife management an experiment in anti-colonial praxis? These are questions not just for humans and not just for coyotes, but whatever bigger thing emerges between the two, which we enter into, but also which exceeds us as species and individuals.

CHAPTER 6

The (Camera) Trap: Human-Coyote Representations at the Edge of Encounter

"By the power of photography, the natural image of a world that we neither know nor can see, nature at last does more than imitate art: she imitates the artist."

-Andre Bazin, *The Ontology of the Photographic Image*

Introduction

There is no such thing as representation without relation – whether in a painting, a photograph, or in the way a spider's web comes to represent the fly, any given representation is constituted by relations in all directions, with the mind of its creator, with the world it indexes, and from within its own internal coherence too. In the following writing, I want to deconstruct various representations of urban coyotes for the purposes of better understanding how representation functions to mediate human-coyote relations in the urban ecology, and critically for my purposes, I will utilize both the material deployment and analytic device of "the trap" to make sense of the way the worlds of humans and coyotes intersect. As Alberto Corsín Jimenez writes, traps are "ecological placeholders," offering the intermediating grounds between human intelligence and nature, and between the environmental energy supplied by "prey" and the cultural energy constituted by the trap's mechanism (Jiménez, 2021). As such, traps are good to think with for the way they both metaphorize and literalize multispecies encounter, and as an analytic tool, the trap makes different domains "compatible" with one another – hunting, scientific inquiry, photography, ethnography, and a wide range of other descriptive practices that attempt to

"capture" something of the wider world. In the formulation of "the trap," representation can be theorized as relation, but paradoxically, where the distinction between encounter and non-encounter dissolves.

In what follows, I will describe a complex assemblage of forces mediating human-coyote relations in the urban ecology, one whose techno-scientific but also pedestrian usage spans the divide between nature and culture, animal and machine, real and virtual space, intersections, I argue, which are facilitated by systems of representation constituted by the logic of the trap. Within this assemblage, I will consider many kinds of traps that are also representational strategies, everything from images collected by scientists through the activity of "camera trapping," to written descriptions of coyotes by concerned residents posted on social media sites, to the literal encounters between humans and coyotes as mediated by Coyote Management Plans (CMPs). What I hope to demonstrate is both the necessity of understanding these discreet strategies of representing coyotes on their own terms, to honor the forces unique to their practices, but also to uncover something perhaps common to all of them: an impassive mechanization, or "automata" (Jiménez, 2021). Like cinema is a medium, life is also a medium, composed as they both are by a *succession of automatic world projections* (Cavell, 1979). By mechanical here, or automatic, I do not exactly mean to say there is a machine-like quality to the organic world, but rather, to gesture towards the possibility that the logic of the trap, and so the camera, precedes these inventions as mechanical devices. The trap's strange intermingling of concealment and elicitation, insulation and connectivity, contiguity and difference, courses through the wider world's ecology, and is the stuff of thinking too (Kohn, 2013). Here, the term "automata" speaks to *entrapments* more generally, which skillfully blur environmental interfaces

and species *umwelts*, between predator and prey, scientists and the phenomena they study, and between bodies and landscapes, too. “Entrapments are placeholders of worlds as much as they are worldling operations of place,” writes Jiménez (Jiménez, 2021: 118). They provide the grounds – literal, metaphoric and analytical – for the intersecting of multispecies worlds.

Critically for my purposes, I am most interested in thinking with theories of the trap for the way its logic concerns “the image,” since coyotes, as well as humans, can think in pictures. Life is a sign process, and humans and coyotes make meaning with one another as each and the other appears across the human-animal divide (Kohn, 2007). Humans and coyotes are themselves also signs, in their outward appearances, but also in the way they picture the world to themselves through the spectrum of a visual imaginary (Peirce, 1992). Considering the multilocality of “the image” in the cases of entrapment I wish to analyze, I will also attempt to trace the life histories of these human-coyote representations in such a way that renders their “ontological” status intellectually uncertain, or even uncanny. And this line of thinking is inspired by film theorist like Andre Bazin and Laura Mulvey, whose interest in the power of cinema lies at the juncture of the medium’s continuous relation with reality, but also its disorienting spectral effects (Bazin, 2005; Mulvey, 2006). Taking inspiration as well from the history of ethnographic surrealism, I too will attempt to deconstruct the oppositional limits of relationality latent in the logic of the trap between the material and the imaginary, the visible and invisible world, and even between the imagistic representation of the coyote and its flesh and blood coyote kin (Clifford, 1981). Thinking with entrapments is thus good for dwelling in these intermediary zones of vitality for the way they “capture” places as sites for “ontological anarchy” and territorial becoming (Vivieros de Castro, 2019). By mixing theories of urban ecology and theories of entrapment

more generally together, I hope to invite to the study of urban ecology what the media theorist Rey Chow calls "medial reflexivity," where once a practice "takes on a specificity of its own, the question of boundaries becomes complex…and self-conscious, in the sense of having a heightened awareness of its own activity, capability, and limits" (Chow, 2012: 38). Since the trap is good for trapping, but also good for thinking, its evocation as an analytic device inevitably leads to an emphasis on the "recursive" nature of ethnographic and even scientific inquiry (Salmond, 2017). In studying the nature of the trap, predation, scientific inquiry, and human-coyote relations together, can we harness these logics in our own attempts to represent these phenomena to ourselves as something akin to entrapment, capture or captivation? Urban ecology, with its interdependence of human cultural practices and other-than-human livelihoods, has yet to fully consider itself willing to consider representational logics as mediating multispecies relations, and the capricious flourishing of urban coyotes in Los Angeles seems like a good starting place to ground this more capacious understanding of capture.

The intimacies of representation and relation, however, are quite a common feature of a wide array of disciplinary frameworks for analyzing culture. In the field of critical documentary film theory, for example, the writer and filmmaker Trinh T. Minh-ha claims there is no such thing as "truth" in the representations of the moving film image, only *meaning*, but that truth and meaning are forever separated by "the interval" of *aboutness.* "How is one to cope with a "film theory" that can never theorize "about" film, but only with concepts that film raises in relation to concepts of other practices?" asks Minha-ha (Minh-ha, 1990: 76). And in his essay entitled "Vogel's Net: Traps as Artworks and Artworks as Traps," the anthropologist Alfred Gell proposes a theory of art based less on the intrinsic aesthetic value of any given object, and more on the

networked interpretations of a given community, or the value given to the art by its relational context, say, as it circulates in an "art world." Moreover, in looking at traps specifically, writes Gell, "we are able to see that each is not only a model of its creator, a subsidiary self in the form of an automaton, but each is also a model of its victim (Gell, 1996: 27). The camera and the trap, and as I will explore below*, the camera trap*, are perhaps unique in the way they act as a nexus for representations that are also relations, but I believe their peculiar logical mixing of presence and absence also inheres within other domains of representation as well. Writes Bazin, "photography affects us like a phenomenon in nature, like a flower or a snowflake whose vegetable or earthly origins are an inseparable part of their beauty" (Bazin, 2005: 13). For André Bazin, the trapping of light in photography derives its effects from our captivation by the image, but also from man's absence from the process of its creation, the technical indifference of the camera's shuttering nature, an automatism, I argue, that is product of the wider sensory world.

Trapping Urban Coyotes by Noose and By Camera

The trap, or in its more general formulation as *entrapment*, is both a noun and a verb, and I will begin my story with the *activity* of trapping urban coyotes, where I witnessed firsthand how this practice involves reaching into the city's shadows, into the fold at the end of the known, to bring something back for the purposes of harnessing the power of releasing it. One August summer evening, I accompanied the wildlife biologist Niamh Quinn and LA County Coyote trapping expert Fernando Barrera on a foray to trap and radio collar urban coyotes for the purposes of the scientific study of their movement patterns. On this occasion, we were visiting the Chester-Washington Golf Course in the neighborhood of Hawthorne, in South Los Angeles, and we set our trap in a thicket of dense shrubbery growing tall and knotted in the midst of a sea of kept

Kentucky bluegrass. The Chester Washington Golf Course is situated in an urban neighborhood, but it also abuts an abandoned railway line and considerable flood control infrastructure; just outside its fencing lies a large a sump for containing flood waters, nestled beside the 105 Freeway, and from the sump a drainage pipe cuts across the golf course and rises above ground to a trickle of water where the thicket grows. This thicket of invasive plant species, Ricin and Fennel, home to warblers and Cooper's Hawks as well, thus appeared on the surface as an island, but underground it was connected to the surrounding neighborhoods by way of this system of ferrying water, and likely also, coyotes. When we arrived, we saw a young juvenile coyote lazing in the tall grass at the thicket's edge, staring out at the golfers who ambled by in the low angled evening Summer light.

With trapping, as with filmmaking, there exists an air of conspiracy about the whole operation, as if there was a secret pact amongst our small group composed of a wildlife biologist, a county trapper, and myself as a participant observer. Not only did we have to keep the existence of the trap hidden from the coyote we wished to secure, and of course our head trapper Fernando took all the right precautions, sprinkling leaves and dust filtered with a sieve over the noose laid gently on the ground, but we had to also keep our operation hidden from the golfers and other passersby as well. The easiest way to botch an operation like this would be to draw too much human attention, to attract someone who might spoil the trap or might scare away the coyotes we were hoping to lure into our mechanism. To trap a coyote, one must enter their world, and unsurprisingly, this requires disappearing from human view as well as from the coyotes. This public county golf course being an urban environment, however, our human scent generally blended into the background of human activity that covered most of the ground here, and so

Fernando was not worried about masking his own scent. The key would be drawing the coyote into the trap with a positive lure, and so he set the trigger of the noose with a small piece of rabbit fur laced with predator bait and sated the ground around the trap with coyote urine. If a coyote were to approach our trap and gently tug on the rabbit fur, the noose would fling up around its neck and tighten as the coyote tried to escape.

In a flourish of redundancy, Niamh then setup a camera facing the emplaced noose trap on the ground, so she could monitor the situation over the course of the night as the two traps together lied in wait. On nights when the traps are out, Niamh monitors her phone for alerts constantly. "I'm listening for the buzz of my phone to tell me there's something there," she says. [24] With the traps suspended between anticipation and acceleration, one triggered by a tug on the rabbit fur and the other by movement in the dark (and a third you might say by the buzz on Niamh's phone), we left the scene and found a dog skull, a possible den site, and a rake that appeared to be used as a coyote chew toy on the way out. Beyond just seeing the juvenile individual on arrival, sign of coyote presence abounded. Later that same night, at about 1AM, I received a call from Niamh – we had a young coyote in our cascading series of traps.

We arrived back at the course in the dark now, and a little groggy, our team growing to include a veterinarian who would administer the ketamine to sedate the coyote long enough for us to take some samples and to attach a radio collar around its neck. Skunks trotted about in the misty air, but not a person was seen. We approached the thicket in the middle of the golf course and soon saw our young coyote, nervous as can be, making protracted, half circles on the far side of its

[24] See: "Urban Coyotes get collared by UC ANR researcher and community partners," on the UCAN Healthy Communities blog: https://ucanr.edu/blogs/Communities/index.cfm?tagname=Coyote

tethering line, trying to stay as far away from us as possible. Fernando approached with a pole and noose, pinned the coyote to the ground and then approached with his gloved hands – because coyotes, like other dogs, are social pack animals, their defiance usually melts away after any display of dominance. The power of capture, often agonistic but in this case beneficiary, is inevitably also the capture of power (Jiménez, 2021). After Fernando secured the young coyote, the rest of the team approached to make quick work of our tasks: taking blood and fur samples, making an age estimate, attaching the radio collar gently around the young coyote's neck, and moving quickly in the small sphere of light in the night to minimize the amount of stress the animal would endure. Soon, she was released.

After releasing the coyote into the night, and triangulating the radio collar now worn by the coyote with a satellite orbiting Earth overhead, we were able to follow this coyote's movement across the city. In further work on this data set, colleagues and I theorized these movement patterns as something we called "the infrastructural signature" of urban coyote movement, whereby urban coyote movement patterns would conform to the shape of human infrastructural forms (Niesner et al., 2021). What was this coyote space were able to return to again and again because of entrapment, if not to the scene of the trap specifically, then to its extension across time and space as a trackable line of flight – the instantaneous closing of the trap thus offered us a technology for the dilation of time, the remembering, regenerating, and renewing of our connection with this coyote and the urban habitat across which it flourished too. What is it, then, our trapping captured? Not just a coyote, but in our case, the complex exchange of human-coyote intersubjectivity, a quasi-dangerous transubstantiation of human-coyote being, welded across bodies and a landscape in its own right, too. By performing the insulating non-encounter of the

trap, a hybrid human-coyote-machine perspective had emerged, and with ecological effects still yet to be told.

Trapping a young coyote with Niamh and Fernando, Chester Washington Golf Course, August 31st, 2021

The Non-Encounter of the Camera Trap: A Transcendent View?

Across the urban ecology, there is a complex technoscientific assemblage emerging for picturing coyotes to ourselves, and this multispecies assemblage not only incudes camera traps, but iPhones, conversation threads on the local social media application Nextdoor, and Coyote Management Plans (CMPs) too. As residents share information with each other about coyote sightings in their neighborhoods, cities are keeping a detailed record of "problematic" urban coyote behaviors, and scientists are conducting tests with camera traps to determine whether

urban coyotes might be "bolder" than their rural counterparts (Breck, 2019).[25] And in developing these methods for keeping track, measuring and making sense of urban coyotes across the urban ecology, or by "learning to be affected" as Bruno Latour calls the work of scientific sensitivity, we're also potentially learning better how to live together with coyotes from the fluid world of what's "becoming" of our human-coyote relations (Latour, 2004). These techno-scientific mediating strategies change us as they change the life possibilities for urban coyotes as well (O'Mahony, 2018). Our epistemological frameworks are "cyborg" manifestations of the ways we're enmeshed in technologies and ecologies simultaneously (Haraway, 1991), and considering the totalizing effects of these systems, it behooves us to further reflect on how these sense making tools that extend our minds and bodies also index and effect our ecological thinking (MacDougal, 2019).

Remote sensing using camera traps specifically is becoming an increasingly common methodology for understanding animal behavior, and given the proper metadata standards and methodological compatibility across studies, the data collected by camera traps in the field can be utilized for conservation purposes (Caravaggi, 2017). Although this sub-field of wildlife ecology is still in its infancy, the camera trap promises scientists the ability to better study everything from population dynamics and activity assays to the anthropogenic impacts on wildlife behavior as integrated in wildlife management strategies. And with regards to urban coyotes, scientists are currently analyzing data collected by camera traps deployed in cities across the country in an attempt to understand better whether urban coyotes are more "bold" than

[25] For an example of an online coyote behavior reporting system, see Coyote Cacher: https://ucanr.edu/?URL_404=https%3A%2F%2Fucanr%2Eedu%2Fsites%2FCoyoteCacher%2F%3FshowSiteInfo%3Dtrue

their rural counterparts, and in fact, there is limited evidence supporting their evolution as a distinct sub-species due to the genetic isolation of urban environments (Adducci, 2020). Although the analysis of this nationwide camera trapping effort is yet to be completed, I will describe my participation in this study as a volunteer camera trapping technician to offer a sense of the process of this kind of scientific work, and to trace the contours of the tenuously insulated and yet intimate relations with urban coyotes that result from the "gaze" of the camera trap itself.

In the service of our study on urban coyote "boldness," I received my camera trapping equipment from the National Park Service (NPS), who was the local intermediary for the nationwide data collection efforts in the Los Angeles area, and the study design involved setting up "novel stimuli tests" over a rural to urban gradient. The idea here was that coyotes who approached the novel stimulus quickly would be considered "bold," whereas the individuals who showed more reticence would be considered "shy," and this difference would be measured by a short video clip harvested by a camera trap emplaced in clear view of the novel stimuli tests itself. Random points were then generated on a GIS map on a gradient from the rural hinterlands of Los Angeles to some of the most urban areas of the urban ecology, and at the sites designated "experiment" I would setup the novel stimulus test, whereas at the sites designated "control" I'd simply place a dollop of predator bait in front of the camera. The question of what exactly a novel stimulus should look like to urban coyote is a complex question, and in this case, the study designers attempted to introduce novelty into the environment by having us construct a small structure in front of the camera – four, thin wooden posts stuck in the ground to make the four, vertical edges of a box, with a string connecting the top four corners of the box to lend the sense of volume to the structure (see images below). Upon arriving at the field sites, I was tasked with finding a

place nearby that would remain largely out of sight of most human residents living in the vicinity, so as to avoid harassment or contamination by curious passersby. To prevent people from tampering with or even stealing the camera trap itself, we kept the camera in a metal box that we screwed onto a steal pole we then planted into the ground, and to further secure the system we'd then also hammer an "anchor" deep into the hardy soil, which we locked to the protective housing of the camera so it could not be opened or removed. Within the array of random points generated, we always chose sites on land we could easily access with permission as a federal agency, such as state or city parks, or otherwise non-descript public lands splintering the privatized city.

I set one of my camera traps at Rose Hill Park in the neighborhood of El Sereno in East Los Angeles, placing the novel stimulus test a few hundred feet off a hiking path, on the top of a grassy hill tucked between a grove of native Black Walnut trees growing there, a view of downtown Los Angeles floating in the near distance. The camera was to be emplaced for three weeks at a time, and so I had to make sure its view was just right: not too much ground, not too much sky, and situated in such a way that a coyote might be attracted in view to the predator bait placed at the center of my small, wooden structure. If I was to capture something useful, I would have to be methodical – any error with the camera's settings, or with its view on the world, could lead to a wasted three weeks; standardization across sites was paramount to ensure the comparability of the data collected. Once when I set the camera, I failed to clear a few strands of grasses from the front of the sensor, and when they would blow in the breeze, they'd trigger the camera and my memory card quickly filled up with blanks rather than curious coyotes.

Both camera trapping used for scientific purposes and the techniques used in the tradition of observational cinema thus make claims on "the real" that deserves further interrogation, and the quality of the images they produce are sometimes similar. Both observational cinema and camera trapping, for example, utilize *the long take*, and both emphasize the *duration* of time spent with a given subject; in the case of camera trapping, this quality of the observational mode is taken to its logical extreme, as a single "shot" can last up to three weeks in my case, or even an entire year in other studies. *The deep focus* of the camera lens also tries to capture something "authentic" about the place and the subjects in view, as a whole, rather than trying to emphasize something more specific the camera operator may wish to highlight (Grimshaw, 2001). In stealing away to these interstitial places in the city to set my camera traps on the Earth in stillness, to capture something of space and time that is both less and more than the confines of my own perspective, I was reminded of the meditative translucence of Ralph Waldo Emerson's "transparent eyeball," where free of biases and contradictions, it felt as though the camera and I were "standing on the bare ground…[where] all mean egotism vanishes. I become a transparent eye-ball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part or particle of God" (Emerson, 1979: 10). As with any trapping venture, and as I will explore further below, for the coyote to appear, the person who I was must partially disappear into self-concealment, a material practice and situational occlusion with metaphysical implications.

And yet, for many observational filmmakers, especially in the tradition of visual anthropology, an "authentic" portrait must also include the meta-awareness of the filmmaker's own subjectivity, and the film must be a document neither of their own perspective alone nor something more objective, but rather of the participatory nature of the relationship between the

filmmaker and the film's subject (MacDougal, 2019). Considering the scientific methodology of the pursuit of camera trapping, with its emphasis on an attempted "objectivity," this is perhaps where camera trapping and observational cinema in the recursive tradition diverge. The appearance of the animal before the camera is in fact *not* predicated on any awareness of the presence of the camera trapper themselves, nor any known, mutual participation between the two actors on either side of the trap's engagement. Rather, these images are generated at the limits of relationality, at *the edge of encounter*, and yet something curiously intimate emerges from this paradoxical collaboration between the human scientist, the automatism of the camera, and even the animals themselves. Afterall, these images could not be taken without the participation of the coyotes, whether they're fully aware of the mutually entrapping representational process or not.

Stills from videos taken during the nationwide novel-stimuli study, as volunteer with the National Park Service.

In the move from hunting animals to kill, to hunting with cameras for the purposes of wildlife conservation, the father of modern camera trapping, George Shiras, has described this shift as a movement from tragedy to comedy (Shiras, 1906). And anyone who looks at the photographs caught by a camera trap can't help but delight in this assertion, as it becomes clear how the candid nature of these images reveals something of the contingent, slippery nature of our lives, which the camera itself is so good at replicating in its representations (Cavell, 1979). Although all photographs contain this element of the accidental, what Roland Barthes calls "the punctum" of the photograph, that indication of liveliness existing just outside the control of both the photographer and the subject (Barthes, 1981), the camera trap perhaps intensifies this chance-like quality of the image due to the basic facts of its strangely dislocated methodology. The images collected from a camera trap intensify the qualities of photography more generally, for like an image taken from any camera, these images from the camera trap index both the subject and the camera operator, but also something chance-like which exceeds the two of them together (Wollen, 2013). And yet, unlike a camera wielded near to hand, which has a more direct connection to the eye and to the mind, a camera trap is separated from its operator and placed into the wider world as an almost unconscious extension of their subjective, willful intentions, or the place of accident. In this way, it's a process by which the "dislocation" of the self is achieved with dramatic effects, a disjunction present in the snapping of any photograph, but in camera trapping intensified for the purposes of rendering the fundamental discontinuity between the worlds of people and the worlds of animals less impossible (MacDougal, 2019).

The camera trap, then, is perhaps less like a camera, and more like an old-fashioned hunting trap – it's deployment in the wild less indicates the presence of the photographer to the subject, and more the absence of both the hunter and the prey from the apparatus of capture. This peculiar

mixture of presence and absence inhering within the trap invites the trapper and the trapped to become phenomenologically disjointed, but simultaneously entwined (Gell, 1996). Like any camera with a shuttering mechanism, its temporality is one of the "sudden catastrophe," and yet the drama of this instantaneous moment is heightened by the protracted nature of its lying in weight. As Alberto Corsín Jiménez writes, "entrapment thus mobilizes what we may think of as endo- and exo-energies, which hustle bodies and environments into pressure fields and tendencies that are much greater than those of the hunter and his technology or craft. While endo-energies arrest the world into moments of vigilance, suspension, and concentration, exo-energies thrust our bodies into movements of anticipation, acceleration, and display; these energies respectively insulate or catalyze modes of connectivity" (Jiménez, 2021: 117). And so, if we take David MacDougal's claim seriously that the camera's "gaze" reveals something of its operator, then what might we say about the indexicality of the camera trap's taut stillness, its lack of movement, and its inhuman ability to behold the same small plot of land for days and weeks and months on end? What does its perspective reveal about the people who put it there, but also about the camera itself and about the coyotes, too? All three of these "beings," human, machine, and coyote, intersect in this moment of encounter that is also a non-encounter. If "traps 'trap' worlds," in the words of Jiménez, then what do the images recorded here reveal about the intersecting worlds of man, animal, and machine that are hustled into this "pressure field'?

An image series of a coyote from the Wildlife of Los Angeles camera trap data set (NPS).

As far as I know, nobody has quite theorized science as delicate intermingling of encounter and non-encounter, but in Anthropology, a world surely obsessed with concepts like "entanglement," "becoming with," and "constitutive interaction," there seems to be an increasing recognition of the critical importance of cultivating "detachment" or "partial connection" for the purposes of thinking with others (Candea, 2010; Strathern, 1991). Despite the "tragic" dimensions of the hunting trap, the comedy found in the images of the camera traps perhaps brings to light something of the intense intimacy that can sometimes be afforded through *distance* rather *nearness*, or even speaks to the efficacy of recording practices that utilize passivity and inaction as opposed to agentive reaction. And besides, when the scientists place these cameras into the field, they are not only dislocating a small part of their viewing selves and hiding this in disguise, but they are also recruiting the agencies of other creatures, and maybe even machines, into their

perceptual-epistemological networks (Latour, 2014). Afterall, the cameras too often "behave" in ways the camera operator could never quite predict – the lens fills with moisture, the sun blots out the view, the camera appears strange to a deer, or is tripped by grasses waving in the wind – once the camera is in the field, it's anybody's guess what will be captured, and the camera's shuttering mechanism is only just the beginning of this technological agency exceeding the bounds of human control.

I've thus come to see "the gaze" of the camera trap as something near to a *transcendent* view of a "transcendent nature" (a view from nowhere onto the surface of a "nature" absent human presence), but one which never quite arrives in the purity of this non-relational form because of the complex intermingling of human-animal-machine agency that intersects at the site of the trap (Benson, 2010). It's true, the supreme passivity and duration of the camera's emplacement renders its perspective something more and something less than human, and it's this skillful blurring that provides the power of its observation, or at its worst, simply the observation of power. And yet, despite the many and salient critiques of "objectivity" (Haraway, 1988), I'm also coming more and more to see the value in cultivating a view of the world that if not also partially, and carefully, devoid of the all-too-human perspective, includes other intelligences in the representational processes of worldmaking as well. By displacing our perspective into the wider environment, and inviting the energies of animals and machines to co-create these pictures with us, I believe something greater than all three of these worlds emerges, and constituted by perhaps surprisingly emergent newfangled agencies as well. If trapping is a form of thinking, and thinking is continuous with the living, then what might be said for the "sentience" of these representational systems, for the trap as a non/relational form exhibiting a lifeforce of its own?

Disappearing acts for the purposes of survival are commonly found in nature as emergent behavior and evolutionary adaptation: iconicity, or the ability to camouflage oneself, is a critical dimension of predation and anti-predator defenses alike. The peculiar logic of presence and absence inherent in trapping is a kind of latent play at the beginning and the ending of thought, as camouflage and concealment, and it produces coyotes, rabbits, and also the ticks that feast on their blood (Kohn, 2013). When the representational logics of entrapment are more generally thought in this way, as extensive with the properties of the wider natural world beyond the invention of the mechanized deployment of traps by humans, then we might say these camera's make their way in the world by harnessing the capturing logics native to these ecosystems. And it's true, these entities of camera traps themselves suddenly seem to be flourishing across a wide array of ecosystems, deployed by scientists, hunters and image recreationalist with increasing prevalence and intensity. They are now fixtures of our environments, whether in cities or in some of the most remote corners of the world. At the point of coincidence between encounter and non-encounter, where difference either emerges or does not, where relation and representation first emerge together as mystery and otherness, here is the place where thinking begins and ends, and so the confluence of worlds in the wonders of more-than-human, agentive, intersubjectivity.

Image of camera trap attached to tree with camouflage casing (stock image).

Landscapes of Entrapment: from Nextdoor to Coyote Management Plans

In the past decade in Southern California, it appears human-coyote conflict has been on the rise, and in response to resident complaints about the presence of seemingly aggressive coyotes in their neighborhoods, a natural-cultural system for managing coyotes, and people, has arisen over these years across the urban landscape. In what follows I'd like to trace the machinations of this system of urban wildlife management, with a special emphasis on the ways people are representing coyotes to themselves, and how these same people are also representing themselves to coyotes. Whether on social media applications like Nextdoor, or through the prescriptions found in Coyote Management Plans for "proper" human-coyote relations, how humans and coyotes appear to one another across the human-animal divide matters, for both people and coyotes. This is not to say *real coyotes* do not exist, but rather to emphasize the ecological importance of human representations of their relations with these wild dogs. In translating our experiences with coyotes into more abstract thoughts *about* coyotes, the relaying of these re-

presentations across the urban ecology, from Nextdoor, to City Council Chambers, to CMPs, to local trapping and killing ordinances, comes to influence the collective decision-making process regarding how to "manage" their population, with life or death consequences. Thus, the landscape in its own right and under the right circumstances *becomes a trap*, one loaded with both human and animal energies by the way these images of coyotes circulate in the urban ecological imaginary, to stoke fear and concern, and which trap coyotes and other bodies too in its snare (Jiménez, 2021).

According to Kaja Silverman, describing the semiotic framework of the logician Charles Sanders Peirce, "if representations provide us with our only access to reality, then the authenticity of those representations become an issue of pressing importance" (Silverman, 1983). For Peirce, this verification of the truth lies beyond the reach of the individual and outside the present, too. Only overtime and involving a community of representational practices can knowledge about "the real" be produced "independent of the vagaries of me and you" (Silverman, 1983: 17). This is a collective process by which the truth is triangulated many times over, and in Los Angeles, where stories about coyotes are seemingly far more numerous than their furry relations, community ecological knowledge is most often generated through sharing on social media, for better, but more often, for the worse of coyotes. But to be fair to those who'd still like a little help with navigating their human-coyote relations, encountering a wild animal like a coyote, especially in a city, is a deeply unsettling experience. Not only do they sometimes appear threatening or indifferent to their human co-inhabitants, the presence of these wild dogs in a metropolis like Los Angeles at once troubles our common notions of binaries foundational to our civilizational concept: the rural and the urban, the wild and the domestic, and even presence and

absence are subtly undermined by any encounter with one of these "ghost dogs" (Ghert, 2021). In attempting to think more deeply about what these encounters might mean for the nature of representation and relation, I've continually found it useful to turn to theories of the photograph in order to make sense of the similarly uncanny quality of these multispecies encounters. If the captivating nature of photographs offers one such instantiation of the trap, of light, of the subject, of the viewer of the photograph itself, then utilizing the entrapment as an analytic tool might help us formulate productive "compatibilities" across disparate domains of thought (Jiménez, 2021).

As Roland Barthes describes of the strange temporality of the photograph, "this was now" could also describe the experience of seeing a coyote who appears ever so briefly on the landscape before disappearing once again into the background of the city after dark (Barthes, 1981). And Ariella Azoulay, in her essay *What is a Photograph? What is Photography?,* describes how the image produced out of an encounter "invariably contains both *more* and *less* than that which someone wished to inscribe in it." For Azoulay, the photograph, like a human-coyote encounter, is an event, and one imbued with the unsettling effects of having to reconcile with another being, and a machine, which you can't quite control (Azoulay, 2010). And Andre Bazin, in speaking to the ontology of a photographic image, says its emotional power derives from the way the surface of the image has been touched by something of the quality of the real world through the play of light on the surface of the film, but also how there is always something beneath or beyond this image to which we do not have access, which we cannot see, but to which we are drawn, like how the face might prove a captivating indication of the soul (Bazin, 2005). We might ask again, what exactly does a photograph, or an encounter with an urban coyote, capture? Are we also, sometimes, entrapped by our own strategies of relating with coyotes?

Nextdoor

In the paper *Coyotes in the Cloud,* my colleagues and I in the Labyrinth Project studied how real coyotes are translated to the virtual space of the Internet, and for the purposes of better understanding how images of coyotes circulated in the virtual realm, we focused our analysis on the local social media application Nextdoor. After "scraping" the site for conversations about coyotes in neighborhoods across Los Angeles, of which there were hundreds, we then categorized these conversations thematically and isolated specific descriptions of coyote behavior for analysis. On Nextdoor, there is no shortage of coyote fascination amongst users, as a single posting about the presence of a coyote in the neighborhood might elicit dozens of responses from fellow users and concerned residents. What emerged from the din was the clear tendency for these stories to represent coyotes as dangerous and ungovernable. For example:

And there he was. Large as a wolf just walking up, looked like he was walking in from the street into the empty field that has building materials where we think they're hiding out. I yell "hey what are you doing here" started clapping my hands jumping around and he ran away quickly…

Am afraid to let my kids go into my own backyard I understand that we need to coexist …but this is out of hand already..there are too many of them in the city..and yes they are not scared of human…I was outside and 3 of them came to my door, I had to run inside my house… [emoji] ..something needs to be done..!!!

The above passages evoke the process by which encounters with coyotes in the real world migrate to the virtual realm of Nextdoor, and the degree to which these representations of relations are sometimes animated by a deep-seated distrust and fear of these wild dogs with whom these users are sometimes coming into contact.

In our paper, we show how conversations on Nextdoor are often animated by a desire to "domesticate" these neighborhoods for the purposes of yielding comfort and safety from the environmental surround, and so the cloud coyotes on Nextdoor are often decidedly "wild," "ungovernable," or "savage," prone to the kind of hyperbolic descriptions that might "capture" other user's attention and stoke fear. Thus, the intensity of the presence of the "cloud coyote" on Nextdoor specifically is likely due both the presence of coyotes in these neighborhoods, but also to the design affordances of the application, which profits from the desire for local whisper networks, which is lubricated by the availability of online commenting boards provided by the application (Niesner et al). And since Nextdoor is locally based, and requires an address to participate, these representations are also quite literally grounded in the materiality of place, intensifying their ecological impact – and it's true, conversations on Nextdoor that begin with representing a coyote as "Large as a wolf," often end with calls to the city saying "something needs to be done..!!!" The cloud coyote thus is not a *real* coyote, but rather a virtual coyote avatar that serves to "capture" the local ecological imaginary, and thereby produces the fear so easily transmuted into the political will to kill coyotes.

Whether on Nextdoor or on other social media applications like Facebook, the propagation of the "cloud coyote" seems to have taken on a life of its own, and local officials in some places have

even begun asking residents to stop posting about coyotes altogether, or to report sightings directly to the city using a classification system of potentially dangerous coyote behavior. What remains clear is the pivotal role the "cloud coyote" has taken in catalyzing trapping and killing programs in cities across Southern California, a practice previously considered impractical and non-sensical (except maybe for the purposes of quelling human fear).[26] And so, the captivation of Nextdoor users by the "cloud coyote" perhaps offers a virtual gloss on an old theme from the study of ecology, where "ecological traps" have long been known to attract populations of a given species to their deaths (Hale, Swearer, 2016). By delineating the worlds between urban coyotes, the human ecological imaginary, and the governing bodies responsible for making decisions about urban wildlife management, we can see how entrapment is not just a mechanical device or an instantaneous moment of capture, but rather an oftentimes agonistic technological interface for capturing bodies and minds, and terraforming landscapes writ large.

[26] See: "Torrance City Council. At behest of residents, to begin trapping coyotes" in *The Daily Breeze*: https://www.dailybreeze.com/2019/09/11/torrance-city-council-at-behest-of-residents-to-begin-trapping-coyotes/

A trapper with CritterBusters lays a coyote trap at a gap in the fence at an urban golf course. Private pest control companies like CritterBusters are often hired to implement costly trapping and killing programs in cities for the purposes of coyote population control, despite limited evidence for the effectiveness of this strategy as a management tool.

Coyote Management Plans

In response to resident fears about coyotes, municipalities across Southern California have in recent years implemented Coyote Management Plans (CMPs), which for the stated purposes of fostering co-existence, offer residents guidelines for relating to coyotes that aim to prevent conflict from occurring in the first place. These plans largely exist as PDFs on city websites, but many localities also offer programs by which volunteers are trained in the prescriptions of the plans and then sent out into the community to educate their neighbors. Elsewhere (see chapters 4 and 5, "Coyote Plays Itself"), I've discussed how these plans act as a kind of "script" for normative human-coyote relations. And by dissuading people from feeding coyotes, whether

intentionally or accidentally, and by encouraging people to "haze" coyotes instead, these plans also foster the kind of "constitutive interaction" that gives rise to the very qualities we've come to recognize in these two distinct species: the "human" and the "coyote" (Oyama, 2000).

Critical to my purposes of trying to better understand the ecological implications of the strange relationalities of entrapment, I believe CMPs offer a productive local example of how cultural frameworks for narrativizing our relationships with animals through images and text ultimately comes to affect the wider other-than-human world (Heise, 2018). What we see in CMPs, then, is how a document existing in virtual space, composed of language, photographs and stories *about* coyotes in a mythic sense, soon leads directly to inspire the existential exchange of the iconic and indexical effects of the experience of encountering very real, fleshly coyotes. In the terms of the trap, as Jiménez writes, "entrapments are terraforming, but they are also body- and soul-forming. Trickery and deceit may well be what is partly at stake, but these are modes of existence that pertain to no singular being and are redeployed more amply as ecological and intersubjective effects" (Jiménez, 2021: 117). And so, by offering detailed instructions for how to haze coyotes, for example, these CMPs come to inform the "automatic" behavior to be engaged whenever a coyote is encountered, an *automatism* that is then literally played out through the powerful constraint of having to communicate with wild dogs without language (see Chapter 5, "The Curious Constraints of Hazing Urban Coyotes). The performative prescriptions in these CMPs thus invite human residents and coyotes alike into a relationship imbued with a strange sense of agency, a sensibility arising in the crucible of the experience hazing, as the human hazer "falls into [the] form" of a human-coyote relation predicated on territoriality and dominance. Is this a trans-technological permutation of the "automatic world projection" described by Stanley

Cavell as the essence of cinema and the camera (Cavell, 1979)? Or is hazing an example of the "automata" of Jiménez, those traps of nature-cultures, whereby copies of human nature are propagated as mechanical bodies in the service of both connection with and insulation from coyotes simultaneously (Reis-Castro, 2021)?

A graphic about hazing from the Culver City Coyote Management Plan

(accessed August 31st, 2023)

Somewhat paradoxically, if hazing as performance is intended to reify the very concepts of the human and the coyote, it requires the human hazer to become animal-like and aggressive, or to enter into an encounter with a coyote that literalized their metaphoric intersection. The power of capture and the capture of power thus become mutually entrapped in the work and magic of indexical mimesis, wherein the representation of humans and coyotes to one another occurs

through the practiced performance of the "falling into the form" of hazing. As Silverman writes about Peirce's conception of the indexical sign, the significance of the weathervane doesn't only reside in its relationship to the wind, but also in the way it gives rise to the concepts of "wind" and "direction;" as such, the CMPs' instructions for "hazing" coyotes on sight is significant not only because of the physical performance of a dominant human relation that purports to "keep coyotes wild," but also in the way this prescribed activity permits the human hazer and also the coyote to picture to themselves the very concepts of "human" and "coyote," and so the proper human-coyote relation of distance an caution (Silverman, 1983: 19). In relating to one another across the human-animal divide, we must re-present ourselves to be seen by coyotes. In practice, this activity can feel less like a choice and more like an abduction, as the hazing prescribed in CMPs clears the metaphoric grounds of relating, and solicits us into its own form of entrapment.

Conclusion: The Wildlife of Los Angeles Film – Data, Art, and Animal

What's missing thus far in my analysis of the camera trap is the life history of these images, or the place of the viewer – in looking at a collection of images captured by camera traps, what do I see, what are we able to see, what might we see if we change the terms of our relations with these images (Steyerl, 2012)? As much as the trap is a "sudden catastrophe," in the terms of Alfred Gell, what I've tried to show above is how entrapment is a protracted process, across time and space, implicating bodies and mobilizing imaginaries in an extended interface at the point of encounter and non-encounter. And a photograph is the product of a cascading series of such encounters, or "looks," between the photographer and the subject, between the subject and the other subjects in the world of the image, and then later, between the photograph and the viewers, however many may visit their eyes upon its surface (Azoulay, 2010; Mulvey, 1975). As David

MacDougal writes in his essay *Observation in the Cinema,* a film is "recursive, what we have filmed creates a kind of loop in our consciousness which we can go back to again and again. At the same time, it leaves a small mark on the surface of reality. For when a film is lost – and all that it contains – that mark is smoothed over and disappears forever" (MacDougal, 2019: 128). In this vivid formulation, we can see the photographic representations of the camera trap as a system of gazes, one connecting the world with the image and the image with scientists, and where there is a chain of influence moving back and forth between one and the other (Mulvey, 1975). When we look at images, we not only change them as we change ourselves through our captivation by them, but this activity continues to make its mark on "the surface of reality" too.

And just as there are different ways to encounter a coyote, there are different ways to look at the images harvested by the camera traps. These images might be taken, but the trap that captured them has yet to be fully shuttered, as the *meaning* of these images is never completely foreclosed. In undertaking the making of an experimental film using the camera trap images collected by the National Park Service as part of their Wildlife of Los Angeles initiative, my aim is to honor the way these images represent very real encounters with a very real coyotes (even if we, as humans, are not exactly present to the encounter), but also to demonstrate how we can change these images through our ensuing analysis, interpretation, or re-presentation.[27] If I were to catalogue these images by species and location, whether by soliciting the help of the general public or using AI, then I would be treating them as scientific data, which could be mined to make strong, positivist correlations with other features of the wider environment. And so far, this is exactly what these images are being used for – scientists and volunteers with the NPS have

[27] See: The NPS Wildlife of Los Angeles Camera Trap Data set on Zooniverse: https://www.zooniverse.org/projects/lawildlife/wildlife-of-los-angeles

spent countless hours and crossed many miles of terrain in the Santa Monica Mountains to set these traps for the purposes of studying how wildlife have responded to the great Woolsey Fire of 2018, which burned nearly half of the entire range. In this way, for these scientists, a story is emerging between these data points by connecting them in sequences of correlation and movement, which is not so unlike the propulsive logic of a narrative film (Mulvey, 2006). But if I were to consider one image at a time, without necessarily linking them, whether analytically or otherwise narratively, then what might emerge between the viewer and the image? According to Laura Mulvey, this kind of stillness of the image is evocative of death, but it also frees the subjects of the narrative imposed on them from the narrative force of editing. In her book *Death 24x a Second,* Mulvey writes how the digital era ushered in a new way of looking at movies, one predicated on pausing, delay, and bringing stillness to the moving image in such a way that adds heuristic weight to the position of the viewer, and potentially releases new meanings in the image as well. This is the "film behind the film", in Mulvey's words, "where hitherto unexpected meanings can be found hidden in the sequence, deferred to a point of time in the future when the critic's desire may unearth them" (Mulvey, 2006: 144).

In making my own film with these images from the NPS camera trap data set, I'd like to ask: what can I give to these images after the moment of initial capture, and by giving to these images, what can I give to the animals embalmed in the zeros and ones of their digitalization? In a sense, I am developing a practice of editing that is perhaps also a practice of meditative contemplation, where I toggle back and forth between seeing the world in myself and seeing myself in the world, between seeing these images as data and seeing them as art, or perhaps just setting them free in the givenness of their accident. This process of repetition and return,

remembrance and regeneration, involves further stretching the time-scale of these images, already protracted by the long-take of the trap lying in wait, to allow even further time and space for thought, reflection, association, resonance and personal revelation.

By translating these images from the context of data into a sequence that feels sometimes more and sometimes less like a narrative, which I can continually manipulate as long as I wish, new relations between the viewers and the materials might arise, new associations between what they see on the screen and what remains unseen outside of the frame within the wider ecology. I will 'domesticate' these images, and then set them free and repeat, if only to demonstrate the dialectic between stillness and movement that is the essence of cinema, but also the entrapments of life (Mulvey, 2006). Developing this way of continuing to breathe life into these images is thus both an attempt to refine a kind of aesthetic-affective practice, but also to potentially lay the groundwork for a new kind of digital natural history, or an intuitive ecological theory making by way of the observation of images collected by camera traps. Afterall, the camera eye and the human eye together can see more than either can see independently, and by channeling the energies of the animals themselves into the representational process, we invite these other-than-human subjects into the fold of collaboration as well. As the digital revolution continues to unfold, new horizons are opened by new assemblages of people, technologies and animals, and these arrangements themselves are going wild.

Can I move from the place of representing these moments of *capturing* animals to something more like my own *captivation* by their likeness: "to bring to the fore questions of being -- of origination, freedom, finitude, and infinitude: Where do I come from, where am I heading

toward, when and where will I end?...Is there more to I than I?" in the description of captivation by Rey Chow (Chow, 2012: 52). Can I make other viewers, too, see these moments with the glance of instantaneous presence, freshly formed and forming, without the entrapping projection of categorization, but with the open-ended consideration of something still unassignable (Althusser, 2006)? We are formed as much by what we see as by what we don't see. In moving from the animal, to data, to art, I'd like to bring some awareness to our part in the making and unmaking of worlds by way of looking, capturing, being captivated, and being seen.

CONCLUSION

It is my hope that the above scholarship led not to novel coyote conclusions, but to a reframing of some of the fundamental questions relating the presence of urban coyotes in Los Angeles to the wider urban ecology. By asking towards what it might *mean* for coyotes to live in Los Angeles in the first place, rather than towards a given scientific fact or towards whether a given management strategy may or may not work, I wanted to add my energies to the mitigation of human-coyote conflict by providing answers in the form of new questions. I believe this style of approach, tentative and decidedly contingent as it may be, might offer some new beginnings for the development of an ethical practice of living with urban coyotes that by its very nature is without end nor closure, even as it may move us with direction.

By rethinking urban coyote flourishing in the terms of human-coyote *relations*, I wanted to create an opening for evolving practices of thinking and living with coyotes, ones which take into consideration the way the self always exists in relation, and how these relations, even in cities, are fashioned in material-semiotic webs of meaning that extend beyond the human. In noticing some of the ways urban wildlife management is a system arranged in concert with other political systems in the urban ecology, and how these systems create us even as we create them, I believe there is immense opportunity to catalyze cascades of developmental change across many domains of city life through our practices of multispecies relations. The urban coyote, whose insistence is one such site where these systems potentially intersect, offers a particularly fertile flashpoint for reconfiguring the stewardship of our landscapes and the terraforming of our psychic topographies towards more multispecies justice for all.

Fundamental to this research was my focus on the ubiquitous Coyote Management Plan (CMP), and I believe there is more work to be done here on the idea of "the plan" for the way it offers a way of *being in the future* together and with others. But as I hoped to demonstrate in my deconstruction of the current coyote management paradigm, plans can also reify our relational forms and all-too-easily support existing power structures if care and consideration is not taken. Can we imagine new kinds of wildlife management plans, ones truer to the decidedly critical imperatives of fostering more flourishing for biodiversity and environmental justice movements alike? Or is there something inherent in the concept of "management," or even in the concept of "the plan" itself, too hubristically universal and non-specific, which thwarts our attempts to co-exist compassionately with wild animals like coyotes that we cannot, and should not, desire to control? Maybe these plans must constantly be rewritten, and to be at home with coyotes is to prepare ourselves for living with the unknown by being present to the singularity of coyote encounters as they emerge. Maybe the stories we tell about them, like the coyotes themselves, must be alive.

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