

THESIS

IMPLICATIONS OF NATURAL BOUNDARIES FOR PLACEMAKING AS A COLLABORATIVE
PRACTICE BETWEEN HUMANS AND ANIMALS

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ABSTRACT

IMPLICATIONS OF NATURAL BOUNDARIES FOR PLACEMAKING AS A COLLABORATIVE PRACTICE BETWEEN HUMANS AND ANIMALS

Living beings (flora and fauna) coexist within natural environments, sharing physical locations both temporally and spatially. When applied beyond the human scope, “place” takes on new meaning as humans and nonhuman animals each take part in their own placemaking practices. This study evaluates the practice of placemaking as it relates to long-term wildlife-human cohabitation and coexistence. Here, placemaking refers to the practice of attributing meaning to geographic locations or physical objects. Integrating compassionate conservation and multispecies livelihoods, researchers employed a patchwork ethnography methodology to identify patterns in collaborative placemaking. They also drew from a Multispecies Livelihoods framework, including compassionate conservation, which aims to conserve biodiversity and planetary climate at the individual rather than species level. Through ethnographic semi-structured interviews, archival research, and participant observation methodology, 16 researchers from Colorado State University’s (CSU’s) Human Dimensions of Natural Resources Department and CSU’s Doctor of Veterinary Medicine program partnered with three wildlife rehabilitation centers and a veterinary teaching hospital in Costa Rica. The research team interviewed participants, conducted observations, and gathered data to analyze the effects of natural barriers to human activity in Costa Rica on collective placemaking practices. This research is based on a three-week pilot study in January 2022 titled, ‘Wildlife Rehabilitation for Conservation’, led by Dr. Bastian Thomsen. This initial pilot project aimed to inform future studies on the use of

natural barriers, rather than constructed barriers, to foster animal welfare, wildlife-human coexistence, and more sustainable animal-human relationships. Findings suggest that collaborative placemaking, which is heavily influenced by natural boundaries, is a viable strategy for encouraging positive wildlife-human interactions and successful coexistence.

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I. Introduction

Numerous scholars describe ‘placemaking’ directly and indirectly over decades and throughout anthropological movements (see Basso, 1996; Berry, 2010; Heaney, 1980). Heaney’s 1980 definition of placemaking is perhaps the most applicable in this project, as placemaking assesses the relationship and interactions between the physical landscape experienced by a living organism and the mental landscape of imagination and emotion. This definition allows living beings to maintain strong associations between geographic locations and constructs such as emotions, practices, and events. Although humans are historically the only species to have documented placemaking in written form, connections between places and nonhuman beings are not only evident but possibly even more acute than that of humans. Through repeated actions such as raising young, migration paths, or sharing food, animals take part in placemaking as a ritualistic piece of their lifespan (Bull & Holmberg, 2017). This project utilizes Worrell and Appleby’s (2000) definition of the ‘natural world’ as non-urbanized spaces. These interactions with the natural world are encouraged and enforced by the physical landscape in which animals reside, combined with the theoretical landscape produced by animals’ interactions with each other, and with their human counterparts in cohabitation of the same singular place.

This study is part of a larger ‘wildlife rehabilitation for conservation’ study that focuses on Costa Rica for its renowned commitment to wildlife conservation. The nation-state is home to a vast array of plant and animal species roughly 5% of the world's biodiversity can be found within this Central American nation. Costa Rica is home a wide range of protected areas, including national parks, wildlife refuges, and biological reserves; all of which aim to safeguard the country's unique flora and fauna (Tafoya et al., 2020). The national government and several non-

governmental organizations (NGOs) collaborate to protect endangered species, such as jaguars (*Panthera onca*), sea turtles (*Chelonioides*), and scarlet macaws (*Ara macao*) through habitat restoration and protection, anti-poaching efforts, and wildlife protection. Costa Rica's wildlife conservation efforts preserve its natural heritage and attract ecotourists from around the world. The country relies heavily on ecotourism, which accounted for 12% of gross domestic product (GDP) in 2015 (Sanchez, 2018). Ecotourism revenues incentivize the Costa Rican government to maintain its environmental and wildlife protection commitment.

Wildlife corridors in Costa Rica refer to the interconnected patches of landscapes, primarily jungles, that provide crucial habitats and pathways for wildlife to migrate and interact with one another. Deforestation and habitat fragmentation have caused many wildlife populations to face threats of isolation, genetic diversity loss, and extinction, making corridors essential for conservation efforts and wildlife-human coexistence (Silva, 2003). The Costa Rican government designed a myriad of projects to protect and rebuild wildlife corridors. Examples include the *Mesoamerican Biological Corridor* and the *Tempisque Conservation Area*, which aim to connect fragmented habitats and restore natural ecosystems (Quesada & Stoner, 2004). These corridors protect the livelihoods of wildlife, promote sustainable land use practices, and enhance the livelihoods of humans through wildlife cohabitation, access to nature, and ecotourism (Silva, 2003). The consideration of multispecies livelihoods is critical for wildlife-human coexistence. Thompson et al. define multispecies livelihoods as “human and nonhuman animals possessing equal rights to (co)exist and to secure life’s provisions in a way that does not violate another’s” (p. 1, 2020). Wildlife corridors in Costa Rica demonstrate positive human-animal coexistence and the integration of each species into the spaces of the other.

This study utilizes ethnographic methods of participant observation, archival research, and semi-structured interviews to capture a high degree of detail and accurately inform researchers examination of the placemaking environment within Costa Rica (Creswell & Creswell, 2017). These data collection methods allow for content analysis to include the context, tone, and relationships observed in interviews and interactions among human participants, as well as their interactions with animals. Desktop archival research of secondary sources was conducted by the research team prior to the trip and the at the wildlife rehabilitation centers as each partner shared data such as intake logs and revenue records with the team. The collection of data occurred at four Costa Rican locations with a focus on wildlife rehabilitation centers. Costa Rica was selected as the locus of this study for its natural barriers and animal livelihood focused policy, ease of access as Costa Rica does not require a tourist visa to enter the country for two weeks, the many wildlife rehabilitation centers which are amenable to research, and the dominant languages of English and Spanish, both of which researchers on the project speak, allowing for semi-structured interviews without language barriers.

Semi-structured interviews are designed to provide insight into individual perspectives on phenomena or situations within which they are experienced (McIntosh & Morse, 2015). Semi-structured interviews employ a series of questions which each participant is prompted with. Researchers do not direct the flow of responses, thereby gaining information most relevant to the participant, and the topic of conversation can shift based on the Interlocutor's response. By prompting each participant with the same set of questions, researchers acquire a data set that contains common topics which can be analyzed under the same methodology (McIntosh &

Morse, 2015; Creswell & Creswell, 2017). Our interviews allowed the researchers to gain insight into the human relationships with wildlife and animals. They also provided insight into public opinion on conservation policies and the manners in which the government may or may not uphold wildlife-focused policies enacted. Common themes were identified to establish a baseline understanding of public opinion of wildlife species, conservation efforts, and human-animal interactions in the country of study. During the analysis phase the team was able to thematically code the data and cross-check each other's answers for consistency, accuracy, and triangulation compared to archival data and participant observation.

Participant observation allows researchers to observe a particular group as a member of the group, compared to simply being a passive observer, to acquire the most authentic information while simultaneously trying to remain detached enough to avoid influencing the results by their presence. The chosen role of researchers (active or passive, general or specific) depends on the population of the study and the information being gathered (Bruyn, 2017). For the purposes of this study, researchers took an active role assisting in work at sanctuaries, participating in local gathering places, and learning alongside students. Through this participation, opportunities emerged for the researchers to observe behaviors, relationships, and beliefs in action from a peer perspective. By participating in quotidian tasks such as raking leaves, feeding animals, or cleaning cages, it allowed the researchers to build rapport and trust with the Interlocutors. This strategy led to the Interlocutors sharing more information, and perceivably candid insights. Data collection from this method of observation included photographs, video, and field notes. In this study, data collection occurred predominantly through field notes, with a few instances of photographs when necessary and appropriate. Photographs and videos for this study were often

inappropriate as Costa Rican law does not permit persons and wildlife to be captured in the same photo or video to mitigate animal abuse and promote nonhuman agency in multispecies relations (Maguire, 2017).

The first chapter of this study explores collaborative placemaking practices between animals and humans in Costa Rica. The second chapter expands upon the placemaking relationships established within the first chapter to evaluate the implications of natural boundaries that protect nonhuman animal livelihoods upon the placemaking relationship between animals and humans. Going forward nonhuman animals will be referred to as animals for simplicity, not as any type of theoretical stance of animal personhood. Establishing the existence of a collaborative placemaking relationship between humans and animals is essential to moving conservation efforts toward (humans) viewing wildlife at an individual level rather than only at a species level. This is congruent with Thomsen et al.'s (2021) multispecies livelihoods framework for its focus on individual rights, agency, and welfare, no matter the species. The evaluation of natural boundaries as a conduit to animal-human coexistence assesses the efficacy of such boundaries as a tool for efforts to preserve multispecies livelihoods on a global scale.

Chapter One: Intersections of Placemaking as a Practice that Occurs Collaboratively between Animals and Humans in Costa Rica

1.0 Introduction

The field of anthropology evaluates placemaking as a human practice and as a landscape upon which conflict between humans and nature occurs (Wyckoff, 2014; Boreskie, 1999). However, this theory overlooks a history of human-nonhuman cohabitation. Though there are many examples of placemaking as a conduit for enhanced wildlife-human relations such as ecotourism efforts to save the Marsican brown bear (*Ursus arctos Marsicanus*), more than 70% of the world's wildlife has died off in the past 50 years with little signs of slowing down (Thomsen et al., 2021; Grooten & Almond, 2018). This study specifically explores three elements of placemaking practices between humans and animals within Costa Rica to demonstrate how pro-animal actions can result in positive wildlife-human relations. The first considers three major wildlife protection policies: Wildlife Conservation Law 7317, Biodiversity Law 7788, and the Memorandum signed by MINAE in October 2022. The second explores collaborative placemaking practices between humans and animals in human recreation scenarios. The third investigates placemaking practices between wildlife and humans in the context of domestication. This trifecta of placemaking contexts perhaps increases the likelihood that animal and human placemaking occurs in concert rather than conflict.

Costa Rican policymakers enacted Conservation Law 7317 in 2012, which prohibits wildlife hunting, collection, and removal, while outlining acceptable forms of human interaction with displaced wildlife through rehabilitation and research (Costa Rica, 2012). This law exemplifies

how Costa Rican policy is designed to integrate animals into human placemaking practices and facilitate human integration into animal placemaking practices by advocating for animal livelihoods within the spaces humans inhabit. Biodiversity Law 7788 emphasizes the importance of human respect for all life forms in Costa Rica, including animals, along with the importance of generational and cultural equity (Costa Rica, 1998). One aim of the recent Memorandum signed by MINAE in October 2022 is to reduce animal electrocution on power lines by constructing aerial wildlife passages, which exemplifies the human importance placed upon animal livelihoods within human spaces (MINAE, 2022). Captive wildlife circumstances created by these policies raise questions about how collaborative placemaking between humans and animals takes place in such scenarios.

The three relevant Costa Rican wildlife protection policies are considered world leading from a pro-wildlife lens (Thomsen et al., 2022; Schneider et al., 2023). The first is the Wildlife Conservation Law 7317. This law establishes a baseline for collective placemaking between humans and animals within contexts when humans and animals cohabitate in natural environments. The second policy references Biodiversity Law 7788 offers significant insights into the study of placemaking practices of animals and humans during captive scenarios (Costa Rica, 1998). Tools to improve or destroy the welfare of living things present a dichotomy in the relationship between animals and humans (Cheng et al., 2021). The third, the Stop the Shocks Program, was brought into effect by the memorandum signed by the Costa Rican Ministry of Environment and Energy (MINAE) in October 2022 (MINAE, 2022). MINAE is responsible for regulating the use of resources within Costa Rica with consideration of environmental protection (Subak, 1999). This initiative was successfully turned into policy. It provides insight into

contemporary multispecies relations and the technologies that influence these relationships and placemaking practices. By analyzing these turning points in placemaking practices between animals and humans, this study sets a basis for examining placemaking practices that occur at an individual level within these policies.

The placemaking relationship between humans and animals is not limited to that of humans and wildlife, it also encompasses that of humans and their pets. This study identified significant points in Costa Rican policy where placemaking characteristics evolved. It specifically surveyed the placemaking relationship between Costa Ricans and their pets. With pets' significance to the human experience and humans being integral to the experience of their pets, such relationships are important to the evaluation of collective placemaking (Herzog, 2010). Studies dating to the late 1990s reflect how people pass personality traits on to their pets, recent research suggests the inverse may be true as well (see Johnson et al., 1992; Payne et al., 2015; Zilcha-Mano et al., 2011).

This section will look at the effects of personality trait inheritance of pets on collective placemaking, as well as how sharing a home environment affects placemaking practices between humans and animals. After establishing collective placemaking practices for animals and humans in cohabitation, the study examines placemaking practices between wildlife and humans.

Dwindling natural environments have forced wildlife and humans to cohabitate in both urban and natural environments with increasing frequency (Radeloff et al., 2005). This paper considers a holistic view of the three conjoined placemaking contexts of humans and animals within Costa Rica to reflect upon placemaking between animals and humans. We argue that multispecies

placemaking is a fluid process through temporal and spatial contexts. We demonstrate how placemaking practices in multispecies relations occur simultaneously and collaboratively within Costa Rica and are a possible pathway toward staving off species extinction in other locations.

1.1 Literature Review

1.1.1 Placemaking: Not an Inherently Human Practice

Placemaking is primarily defined by the field of anthropology within a human context. Applying Basso's (1996) definition, Christie (2009) asserts that placemaking is "a work of 'retrospective world-building' that enables a person or community to see a place in all its richness and complexity and hold that place in the imagination" (p. 347). Berry (2010) defines 'devotion' as being deeply involved in the sense of place. Traditionally, 'imagination' and devotion, from a scientific perspective, are largely defined through a human lens, implying that placemaking is a human practice (Åsberg et al., 2011). Contemporary research suggests otherwise (see Thomsen et al., 2022).

Heaney (1980) asserts that a sense of place is derived from placemaking practices by "offering a comparable assessment of the delicate relationship between geography and imagination: It is the feeling, assenting, equable marriage between the geographical country and the country of the mind... that constitutes the sense of place in its richest possible manifestation" (p. 132, cited in Christie, 2009). Placemaking contributes to a sense of familiarity and nostalgia. Cresswell (2015) cites the famous Wallace Stevens poem, *Anecdote of the Jar*, in making the construction of place

more palatable, suggesting that a hill is just a hill until one has placed a jar atop it, at which time it becomes a place.

Wallach et al. (2020) refute the common argument that animals do not have the capacity for imagination and devotion and are, therefore, less than humans at a fundamental level due to their lesser moral standing. Westernized theories of moral ethics often argue that what necessitates membership within a moral community is qualified by the possession of moral autonomy (Frey, 1987). In *Can Animals be Moral?* Rowlands (2012) posits that animals rival humans in their capacity to possess a sense of right and wrong, perhaps because humans are animals and it is anthropocentric of us to think otherwise (see Thomsen, 2022). As evidence, Rowlands draws on examples of elephants supporting their dying matriarch in her final moments, and a chimpanzee who rescued a small boy who fell into his enclosure at the zoo. Rowlands also criticized mainstream definitions of ‘morality’ as evaluating the moral standing of all beings through a human lens, supporting the hypothesis that morality is not limited by human contexts (Rowlands, 2012, pgs. 7-17).

In studying animals’ capacity for imagination and devotion, Mitchell (2002) found animal imagination comparable to that of humans, *even when evaluated on human terms* [emphasis added]. Sable (2013) asserts not only that pet owners believe their pets love them but also that the devotion of pets to their owners is comparable to, and at times surpasses, the bounds of human devotion. Following these assertions regarding animals’ capacity for imagination and devotion as key determinants of placemaking, we can extrapolate that animals have the capacity for placemaking practices (Christie, 2009; Berry, 2010). Berry’s definition of place implies that

the ‘home’ is central to the placemaking experience (Berry, 2010). Hauser (2001) confirms that animals, both domestic and wild, experience a sense of home, clearly demonstrating not only the capacity for placemaking in animals but also as an active practice of it (Hamlett & Strange, 2022). So, what makes Costa Rica unique in multispecies relations, and more specifically, placemaking?

1.1.2 Implications of Costa Rican Wildlife Policy Upon Animal/Human Placemaking

In the last two decades, Costa Rican wildlife policy has transitioned to emphasizing animal welfare over humans’ hunting rights. Clark (1986) defines wildlife policy as “what state, federal, and private wildlife management agencies and or organizations do for or to wildlife in the name of the public interest” (p. 11). This shift is evident in Costa Rica’s recent policies, such as the aforementioned Wildlife Conservation Law 7317, Biodiversity Law 7788, and the Memorandum signed by MINAE in October 2022. While consumptive practices demonstrate collaborative placemaking through both humans and wildlife being deeply rooted in the meanings of place found within such practices, new Costa Rican policies created a social environment where placemaking practices between animals and humans may be evaluated when the livelihoods of all species are taken into consideration (Thomsen et al., 2021; 2022).

Costa Rican policymakers enacted Conservation Law 7317 in 2012, emphasizing the human guidelines of respecting the livelihoods of wildlife in Costa Rica. These guidelines are demonstrated in Article 14, which bans wildlife hunting, collection, and removal. In doing so, this law outlines acceptable forms of human interaction with displaced wildlife through rehabilitation and research (Costa Rica, 2012). The policies found within Conservation Law

7317 clearly demonstrate the importance placed by the humans inhabiting Costa Rica upon animal integration into human places. Furthermore, this law exemplifies how Costa Rican policy is designed to not only integrate animals into human placemaking but to facilitate human integration into the placemaking practices of animals by advocating for animal livelihoods within the spaces humans inhabit.

In conjunction with Conservation Law 7317, Biodiversity Law 7788 outlines the importance of human respect for all life forms within Costa Rica. This includes an emphasis on generational equity, cultural equity, and the value of biodiversity (Costa Rica, 1998). By emphasizing animal importance adjacent to the emphasis on equity between humans, this law demonstrates the clear implication of animals within the placemaking of humans in Costa Rica. Article 22, in particular, establishes protected areas, the implications of which are twofold: demonstrating human respect for animal placemaking practices and human involvement in animals' placemaking practices.

The Memorandum signed by MINAE in October 2022 enacted a plan to reduce instances of animal electrocution on power lines throughout Costa Rica (MINAE, 2022). With a budget of 1.2 million USD, this plan consisted of constructing aerial wildlife passages (Fernandez, 2022). This memorandum effectively demonstrates the human importance of animal livelihoods within the human spaces of Costa Rica, thereby implicating animal livelihoods in the placemaking practices of humans. Such policies, and the resultant captive wildlife circumstances lead one to question the attributes of collaborative placemaking between humans and animals in captive scenarios.

1.1.3 Captive Wildlife

Another facet of collaborative animal-human placemaking practices occurs in zoos. The first contemporary zoo opened in 1793 in Paris, France (National Geographic, 2012). Current data reflects an estimated 10,000 zoos worldwide containing over one million individual animals (Born Free, 2022). Though zoos have been highly criticized for exploiting animals as commodities (see Fennell, 2013), they have had arguably one significant positive effect; to make animals more accessible to all social classes. Tofield et al. (2007) found zoos incredibly advantageous to humans as a source of learning for young children. Colléony also asserts the benefits of zoos, providing a positive experience that allows humans to connect with nature in a controlled environment (Colléony, 2016). Unfortunately, in so doing, wildlife are displaced from their original habitats (Jamieson, 1985; Braverman, 2011). Among studies demonstrating poor animal welfare standards in zoos, Clubb et al. (2008) found that the life expectancy of female Asian elephants (*Elephas maximus*) born in zoos was 16.7 years, while the life expectancy of female Asian elephants in the wild was 56 years. In this study, stress and obesity were identified as the two major predictors of female Asian elephant survival in zoos (*ibid*, 2008).

The aforementioned (limited) human benefits notwithstanding, zoos represent a polarizing dichotomy between the respective placemaking practices of animals and of humans. Animals removed from their natural habitats only to pace anxiously back and forth in a small, artificial space within an urban environment is an example of what some might consider an egregious displacement of animals (Malamud, 1998). On the other hand, families, couples, and school children can gain a first-hand appreciation for the animals they see at zoos. Yet, zoo interaction requires copious application of human imagination throughout the placemaking process

(Bleakly, 1999). For humans to enjoy their observational experiences, they must first desensitize themselves to the suffering of the captive animals. This process involves both the imagination and devotion of Berry and Basso's placemaking concepts (Basso, 1996; Berry, 2010). The entirety of the placemaking experience of the animals within zoos is constructed by humans, designed to mimic their interpretation of the animals' natural habitats and scheduled feedings while subject to constant human observation (Malamud, 1998). Animals and humans contribute to each other's placemaking practices in zoos, suggesting that placemaking is a collaborative process even in captivity.

Within Costa Rica, wildlife rehabilitation sanctuaries are far more prevalent than zoos, which introduces the possibility of wildlife viewing as a form of human recreation where animal suffering and mortality are arguably not exacerbated by their living conditions (Speiran, 2021). This suggests an altogether different form of placemaking between humans and wildlife than that of zoos; a placemaking practice wherein the livelihoods of all involved are considered. In addition, the placemaking experiences of wildlife and humans within Costa Rica are not limited to captive scenarios (Lopez et al., 2020). Humans residing in the country, particularly those near the forests, share spaces with wildlife. It is not uncommon for wildlife and Costa Rican humans to live in close proximity, which previously led to common practices of humans trying to domesticate wildlife (Chardonnet et al., 2002). While this practice is now illegal, it demonstrates the human capacity to actively integrate wildlife into the shared spaces (Costa Rica, 2012). By both Berry and Basso's definition, in this context humans and animals collaboratively placemake by actively incorporating each other into their placemaking practices (Basso, 1996; Berry, 2010).

This evaluation of collaborative placemaking in wildlife scenarios does not include the placemaking relationship between humans and their pets.

1.1.4 Pets

The reallocation of the role of household animals remarkably affected human placemaking practices in the home and beyond. The domestication of animals for human use began about 10,000 years ago. These animals were primarily used for food, clothing, and labor, rather than companionship. The concept of pets, or domesticated animals kept for companionship, didn't develop until the 18th century. Today, pets are an integral part of many households worldwide, with an estimated 85 million families in the United States alone owning a pet (Lear, 2012). With the development of pets, humans began classifying animals, not by their species but by their relative importance to humanity: animals of wildlife, animals of agriculture, companion animals, and so forth (Gordon, 2017). Humans often associate different places with different animals. When one imagines a forest, their imagined place would likely include animals, as would their lived experience with forests. Squirrels (*Sciuridae*) are typically considered woodland creatures in the human eye; however, can be found in urban environments. Wildlife wandering into urban spaces can be jarring and out of place for humans and animals alike. This shift influences the places animals and humans inhabit and how they connect with and imagine such places. Basso's and Berry's definitions of placemaking as a process of 'world-building' exemplify the evolution of present-day multispecies placemaking practices (Basso, 1996; Berry, 2010).

The project's evaluation within Costa Rica includes collective placemaking between humans and animals in cases where wildlife has been domesticated. Human personality traits, in many cases,

are inherited by their pets; a human with anxiety is more likely to have an anxious dog (Johnson et al., 1992; Payne et al., 2015). In this way, humans, and animals collaboratively placemake by having like reactions to changes in or elements of individual places. Pets are considered members of the family in many households (Albert & Bulcroft, 1987). Comparably, pet owners design the world within which their pets exist and, by default, generate the places the pets might create for themselves. This propounds the idea that placemaking in this setting occurs as a collaborative process between humans and animals. Considering the unique prevalence of instances where wildlife has been domesticated in Costa Rica, more research is needed on the effects of the shift from wildlife to pet in the human construction of place upon collaborative placemaking practices between animals and humans.

Unfortunately, placemaking practices between animals and humans are also shaped by instances of animal abuse. Animal abuse is surprisingly prevalent in contemporary times. A study at Georgia University found in an anonymous survey that 67% of male university students and 44% of female university students admitted to abusing animals. Hal Herzog even goes so far as to equate animal abuse during childhood to drinking milk (Gupta, 2006; Herzog, 2010). This suggests that, to some extent, fear is implicated in the placemaking practices of pets. Many adults who abused animals in childhood express shame and regret when recounting such transgressions (Herzog, 2010). This similarly implies regret in the placemaking practices of humans. In these instances, through Basso's definition of "retrospective world-building," one can see collective placemaking between animals and humans with negative underlying emotions (1996). Costa Rica is no exception to this. In their 2011 article, Sollund et al. detail the many facets of animal abuse in Costa Rica, including domestic animal abuse, animal trafficking, and illegal poaching.

However, Chapter 1, Article 9 of Costa Rica's Biodiversity Law 7788 explicitly states the importance of respect for all life forms, thereby implying this value at a national level (Costa Rica, 1998). This demonstrates the need for research on the placemaking practices of animals and humans in instances of abuse wherein the values of the individual do not align with governmental policy. Factors such as animal domestication and Costa Rican wildlife policy and placemaking as an animal process indicate that placemaking occurs collaboratively between humans and animals.

1.2 Methodology

In order to develop an understanding of the collaborative placemaking practices between animals and humans within Costa Rica's national values of wildlife protection and welfare, this study utilized a multi-site, multi-species ethnographic pilot study (Kirksey & Helmreich, 2010).

Researchers in this study utilized anthropological methods of ethnography to draw out inductive themes from interviews and observations (Creswell & Creswell, 2017). Over the 16-day course of this pilot study, researchers collected data across three wildlife rehabilitation centers and one veterinary hospital to inform the analysis of the placemaking relationship between animals and humans within Costa Rica. For the purposes of this study, the term "patchwork ethnography" refers to the method of collecting ethnographic data in short, thorough intervals (Günel et al., 2020). In this study, saturation through semi-structured interviews was achieved across short intervals of time through the use of a patchwork ethnography approach. In doing so, the study amalgamates essential data to derive conclusions that are both saturated and coherent (Smolka, 2021). The data collected through this patchwork ethnography was collected in Costa Rica in January 2022 and aims to inform a broader, longitudinal study entitled "Wildlife Rehabilitation

for Conservation” which seeks to evaluate the relationship between wildlife rehabilitation centers and wildlife conservation at all levels.

1.2.1 Data Collection & Analysis

This January 2022 pilot study consisted of fieldwork conducted by sixteen researchers across one veterinary college and three wildlife rehabilitation centers. The research team included one wildlife rehabilitation professional, two university faculty members at an R1 institution, five graduate students in the College of Natural Sciences, six students of veterinary medicine, and one undergraduate biology student. While the majority of data collection took place in English, four members of the research team spoke Spanish and translated for the rest of the team when appropriate. The self-reported demographics of the research team included an age range of 21 to 60, with eight males and eight females.

Over 130 semi-structured interviews were conducted by researchers over the 16-day research period. Digital documentation of interviews was not collected by researchers to allow researchers to contribute to volunteer activities and thereby conduct participant observation (Creswell & Creswell, 2017). Participant observation took place as researchers took part in volunteer assignments and clinical practice in equal measure across all four locations. Wildlife centers surveyed by researchers in this study fell into three size classifications: small, medium, and large. The aforementioned classifications were derived from the 500 to 1000 annual patient intake range within Costa Rica. The center classified as small has an annual new patient intake of less than 500, while the medium-sized center’s annual intake ranges from 500 to 1000 patients, and the large center reported an annual intake of over 1000 patients. Each member of the team

conducted participant observation across each context to allow for both natural science and veterinary medicine perspectives as well as generate diversity in participants across all researchers. In lieu of digital data collection, researchers documented their findings using a pen-and-paper format at regular intervals (Bernard, 2017). Upon the conclusion of data collection, researchers transcribed these notes in a digital format to allow for ease of access to the body of field notes. Researchers then used the compiled data to inform a thematic analysis (Creswell & Creswell, 2017), which generated two major themes: policy in action, and stewardship/ecotourism.

1.3 Findings and Discussion

Table 1.0: Key Observations by Center Size

Key Findings	Large Center	Medium Center	Small Center
Funding Challenges		Resources are gathered from the environment whenever possible to reduce costs.	Lack of funding is a major obstacle to improving facilities and care provided to patients.
Funding Source	Tourism (No Volunteer base)	Volunteers and tourism	Volunteers and tourism
Release		Majority of wildlife releases take place on the property of locals who volunteer their space.	Previously domesticated animals are ineligible for release and are the only animals available for viewing by tourists.

Wildlife welfare	Priority is centered around visitor experience as opposed to patient welfare.	Previously domesticated animals are ineligible for release and are the only animals available for viewing by tourists to protect welfare.	Staff are endeavoring to initiate and fund a project which would build safe passages for arboreal wildlife across roadways to prevent wildlife electrocutions while attempting to cross upon power lines.
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This pilot study effectively identified the fundamental components of the placemaking relationship between animals and humans in captive wildlife, political, and residential contexts within Costa Rica. Each interview collected by researchers supplied relevant insight into the collective placemaking practices between animals and humans in the Costa Rican environment. While a broad range of valuable knowledge was compiled by researchers throughout the course of this study, this study highlights illustrative examples over exhaustive descriptions (Gong et al., 2021; Truong et al., 2022; Zhang et al., 2022), with key findings fall into the following major themes: policy in action, ecotourism, and stewardship.

1.3.1 Policy in action

Prior to commencing this study, researchers established a foundational understanding of Costa Rica's progressive wildlife policies. Through participant observation and semi-structured interviews, researchers were able to identify public opinions on such policies and evaluate how they demonstrate collaborative placemaking between humans and animals. Costa Rican wildlife protection policies were observed to promote positive and collaborative placemaking

relationships within the country. For example, the majority of staff at each center informed researchers that it was illegal under Costa Rican law to take photos that include both humans and captive wildlife. Researchers found informational signage at the large rehabilitation center, displaying notices on the policies that benefit wildlife. At the same center, Interlocutors #62 and #81 referenced how this particular policy aimed to reduce human-wildlife conflict by decreasing instances of human interference with wildlife. Other examples include Interlocutor #68 description of how the Costa Rican government banned hunting practices with the exception of indigenous populations. These policies represent facilitation of the placemaking relationship between humans and animals as observed by researchers. Further, the anti-photograph regulations have affected a direct human influence upon the placemaking practices of animals by regulating the ways in which humans might alter their environment. Said policies also influence the placemaking practices of humans within wildlife rehabilitation centers by creating a system wherein humans are limited to revisiting experiences through recall and imagination, rather than photographed images.

In addition to observing the positive facilitation of placemaking relationships through governmental policies, researchers observed the collaborative placemaking between humans and animals within contexts of narrower government influence. At the small center, participants reflected on how the center's size rendered it relatively inconsequential to government funding and regulation. Researchers observed how the smaller center's volunteers and staff took great care to ensure that resources were not wasted, highlighting the center's financial constraints and consequent adaptive measures. The influence of wildlife upon human placemaking practices was apparent in the day-to-day activities of center staff and volunteers who developed cost-effective

practices in caring for the animal residents. Interlocutor #12 expressed the desire to improve the care given to both animals and facilities, each time citing a lack of funding as an obstacle.

Interlocutor #1 informed researchers that the majority of funding for the center came from volunteer fees and tourism, with no funding from the government. Researchers observed that, in the absence of funding to generate superior environments for animal residents, staff found zero-cost alternatives, as evidenced in the construction of enrichments for animals using readily found materials such as coconut shells and sticks. The volunteers thus demonstrated the integration of animals within their placemaking practices, actively seeking and imagining enrichment items within mundane objects found in their environment. In so doing, volunteers integrated themselves into the placemaking practices of animals, transforming their relationship with the environment.

At the small center, researchers detected the prevalence of attempted integration of wildlife into human places through domestication. Researchers observed that by attempting to domesticate animals, humans condemned animals to a lifetime of captivity. This occurs as humans integrate themselves into the placemaking practices of animals by permanently altering the physical landscapes and degree of human interaction in the spaces where animal placemaking occurred. Interlocutors #18 and #22 noted that animals kept in and around human homes were not eligible for release and that only the animals which were permanent residents were available for viewing by tourists at the center. Humans at the small center also altered the physical placemaking landscapes of wildlife intended for release by limiting their contact with humans and altering their space with privacy measures. All other animals were kept in the veterinary facility with privacy fencing so tourists could not see in.

At the medium-sized wildlife rehabilitation center, researchers observed the effects of Costa Rican wildlife policies and governmental influence upon the collaborative placemaking practices of humans and animals. Researchers discerned a lack of government respect for the patient capacity of centers and the resultant overcapacity of patients affected human placemaking practices in generating stress for center staff and volunteers. Interlocutor #49 reported that, although the government inquires whether there is space available for more patients, it drops new patients off regardless of the response. Interlocutor #49 described the strain that this overload of patients places upon the center to continue to provide equitable and adequate care to each of the animals for which they are responsible. Over-crowding and limited resources notwithstanding, researchers observed that staff and volunteers actively integrated animal welfare strategies into their interactions with physical space by gathering resources from the surrounding environment, such as flowers, fruits, and vegetables to feed the animals, as well as wood and grasses for buildings and enclosures. Interlocutor #52 communicated that such foraging for resources was aimed at meeting the challenge of caring for patients brought by the government without the benefit of receiving governmental funding. Researchers observed that this strain affected animal welfare and the resultant placemaking practices of animals that occurred.

At the large center, researchers observed the effects on the placemaking relationship of humans and animals of a center whose operation was not limited by economic factors. In contrast to the small and medium-sized centers, the large center did not rely on volunteer staff. Researchers observed that the center's increased economic wealth affected animal placemaking practices

through additional enrichments and enhanced habitat construction of the physical spaces that animals inhabit. Employing caregivers allowed the center to influence animal placemaking by providing greater continuity of care, and human placemaking by enriching visitor experiences. This center's priorities centered around the placemaking experience of visitors, as opposed to the smaller centers which emphasized patient welfare.

At the large center, researchers learned of Costa Rican policies on hunting which serve to alter the placemaking practices of wildlife by minimizing animal experiences of fear and death. Researchers were also introduced to policies that affect the placemaking relationship between humans and animals by regulating human domestication of wildlife. Interlocutor #67, referencing the Costa Rican wildlife protection policies, described how hunting and the domestication of wildlife had been rendered illegal. This Interlocutor went on to explain the problem that this domestication policy created for the placemaking practices and wellbeing of wildlife: wildlife that had been domesticated for years were turned over to rehabilitation centers and yet were ineligible for release due to their domestication. This alteration in the physical space of animals affected human placemaking by limiting the integration of wildlife into human homes, while also affecting animal placemaking by removing them from spaces wherein their placemaking practices cultivated a sense of home and rendering them ineligible to return to their natural placemaking habitat.

1.3.2 Ecotourism and Stewardship

At the small center, researchers bore witness to the feelings of stewardship generated by the integration of wildlife into the placemaking practices of center staff and volunteers. While limited by their economic means, the small center staff were observed by researchers to advocate for the wildlife of Costa Rica, even when it came at a personal cost to the staff. Interlocutor #12 informed researchers that they worked full time and volunteered on their days off to support the center. Volunteers and staff at this center integrated themselves into the placemaking practices of their wildlife patients by making every effort to ensure that animals are recovered and rehabilitated prior to release, thereby fundamentally altering the ways in which animals interact with their physical environment. This commitment is evidenced by veterinary staff performing physical therapy with an injured sloth. This center relied heavily upon visitors as a source of income, another example of the placemaking practice of human tourists integrating center wildlife into the construction of the Costa Rican ‘place.’ Interlocutor #1 reported that they receive 30-50 visitors a day from all over the world. Center visitors left with a deeper understanding and appreciation for the wildlife that inhabits the physical spaces of Costa Rica.

Within the medium-sized center, researchers gained insights into the collaborative placemaking between wildlife and locals, and the success of local programs safely integrating wildlife into urban places by protecting wildlife and preventing the need for center intake. Interlocutor #22 informed researchers that staff at the center were endeavoring to initiate and fund a project which would build bridges of safe passage for arboreal wildlife across roadways to prevent electrocutions when attempting to cross via power lines. The construction of these bridges alters

the physical landscape within which wildlife placemake and mitigates the underlying fear within the placemaking practices of wildlife in urban spaces. The bridges also alter the physical landscapes where humans engage in placemaking practices and encourage wildlife into the spaces where humans placemake. At this center, researchers witnessed the release of a sloth who had been rehabilitated. It was noted that the sloth was released in a tree in the yard of a local's home. In fact, Interlocutor #44 informed researchers that a majority of wildlife releases take place on the properties of locals who volunteer their space. Furthermore, Interlocutor #22 added that, while some locals consider wildlife to be a nuisance and attempt to shoot them, a majority of locals care for the wildlife and enjoy seeing them in urban spaces. By allowing wildlife release on their properties and encouraging wildlife to live within their property, humans both integrate wildlife into their physical spaces and resultant placemaking and protect animal welfare generating safe spaces where wildlife can engage in placemaking.

The large rehabilitation center focused primarily on the placemaking practices of tourists, who account for the majority of the center's revenue. This focus, in and of itself, seems to influence human placemaking in that the abundance of resources resulting from tourist-related revenues changed the behaviors and environment of the large center. By changing the physical setting of placemaking, this human focus also inadvertently altered the placemaking practices of the animals within this setting. Interlocutor #68 informed researchers that all the staff at this center were from predominantly English-speaking countries. Additionally, Interlocutor #70 referenced using non-endangered wildlife species brought to the center for rehabilitation as food for the endangered species receiving rehabilitation at the center. Researchers learned from an interview with Interlocutor #68 and observation at the large center that none of the animals at this center

were kept from visitor viewing. Even animals in the veterinary clinic could be viewed through a walkway passing above it, in stark contrast to the two small centers which kept patients intended for release and those being treated from public view. Researchers noted that greater resources and fewer restrictions within this center resulted in compromised respect for life as evidenced within the use of non-endangered species as food, which affected associated placemaking for wildlife. This shift in values from animals at the individual level to animals at the species level negatively impacted the human acknowledgement of the role of some animals in collaborative placemaking practices and results in a decline in individual animal welfare.

1.4 Conclusion

Animals are capable of imagination and devotion (Mitchell, 2002; Sable, 2013), and our data supports claims that animals are capable of placemaking (Berry, 2010; Basso, 1996). Animals demonstrate having a clear sense of home, implying not only that they are capable of placemaking practices, but are also active participants (Hauser, 2001). Observations and interviews gathered throughout this study also reflect that humans involve animals in their construction of home by domesticating them, and animals involve humans in their construction of home by acquiescing to domestication. This study addressed the impact of Costa Rican anti-domestication policies upon the physical environments and resultant placemaking practices of both humans and wildlife. In so doing, this study sought to evaluate placemaking practices between humans and animals in Costa Rica where arguably progressive wildlife policies, along with human-animal habitation in close proximity, facilitate the positive and collaborative placemaking relationship between humans and animals. Across the three settings in this study, researchers found that humans and animals were deeply integrated with each other's places. In

fact, not only do humans and animals in Costa Rica exist within the same places, but they demonstrate pathways of coexistence through collaborative placemaking.

Through policies, interviews, and observations, rescue centers and governments were found to demonstrate that the welfare and resultant placemaking practices of Costa Rican wildlife, and specifically the animals for whom they were responsible, was of the utmost importance. The center's staff integrated animals within their placemaking practices anchored in a deep appreciation and reverence for wildlife, evidenced by their commitment to aiding and protecting animals in their care. Examples supporting this assertion included staff working for free or paying to volunteer, and the practice of humans releasing rehabilitated wildlife in and around their own residential places. This release of animals integrated humans and a sense of safety into the animals' placemaking practices. Further, animals were granted a measure of protection by humans in the event of injury or abuse, thereby minimizing the component of fear within animal placemaking practices. Finally, the daily experiences of animals who reside at each center were designed and regulated by humans, thereby fundamentally integrating animals into the day-to-day placemaking of these humans and vice versa. These factors collectively support the conclusion that placemaking practices in Costa Rica occur collaboratively between animals and humans.

Within each center studied, ecotourism was a major economic driver of the center's success. Ecotourism, by nature, demonstrates the integration of the wildlife and the protection of wildlife into the placemaking practices of human ecotourists. An influx of human ecotourists increases the number of humans in the physical placemaking spaces of animals, consequently increasing

instances of human interference with wildlife, which integrates humans into the placemaking practices of animals. While some centers sustained ecotourism through volunteer work, others relied on the collection of visitors fees for wildlife viewing. The success of these strategies suggests that the impetus for people visiting Costa Rica is strongly driven by the intention to view, interact, and protect wildlife, indicating a deeply ingrained appreciation of wildlife within the construction of meaning that tourists hold of Costa Rica. This construction of meaning for visitors, suggests that animal conservation is a point of importance in their lives. Costa Rica is the place where they interacted with wildlife, and the relationships developed with individual animals contributed greatly to the center volunteers' construction of the place. The effect of this relationship can also be attributed to the animals with whom the relationships were developed. Furthermore, the influx of center tourism serves as a motivating factor in contributing to the economy and livelihoods of humans native to the area, cultivating their sense of stewardship for wildlife beyond the centers. These observed relationships support the conclusion that placemaking is a practice that occurs collaboratively between humans and animals within Costa Rica.

In each of the study's settings, researchers consistently reported being notified of the illegality of photographs that capture the images of both humans and captive wildlife. Upon investigation, researchers found that Reglamento a la Ley de Conservación de Vida Silvestre, Costa Rica, 2017 states that volunteers may not handle wildlife. This restriction is in response to the oversharing of photos within the tourism industry. Only nonprofit-certified centers are authorized to handle wildlife. This restriction is coupled with the stop the selfie campaign. While not illegal, the taking of photos that capture the images of humans and captive wildlife is now taboo.

Interlocutors at each of the rehabilitation centers, and predominantly at the small and middle-sized centers, expressed personal views that align with these policies, suggesting that the policies set by the Costa Rican government facilitate both the protection of wildlife welfare, and the integration of wildlife into human placemaking through ‘retrospective world building’ in the absence of photographs (Basso 1996). This is consistent with both Basso’s and Berry’s definitions of placemaking (Basso 1996; Berry 2010). The alignment of governmental wildlife protection policies and beliefs expressed by staff and volunteers further suggests that such policies promote wildlife integration into human placemaking practices through stewardship.

This study demonstrated that in the locations surveyed, placemaking occurs as a collaborative interaction between animals and humans rather than as a conflict between the two. Specific examples supporting this assertion are three-fold: (1) stewardship, including wildlife release on personal property, staff creating passages for wildlife, and wildlife brought to the centers for evaluation; (2) interspecies relationships through rehabilitation centers and ecotourism; and (3) welfare concerns, including governmental policies, the viewing policies at rehabilitation centers, and prioritization of tourist experiences and animal experiences. Overall, these findings highlight the importance of evaluating the relationship of humans and animals in placemaking and the implications of such relationships upon future positive relationships among humans and animals. Confirmation of such placemaking relationships presents a clear opportunity for further research to evaluate the placemaking relationship between humans and animals and the implications of such placemaking relationships on the physical construction of landscapes, boundaries, and human edifices.

Chapter 2: The Implications of Natural Boundaries Upon Collaborative Placemaking Between Animals and Humans

2.0 Introduction

The field of Anthropology evaluates the process of attributing meaning to physical objects or locations as a process undertaken by humans in direct conflict with nature. Such evaluations fail to consider the long-standing history of cohabitation between humans and animals. In Chapter 1 of this study, researchers evaluated data collected in Costa Rica which suggests that placemaking in Costa Rica occurs as a collaborative process between animals and humans. To build upon this, researchers in this study will evaluate the data set to appraise the effects of natural boundaries on the animal-human placemaking relationship.

Following careful consideration of the collective placemaking process that occurs between humans and animals, this study evaluated the construction of boundaries separating urban spaces from nature, and the effect such boundaries have on human and animal placemaking relationships. As an example, while world-wide deforestation is increasing, deforestation rates in Costa Rica appear to be decreasing over the last 20 years, falling from 1.43% per year to 0.10% per year (Morse et al., 2009). Costa Rica's central forest serves as a key corridor for wildlife and serves as a boundary between urban spaces (Silva, 2003). This, along with a myriad of sustainable policies, makes Costa Rica a pillar of sustainable development.

By contrast, in recent years the United States has erected a wall along parts of the U.S.-Mexico border. While the intention of wall was to intercept human movement, the unintended

consequences of said wall structures include interruption of the migratory patterns of the area's indigenous animal populations (Best, 2021). This study aims to evaluate the effects of Costa Rican sustainable boundaries on animal-human placemaking relationships to inform welfare and coexistence efforts as encroaching Anthropocene displays the degrading relationship between the livelihoods of humans and the livelihoods of animals and ecosystems (Steffen et al., 2011).

The process of placemaking is not inherently positive. In his book *Wisdom Sits in Places*, Keith Basso(1996) details the storytelling practices of the Western Apache. These stories are tied to geographic locations and give meaning to these locations for tribe members. While some stories tell of great triumphs, others emphasize suffering as a result of mistakes made. One can infer from Basso's research that individuals' experiences of trauma serve to associate meaning with physical objects or locations. Both the central forest of Costa Rica and the border wall between the US and Mexico, as examples of human-designed boundaries with associated experiences of triumph or trauma, are implicit in the placemaking practices of animals. When migration patterns are interrupted by a road or wall, causing harm or death to animals, it stands to reason that a geographic pattern that marked migration for a species will produce negative associations for the survivors. Similarly, when humans strive to preserve the habitats of animals, such as the forests of Costa Rica, they preserve the physical landscape upon which animals cultivate a sense of home, thereby inextricably involving themselves in the placemaking practices of animals.

2.1 Literature Review

2.1.1 Placemaking

As defined in Chapter One, “placemaking” is the process by which individuals and groups attribute a sense of meaning to physical objects or geographic locations. This chapter expands upon the concept of collaborative placemaking in Chapter One to evaluate the implications of animals' moral status among humans and the resulting placemaking practices within landscapes shaped by human policy and interests. The status of moral autonomy applied by humans to separate animals from themselves and justify the inequitable treatment of animals can be defined within the human constructs of personhood. Wallach et al. and Rowlands (2020; 2012) suggest that animals are equally capable of moral autonomy and therefore warrant equal personhood to that of humans, this establishes animals as both actors in placemaking practices and morally entitled to multispecies justice. The sustainable boundaries maintained by Costa Rica provide a setting within which to evaluate the placemaking relationship between humans and animals in contexts approaching multispecies justice. Such evaluation will inform conservation efforts and sway decision-making toward compassionate conservation which takes into account the livelihoods of all beings.

2.1.2 Personhood

Western cultures have long utilized personhood to separate the rights of the stereotypical white man as opposed to those from whom he stands to benefit through oppression (Schroer, 2005) as exemplified in Native Americans not being granted legal rights that accompany personhood until the Indian Citizenship Act of 1924 (White, 2018). Merriam-Webster's Law Dictionary defines a

legal person as, “one (such as a human being, a partnership, or a corporation) that is recognized by law as the subject of rights and duties.” It seems a colossal oversight to limit the mental autonomy of personhood to human beings and their agencies while dismissing the rights and agency of nonhuman beings. Those in support of this divide argue that autonomy is a distinctly human characteristic defining personhood and, as such, the concept of personhood cannot apply to nonhumans, rendering nonhumans incapable of placemaking in the human view (Bandura, 1999). In the United States Supreme Court’s 2010 decision on *Citizens United v. FEC*, corporations were granted corporate personhood (Pollman, 2011). If corporations, which require outside influence to subsist, possess the necessary level of autonomy to be legally defined as a person, then certainly nonhumans also possess adequate autonomy to qualify for personhood.

Personhood may also be defined in an academic context. When the concept of compassionate conservation was introduced, many academics took issue, arguing that humans were of a separate and higher moral community than that of nonhuman species and therefore could not be identified as possessing personhood (Wallach et al., 2020). Nearly every westernized theory of moral ethics necessitates that membership in a moral community is qualified by possessing moral autonomy (Frey, 1987). In *Can Animals be moral?* Mark Rowlands argues that animals have a sense of right and wrong that rivals that of humans (2012). To illustrate this, Rowlands draws on examples of elephants supporting their dying matriarch in her final moments, and on a chimpanzee who rescued a small boy who fell into his enclosure at the zoo (2012). Rowlands criticized the definition of morality as evaluating the moral standing of all beings through a human lens and suggests that morality is not defined by human contexts (Rowlands, 2012).

Historically, efforts for wildlife conservation have focused mainly on groups of wildlife such as species and ecosystems rather than individual beings (Batavia et al., 2021). Compassionate conservation proposes that conservation efforts consider the well-being of individuals within said ecosystems and species (Batavia et al., 2021). Since compassionate conservation was introduced, it has faced strong opposition from those who subscribe to the belief that humans participate in a higher moral community than wildlife. Conservation efforts must therefore consider compassion for humans when evaluating wildlife conservation efforts (Wallach et al., 2020). Additionally, opponents of compassionate conservation argue that conservation biology is inherently compassionate, and the intent of conservation is to preserve biodiversity, which must be done at the cost of the individual (Wallach et al., 2020). Proponents of biodiversity argue that the protection of invasive species by protecting individuals serves to diminish biodiversity in a given ecosystem (Callen et al., 2020; Griffin et al., 2020). Those who argue that conservation biology efforts are already compassionate pose that eliminating invasive species via euthanasia is compassionate to species threatened by the invasive species (Russel et al., 2015). These arguments rely on a framework that prioritizes the livelihoods of humans above other sentient beings. Wallach points out that the evaluation of human effects is not held to the same standards as those employed in the assessment of species identified as “invasive,” begging the question: Would our conservation efforts outside of compassionate conservation be considered compassionate if they focused on human subjects (Wallach et al., 2020)?

Were humans to recognize sentient beings outside of their species as having intrinsic moral value, the logic of these arguments would not stand. The current conservation system employed in the western world encompasses a great deal of intentional harm to wildlife by humans.

Integrating compassion into conservation efforts shrinks western ideology's moral divide between humanity and other beings of sentience, changing how humans evaluate conservation actions and lessening the harm done to nonhuman individuals (Wallach et al., 2018). This concept of leveling the moral playing field to inform conservation opens the door for multispecies justice ideologies, which expand upon compassionate conservatism to advocate for justice for animals by giving equal concern to the livelihoods of all parties (Santiago-Ávila, 2020). Multispecies justice works in conjunction with compassionate conservation by utilizing equitable levels of compassion for all species, nonhuman, and human alike, when determining a system of justice for situations where one species' livelihood infringes upon that of another (Santiago-Ávila, 2020).

2.1.3 Wildlife Corridors

Lack of preservation of wildlife corridors is among the most egregious offenses against multispecies justice in contemporary times. Protected zones, where animals' risk of being hunted is limited and resources necessary for survival are available, have become scarcer and more scattered as human development continues to expand across the planet (Sanderson et al, 2002). While relatively safe within these designated areas, Bowers and McKnight suggest that animals are unable to distinguish the invisible borders separating the safe from the unsafe and therefore lack the means of safely traversing between protected areas (2012). This vastly inhibits biodiversity, posing significant negative effects on animal welfare (Liu et al., 2018). Without an exchange of genetics within the species inhabiting the protected areas, genetic diversity will increasingly diminish. Moreover, in the current system, unaware of the arbitrary borders drawn between safe and dangerous regions, wildlife wanders in and out of protected zones and often

succumb to hunters (Liu et al., 2018). One apparent solution to this dilemma is the implementation of wildlife corridors.

Wildlife corridors, however, may be fraught with challenges. According to Santini, Saura, and Rondinini (2015), to be effective, wildlife corridors must follow the innate migratory patterns of animals living in protected areas. Such a path is difficult to achieve, particularly in light of the glaring lack of data on existing networks between protected areas. Recent considerations of this approach include a multi-species wildlife corridor approach that utilizes space more effectively and supports more cost-effective implementation (Marrotte et al., 2017).

The lack of wildlife corridors and network mapping in South America is not limited in its scope, spanning from chimpanzees in Uganda to pumas, otters, and panthers in Brazil. Humans are directly responsible for subjecting each of these species to the threat of hunters, leading to species endangerment and possible extinction (Fischer et al., 2003; Cibot et al., 2019). Eric Sanderson (2003) illustrates the responsibility of humans to remedy the problem we have created in *The Human Footprint and the Last of the Wild*, pointing out how “the human footprint is a global map of human influence on the land surface, which suggests that human beings are stewards of nature, whether we like it or not.” (pp. 891). The entrapment of wildlife to protected areas, and the resultant negative effects on biodiversity, is a problem generated and maintained by humans and is now a predicament incumbent upon humans to solve.

2.1.4 Forest Preservation in Costa Rica

While no single solution to this protected area conflict adequately encompasses the scope of the issue, Costa Rica's protected forests offer a boundary to human activity which facilitates animal movement. It cannot be said that this example eliminates human-animal conflict as the liminal spaces of forests are home to both humans and animals; however, with the largest portion of protected forest situated in the center of the country, the space is accessible to more wildlife and less fragmented than that of other countries (Silva, 2003). By connecting the north and south of the country, these protected forests provide a corridor that aligns with the migratory patterns of many species (Silva, 2003). According to the United Nations *Food and Agriculture Organization 2020 Report*, Costa Rica's protected forests constitute fifty-two percent of its land mass. When compared to the thirty-five percent that the United States Forest Service reported in 2021, this suggests that the protected forests of Costa Rica provide not only wildlife corridors, but also a greater relative area within which animals can inhabit outside of urban space. By evaluating the placemaking relationship between animals and humans within the Costa Rican environment, this study establishes the effects of protected forests on the livelihoods of human and animal actors.

2.2 Methods

For this project researchers employed a multi-sited, multi-species ethnography to evaluate the effects of habitat protection and natural boundaries on the placemaking relationship between animals and humans (Kirsey & Helmreich, 2010).

2.2.1 Data Collection & Analysis

Data for this pilot study was collected by researchers across 16 days, through three wildlife rehabilitation centers and one veterinary hospital. The data collected over this period was utilized through anthropological methods to elicit inductive themes present in each location of data collection (Creswell & Creswell, 2017). This study employed a ‘patchwork ethnography’, which is defined within this study as the method of collecting ethnographic data through rapid, detailed interstices (Günel et al., 2020). This method allows for the synthesis of relevant and imperative data to inform saturated and sound conclusions (Smolka, 2021). This study was completed in January of 2022 as a patchwork ethnography located in Costa Rica. The data collected will be expanded upon for use in a longer, longitudinal study, “Wildlife Rehabilitation for Conservation” intending to investigate wildlife rehabilitation as it relates to wildlife-human coexistence.

For the purposes of this study, sixteen researchers collected data in January of 2022, across three wildlife rehabilitation centers and one veterinary school. The bulk of interviews collected for this study were conducted by researchers in the English language, however, four members of the research team are fluent in Spanish and conducted interviews in Spanish and translated for the non-Spanish speaking members when necessary. The research team was composed evenly of both men and women aged 21 to 60. Of the sixteen members, there was one wildlife rehabilitation specialist, five graduate students in the College of Natural Sciences, one undergraduate student, six students in the College of Veterinary Medicine, and two Colorado State University faculty members.

During the study, data from participant observation was collected by researchers through participation in volunteer efforts and veterinary practice, to allow for this participation, digital

documentation of interviews was not collected. Across the sixteen-day study, researchers conducted over 130 semi-structured interviews, which were used to inform succinct and precise conclusions. Researchers designated each of the centers visited into small, medium, and large categories. Criteria for these categories are as follows: small centers have an annual patient intake of fewer than 500 individuals, medium centers have an annual patient intake of 500-1000 individuals, and large centers have an annual patient intake of over 1000 individuals. To allow for a diversity of observations and participants, all of the researchers on the project took part in participant observation in both the veterinary and volunteer contexts. At regular intervals throughout researcher participation and interview conduction, researchers inscribed field notes in a pen-and-paper format (Bernard, 2017). At the termination of the 16-day study, researchers transcribed these notes into a digital format, which facilitated the sharing of notes among the sixteen researchers. These notes were utilized by researchers to conduct a thematic analysis to identify the major themes of cohabitation, conflict, livelihoods, and biodiversity.

2.3 Findings and Discussion

Table 2.0: Effects of Boundaries by Center Size

Key Findings	Large Center	Medium Center	Small Center	National Park
Coexistence	Limited wildlife-human interaction in forests due to government's ban on wildlife hunting	Coexistence of wildlife and humans in urban and natural spaces	Coexistence of wildlife and humans in the same physical spaces	Wildlife unbothered by human intrusion into their habitat

	Wildlife kept out by tree line gap and large concrete walls.		
Wildlife-Human Relationships		Coexistence of wildlife and humans in urban and natural spaces. Initiative to build aerial passages to limit wildlife casualties.	Sense of stewardship expressed by staff and volunteers.
Welfare	Animal enclosures mimicking animal habitats in the wild. Patients being rehabilitated with intention of release not protected from viewing by tourists.	High standard of animal welfare not applied to animals kept as food. Policies enacted to ensure successful release of rehabilitated wildlife.	Racoon enclosure designed to protect welfare despite animal viewing tourism as a major source of income. Policy of releasing wildlife back into their natural habitat whenever possible. Efforts made to protect the welfare of wildlife inhabitants.

For the purposes of identifying the major effects of the natural boundaries found within Costa Rica upon the human-animal placemaking relationship, this pilot study effectively demonstrated data saturation and coherent results. Each site and interview offered researchers essential understanding and insight into the collaborative placemaking practices between animals and humans both in and in the liminal spaces around the protected forests of Costa Rica. Aligning with qualitative analyses elsewhere (Gong et al., 2019; Knight, 2018), the data gathered by researchers during the course of this study were categorized by researchers into themes. These included cohabitation, livelihoods, and conservation.

2.3.1 Small Center

At the small center situated outside of the urban context, researchers were able to collect observations and interviews on the placemaking relationship between wildlife and humans outside the urban realm, Interlocutor #4 informed researchers that animals that had been rehabilitated and released by the center still called the center and surrounding area home and could regularly be seen within the center. This was exemplified by sloths that researchers regularly observed within the wildlife center, which volunteers identified as sloths that had been patients at the center. While participating in the volunteer activity of moving a large pile of compost to the location on the outskirts of the center, along the treeline, researchers witnessed much wildlife including various species of monkeys, kuatis, and lizards. Furthermore, wildlife herein demonstrated comfort with human inhabitants by existing in the same physical spaces in the absence of aggression or fear behaviors.

At the small center, researchers observed staff and volunteers forming relationships with wildlife residents. These relationships contributed to a sense of stewardship expressed by both Interlocutor #16 and #1. This sense of stewardship was observed by researchers while participating in the volunteer activity of redesigning a basilisk lizard enclosure. During this process, an iguana fell from a tree and found itself trapped in the enclosure. Researchers removed the iguana, but then were unable to locate one of the basilisk lizards. Researchers informed Interlocutor #12, who expressed a fear that the lizard had been eaten by the iguana. Interlocutor #12 continued to check back in with researchers periodically until the lizard was found. Both volunteers and staff checked to verify that the offending iguana was unharmed. While many of the residents of this center are permanent residents due to the center's policy of not releasing domesticated wildlife, Interlocutor #12 expressed to researchers the center's policy of releasing wildlife back into their natural habitat whenever possible. In addition, researchers observed that financial means were directed to protect the welfare of its inhabitants. For example, in the raccoon enclosure, numerous areas were designed to allow raccoons to hide from view, despite animal viewing tourism being a major source of income for this rehabilitation center.

2.3.2 Medium Center

The medium-sized wildlife rehabilitation center was uniquely located in the liminal space between the urban environment of the human town and the natural environment of Costa Rica's protected forests. This center allowed researchers to gather data on both animal-human placemaking practices within urban spaces and natural spaces. Interlocutor #38 informed researchers that individuals with properties bordering the rehabilitation center encouraged the

expansion of forests onto their property as well as indignance and anger when outside individuals damaged this expanding forest. While at this location, researchers interviewed a number of citizens of the surrounding town. Interlocutors #43 and #55 articulated stories of wildlife that shared the geographic homes of the citizens and the sense of stewardship among citizens for this wildlife. This was supported by researchers witnessing the release of a sloth who the center had rehabilitated. This release took place upon a tree located mere feet from the entrance to the home of a local citizen. During this release, Interlocutor #49 informed researchers that rehabilitated wildlife was regularly released at this location with express permission and encouragement from the landowner.

While collecting data at the medium-sized center, researchers were informed by Interlocutor #22 of an initiative to build aerial passages across roads to limit wildlife casualties from power lines. The prevalence of such casualties was observed by researchers while observing the veterinary staff and patients, a number of whom were being treated for electrocution. At this center, researchers observed a number of policies enacted to ensure the successful release of rehabilitated wildlife, which includes limiting human contact, live prey feeding, and enclosures isolated from other wildlife. However, while at this center, researchers observed that the high standard of animal welfare was not applied to animals kept as food. These animals, mainly rats, were kept in wooden boxes so small that they were piled on top of each other.

2.3.3 Large Center

At the large center, researchers observed far less human interaction with wildlife beyond the center's boundaries. The center, constructed with a tree line gap and large concrete walls, was designed to keep wildlife out, according to Interlocutor #68. This Interlocutor also shared that most of the center's staff were not originally from Costa Rica. While collecting data at this center, researchers observed that in contrast to the other centers visited, patients being rehabilitated with the intention of release were not protected from viewing by tourists. While collecting data at this center, researchers witnessed animal enclosures that mimicked animal habitats in the wild. While here, Interlocutor #68 explained that since the government's ban on wildlife hunting, there is very little wildlife-human interaction within the large segment of protected forest spanning the country's center. While driving from the medium-sized center to the large center, researchers visited a national park. In this park, researchers observed numerous wildlife which appeared unbothered by human intrusion into their habitat, even stealing food from visitors on several occasions.

2.4 Conclusion

The findings of this study demonstrate that natural boundaries and wildlife corridors facilitate positive welfare outcomes for wildlife, positive relationships, and place sharing between humans and wildlife. At both the small and medium-sized centers researchers observed ease of cohabitation between wildlife and humans. From the human perspective, this manifested in the form of caring for wildlife, providing a safe space for wildlife to inhabit within their property.

Furthermore, researchers observed volunteers and staff at both centers forming relationships with wildlife, both residents of the rehabilitation center and wildlife which wandered in from outside. These relationships contributed to a sense of stewardship among humans at the centers for Costa Rican wildlife. From a wildlife perspective, researchers observed wildlife that made no effort to avoid human contact and did not express behaviors to indicate fear or aggression when humans ventured into their habitats within a national park. This demonstrates that the human and animal inhabitants of Costa Rica have integrated into each others' places and placemaking practices.

The data gathered in this study illustrates that by using protected forests, Costa Rica has preserved the habitat of innumerable species of wildlife where they can exist relatively outside of human influence. Researchers collected data in liminal spaces of protected forests and found that in these spaces humans and wildlife coexisted, respecting each other's welfare. These findings highlight how wildlife corridors can be used as barriers to human activity, while facilitating the welfare of wildlife rather than interrupting it. Compassionate conservation's consideration of the livelihoods of those involved provides an example of how conservation efforts have advocated for the protection and construction of wildlife corridors (Wallach et al., 2020). The results of this study demonstrate that wildlife corridors serve multipurposes, serving as barriers to human activity while protecting the livelihoods of the animals with which humans share this world.

The study also identified areas of concern, such as the welfare of feeder animals and the selective care demonstrated by the large center. This indicates that while wildlife protection and forest preservation in Costa Rica effect positive outcomes for both the placemaking relationship of humans and animals and coexistence as a whole, there remains room for improvement. This

finding calls for further research into how policies are employed and can be expanded upon to encompass the welfare of all living beings.

Thesis Conclusion

The themes and findings identified within this project are foundational to furthering the human understanding of wildlife-human relationships and cultivating productive conservation practices characterized by positive relationships going forward. The two chapters included here were informed by a sixteen-day pilot study conducted in January of 2022, which provided essential insights into the placemaking relationship between humans and animals and the effects of natural boundaries upon such placemaking. In particular, findings indicate that humans and animals collaboratively placemake within Costa Rica and that this relationship is positively influenced by the use of natural boundaries. Furthermore, findings reveal that natural boundaries are an effective tool to protect the livelihoods of all individuals, human and nonhuman, and can further conservation efforts aligned with compassionate conservation.

Chapter One of this thesis focuses on establishing placemaking as a collaborative practice between humans and animals in Costa Rica rather than an oppositional practice. Researchers utilized Wendell Berry and Keith Basso's definitions of placemaking to evaluate the placemaking relationship between animals and humans across three wildlife rehabilitation centers and one veterinary teaching hospital. Through participant observation and semi-structured interviews, the researchers identified public opinions on wildlife policies evaluating their effect on the placemaking relationship as well as animal care and interaction within wildlife rehabilitation centers. Key themes include: effects of Costa Rican wildlife policies on publicly funded wildlife rehabilitation centers, advocacy for the wildlife of Costa Rica, local programs aiming to protect wildlife, and tourist engagement.

This patchwork ethnography evaluated the placemaking relationship between humans and animals within Costa Rica. This location was selected by researchers due to the close spatial proximity in places of habitation of both humans and animals. Researchers found that this closeness contributed to a sense of stewardship for wildlife among humans and a sense of companionship for humans among wildlife. The integration of animals into human placemaking practices is evident in this stewardship, in ecotourism practices, and in protective wildlife policies. Such integration became particularly evident not only through observation of the human influence upon the physical spaces that animals inhabit, but also through the relationship researchers observed between individual humans and wildlife. These findings highlight the importance of wildlife protection and ecotourism to the livelihoods of local communities and promoting human stewardship of wildlife.

Chapter Two evaluated the effects of the natural boundary that is the protected forests of Costa Rica upon the placemaking relationships between humans and animals therein. In contrast to most of the world, the protected forests of Costa Rica are extensive, providing important wildlife corridors and habitats to many animals who call the country home. Through the implementation of semi-structured interviews and participant observation, researchers identified cohabitation, conflict, and livelihoods as key themes in the effects of such natural boundaries on the placemaking relationship.

The findings within Chapter Two support the conclusion that natural boundaries and wildlife corridors facilitate positive relationships and place sharing among humans and animals. The researchers observed the ease of cohabitation between wildlife and humans at both small and

medium-sized centers, where humans provided safe spaces for wildlife and formed relationships with them. From a wildlife perspective, the animals made no effort to avoid human contact, demonstrating integration of placemaking between humans and animals. These findings highlight the importance of protected forests as a means of preserving the habitat of various species of wildlife and advocating for their welfare, while also serving as barriers to human activity. However, researchers also identified areas of concern such as the welfare of feeder animals and the selective care demonstrated by the large center, emphasizing the need for further research and improvement in wildlife protection and forest preservation policies.

Multispecies livelihoods and compassionate conservation are growing exponentially in relevance. Multispecies livelihoods recognize that humans are not alone on this planet and that the survival, empowerment, and well-being of animals are intricately linked with that of humans (Knight, 2022; Santiago-Ávila, 2020). Compassionate conservation reaches beyond traditional conservation approaches by acknowledging that conservation efforts must consider the well-being of individual animals in their social and ecological contexts. It advocates for non-lethal methods that prioritize the welfare of individual animals to preserve and protect biodiversity at both an individual and species scale. By embracing multispecies livelihoods and compassionate conservation, we can build a more just and sustainable world and foster appreciation for the interconnectedness of all life and the well-being of all individuals (Batavia et al., 2021). The findings of this project suggest not only that animals are capable of such practices as placemaking, but that they are integral to the human placemaking process. Furthermore, the findings suggest that natural boundaries developed in Costa Rica show promise as a conservation tool that may be applied at a global scale. These findings urge further research into both

improving the animal welfare standards in Costa Rica and how their successes can be replicated on a global scale.

Limitations

This study bears limitations in that it necessarily evaluates several concepts, among them placemaking, through a human lens. In some cases, it was necessary for the researchers to presume mental processes underlying the actions and experiences of animals. These factors notwithstanding, the consideration of collaborative placemaking among humans and animals contributes to the evaluation of nonhumans to the extent possible. To that end, this study constructs the likelihood of collaborative placemaking between humans and animals, demonstrating an exigent need for further research on cognitive processes that are implicated in placemaking practices of animals. It is important to establish theories such as collaborative placemaking through both human and nonhuman lenses so that researchers may advance collaborative placemaking practices with a developed sense of respect and understanding for the creatures with whom humans share their world.

Another limitation to note is that individuals contributing to the research herein have all received their education in western universities and thus all observations collected were through a western lens. To that end, this study cannot fully account for Costa Rican cultural factors, and emphasizes the importance of further research collected by Costa Ricans researchers. Due to limitations this study took place over a relatively short duration and would benefit from additional studies of longer duration to further evaluate the findings herein.

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