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THE NATURE OF ENVIRONEMTNAL PLANNING IN THE CARNUÉ LAND GRANT

by

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THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Masters of Science in Geography

The University of New Mexico
Albuquerque, New Mexico

July 2022

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by

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ABSTRACT

In 1819, the Spanish Crown established Cañón de Carnué land grant as a buffer between the colonial settlement of Albuquerque and raids from Plains Apache and other nomadic tribal nations. Upon entering the U.S. period of Manifest Destiny, Carnué land grant heirs lost much of the land they stewarded as a collective to the Cibola National Forest. While the state generates laws and policies that complicate the prioritization of subsistence land uses by land grant communities, Carnué's presence is felt as grantees reform relationships to their environment and assert their personal stake in stewardship and care. I argue that Carnué's subordinated status as a community land grant populated by a mix of low status Spanish and Hispanicized Indigenous grantees under the Spanish Crown and subsequent marginalization in the U.S. period does not completely undermine their ability to inform the environmental policies and practices that govern their surroundings.

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Chapter 1: Introduction

Contemporary environmental planning in the Sandia Mountains – a small range east of Albuquerque that shelters the Cañón de Carnué Land Grant, hereafter Carnué -- is intimately tied to the history and culture of Indigenous Nations, *mestizo*[1] and *genízaro*[2] communities that stewarded the landscape through two colonial eras. Their struggle with colonial imperialism – as benefactors and victims – and the land use ideologies of Manifest Destiny is woven into how individuals, communities, and land managers relate to place, environmental stewardship, and each other today. The stories that interpret this complex land history and construct meaning from it are narratives. The stories we tell – our choice of narrative – justify actions, signal alliances, and recall our relationship to community and the environment. Carnué Land Grant heirs use narrative to reclaim their agency in the U.S. colonial era and affirm rights to subsistence land use in what are now federal and county forestlands. Grantees present their ancestral connection to the region and an urgent need to reconcile broken treaty promises to shift institutional environmental management practices that exclude their traditional uses (New Mexico Land grant council 2019; 2007 Tijeras/Carnuel Master Plan). Federal and county agencies managing the patchwork of public lands and residential developments in the Sandia Mountain Wilderness and East Mountains surrounding Carnué also use narrative to maintain the dominance of their own institutionalized land use ideologies. In the shared landscape that all actors operate within, these narratives meet and their interactions transform the ecological and environmental policy landscape of the Sandia Mountains. While some narratives may hybridize or exist together quietly, other forms of narrative entanglement trigger conflict.

A key conflict over land and natural resources in New Mexico is popularly presented as – and even dismissed as – a story of incompatible land use ideologies and an obligation to protect the environment from degradation and misuse (Correia 2008;

[1] Racial classification for people with mixed European and Indigenous ancestry
[2] Detribalized Native people living in Spanish society as a servant class

Hassell 1968). Attempts to resolve this conflict within the presented framework inevitably favors empowering the already dominant land management narratives of the State. When taken for granted, the conclusions of diagnostic narratives can obscure how power shapes and motivates systems that guide land management practices and enable what is possible on that landscape. In the case of the Carnué, this diagnosis of the problem provides no apparent path forward to recognition of traditional land-based lifeways or historic land claims. By prioritizing state-defined ecosystem integrity, it insists on an impasse between groups. Therefore, the narrative coercively cedes power to an interpretation of land use and obligation that undermines land grant community self-determination and opportunities for good-faith collaboration in the environmental planning process. This research seeks to understand how accounting for the power dynamics reflected in narrative and reinforced by historic land tenure decisions may demonstrate pathways to a more equitable collaborative policy framework (Hornborg 2015). Critically examining the political ecology of land use narratives may illuminate the mechanisms driving environmental planning processes and ownership disputes between land grant community members, the U.S. Forest Service (Forest Service), Bernalillo County, and other responsible stewards of the landscape. Understanding how and why contemporary environmental management has produced outcomes of uneven benefit in the study area offers opportunities for structural change, improved collaboration, and lessening power imbalances. Narratives are powerful tools that affect the formation and reformation of the landscapes we exist within. In acknowledgement of these connections, I use historical and interview analysis to examine how narrative animates the specific struggle between traditional and state powered land users in Carnué, the Sandia Wilderness, and the surrounding region. This research tracks the occurrence of environmental policy shaping narratives to answer the following question:

> How does the Carnué land grant community enlist environmental and place-based narratives to affect the management of their ancestral lands?

Project Overview:

In 1819, the Spanish Crown established Cañón de Carnué land grant as a buffer between the colonial settlement of Albuquerque and raids from Plains Apache and other nomadic tribal nations. Since this community built their home at the mouth of Tijeras Canyon amongst the forestland, ancestral pueblo buildings, and running streams, the landscape has transformed. Upon entering the U.S. period of Manifest Destiny, Carnué land grant heirs lost much of the land they stewarded as a collective to the Cibola National Forest and other state entities – reducing their land base by a destabilizing amount. However, this political, social, and environmental reorganization of the landscape did not eliminate the land grant or their agency in the region. While state power dominates, generating laws and policies that complicate the prioritization of subsistence uses by land grant communities, Carnué's presence is felt as grantees reform relationships to their environment and assert their personal stake in stewardship and care. I argue that Carnué's subordinated status as a community land grant populated by a mix of low status Spanish and Hispanicized Indigenous grantees under the Spanish Crown and subsequent marginalization in the U.S. period does not completely undermine their ability to inform the environmental policies and practices that govern their surroundings. Carnué wields its own power in collaborative environmental management using water rights to enforce boundaries and a place-based land ethic to sustain community and guide stewardship*;* however*,* grantees remain severely constrained by the rigidity of laws and policies enforced by state institutions. Even so, the community remains resilient and works to build a stable future guided by memory, cultural tradition, and connection to the land. Using theoretical frameworks grounded in political ecology, this research uses historical and interview analysis to investigate how the Carnué land grant community uses narrative to reassert their presence within their reduced land grant boundary and their historical commons through environmental management and stewardship. To do this, I rely on untangling historical narratives available in the literature that make the foundation heirs and environmental managers in the Sandia Mountain Range and surrounding area work from while also mapping the current environmental management landscape

through interview analysis. This methodology identifies key narratives producing outcomes and possibilities in the study area and unveils power imbalances limiting Carnué's self-determination while offering insight into necessary structural changes.

Chapter 2: Study Area: Cañón de Carnué Land Grant

The Sandia Mountain Range looms over New Mexico's capital city of Albuquerque. The sprawling urban landscape shelters over half a million of the state's roughly two million residents. Sunset bathes the buildings in golden light and the mountain's granite façade reflects a pink gradient viewable from nearly any point in the city. The Sandias are both familiar to and beloved by residents throughout New Mexico; witnessing their grandeur as the sun sinks into the horizon is a nightly ritual for many *Burqueños*. The Sandia Mountain Wilderness, which is part of the Cibola National Forest, and the East Mountains, which include the villages of Tijeras, Carnuel, and San Antonio de Padua, among others, have become a scenic refuge and recreation hub for millions of visitors annually (USDA Forest Service). This region has experienced significant changes in land tenure and relationships to nature through time. Native Pueblos in the Tiwa language group stewarded the land while the Faraon and Gileños Apache dominated pathways through the mountains (Archibald 1976). Spanish colonization then displaced and violently disrupted Indigenous communities to establish settlements for the Spanish Crown. Later, the United States dispossessed these same Hispanic communities of their land to build its nation. The sate mined the Sandias for timber and other natural resources, but when intensive extraction waned in popularity and purpose, conservation and recreation priorities rose to prominence. These changes did not erase Indigenous and land grant relationships to land, but they did reorganize the power dynamics individuals had to navigate and added new complexities to human-environment relationships (Eastman 2011; Garcia Y Griego 2008). Today, state agencies manage much of the Sandia Wilderness landscape, with the Forest Service and Bernalillo County attempting to balance the multiple needs of the environment, people, and development within the constraints of US state law and policy.

This historic boundary of La Merced del Cañón de Carnué includes large swaths of the complex landscape. The northern side climbs to *el Punto del Venado* or South

Sandia Peak, and contains a portion of the east Sandia mountains. The southern edge curves over the Manzano Mountains and stretches as far west as the village of Carnuel – one of Carnué's primary settlements – which is now accessible by Interstate 40. The village of San Antonio used to be an interior settlement within the grant but after land loss in the US period it represents Carnué's most eastern point. Descendants of this grant govern the remaining acres from the viewpoint of ancestral land and tradition. Carnué is a *genízaro* land grant. The term refers to the original settlers' native ancestry. Spanish colonists baptized native people captured in conflicts with the Mountain Ute, Plains Apache, Navajo, and Comanche and forcibly integrated them into Spanish society as a landless servant class named "*genízaro*." Their first connection to the land and a now-lost connection to tribal nations deepens their ancestral ties to the study area and frames their unique position in Spanish colonial history.

Overview of Cañón de Carnué Land Grant

Cañón de Carnué is Community land grant, these grants are unique from individual or private land grants that were given to prominent Spanish leaders and military generals during the Spanish colonial period (Magnaghi 1990). *Mestizo* and forcibly Hispanicized native *genízaro* citizens who lived at the margins of Spanish society populated Cañón de Carnué and other community land grants (Gonzales 2014; Debuys 1981). Eager to secure land and social status, grantees would attempt to protect themselves and the settlement of Albuquerque against violent attack from the nomadic tribal bands for decades (Engstrand 1978). The settlement simultaneously occupied the northern frontier – a strategic deterrent against exploration by the French and other Anglo-Europeans interested developing westward (Engstrand 1978). Instructed by the Spanish Laws of the Indies, the grantees built an *acequia* system – a communal ditch for diverting water – laid out agricultural plots and constructed a town plaza. Each family maintained a private property for themselves, and grantees held the remaining acres of mountain forest for collective grazing, ceremony, and other uses tied to survival and social cohesion (Gonzales 2003). Their existence in the mountains was not without challenge, but within this system communities were self-

sufficient, and their isolation made cash exchange rare and often unnecessary (Debuys 1981).

Water in the land grant

The land grant relied on an *acequia* to water its agricultural plots. The literature on how communal grazing and other forest use was structured is minimal, but many papers have addressed communal irrigated agriculture. Examining how this system operates and ties community members together through practice and obligation is key to understanding communal environmental management on land grants and their interactions with forest resources. *Acequia* irrigation systems were brought to the Southwest region by the Spanish. They integrated native Puebloan ditch infrastructure into their existing *acequia* systems to survive in an arid landscape (Hutchins 1928). These unlined ditches are managed by an elected ditch boss (*mayordomo*) and a committee of community members that allocate water and manage community water disputes (Rivera et. al 2002). Irrigators earn their right to use *acequia* waters through participating in annual spring ditch cleaning and contributing financially to infrastructure repair and replacement (Rivera et. al 2002). The *acequia* model for water management reflects the broader culture and practice of communal resource management discusses in this thesis.

Land Grant Recognition in New Mexico

The 1848 Treaty of Guadalupe Hidalgo transferred half of Mexico's territory to the United States, forcing a profound shift in land management and ownership. Spanish land grants entered an era of rapid land loss and second-wave marginalization marked by the enclosure of the commons and a transformation of the political, cultural, and ecological landscape of what is now called New Mexico.

The Treaty of Guadalupe Hidalgo ended the Mexican American war and prescribed the treatment of people and property on territory that Mexico ceded to the United States. Article VIII of the treaty read that "In the said territories, property of every kind now belonging to Mexicans…shall be inviolably respected as if the same

belonged to the citizens of the United States."(Ellis 1975) Article X included the specific protections for land grant residents, but the United States Congress removed it before ratification (Eastman 1991). This political decision catalyzed a dysfunctional and complex adjudication process that made land grants vulnerable to European speculators, public domain claims, and permanent land loss (Raish and McSweeney 2008; Correia 2008). In 1854, Congress established the New Mexico Office of Surveyor General to receive claims on both Spanish and Mexican grants and offer recommendations. For land grant heirs to obtain a title to their land they needed to retain an attorney, file a claim, and gather supporting documents for their claim (Eastman 1991). Congress severely underfunded the effort, no lawyers or Spanish language speakers served as staff, and no political infrastructure enabled the recognition of communal land holdings (Engstrand 1971) ;(Garcia Y Greigo 2008; Correia 2008). In addition to the burden of financing costly attorneys, the need to produce paper documents the U.S. government would recognize became a major barrier to filing land claims for the rural land grant heirs. These difficulties left favorable conditions for speculators who took advantage of the system by leveraging their access to resources and claiming rights to land grant holdings (Correia 2008). The United States barred heirs from making adversarial claims and as such private Anglo owners and state institutions secured portions of their land to develop industrial timber, infrastructure, and mining throughout New Mexico.

Congress established the Court of Private Land Claims in 1891 after years of confusion and grantee dispossession. The CPLC intended to support the confirmation of land grant claims, but because the Court was not bound to consider the customs of land grant communities, it denied the existence of common property land tenure outright (Correia 2008). In dismissing the existence of common land, the Court of Private Land Claims validated private allotments and increased rejection of communal land claims. As an example: community land grant heir Julien Sandoval filed a well-supported claim to the San Miguel del Bado Grant - a community land grant established in 1794 in Northern New Mexico. The Supreme Court responded to the claim arguing that Spanish and Mexican law had not "vested sufficient title to the unallotted common lands within the grant boundaries to bring those lands within the

property guarantees of the Treaty of Guadalupe Hidalgo in 1848" (Hall 1991; Gomez 1985). This argument was quickly extrapolated to all land grants in New Mexico without established land claims. Before the failed claim, San Miguel del Bado contained 315,000 acres on both sides of the Pecos River. The ruling reduced the grant to 5,000 acres of private holdings and placed the balance of its acreage into the public domain. Pecos National Historic Park absorbed the communities' common land, leaving heirs with an insufficient land base to sustain traditional lifeways and forcing an intense and reluctant outmigration (Hall 1991). A similar scenario played out in the case of Canon de Carnué, where the Court reduced its 90,000-acre claim to only 2,000 acres after a 40-year struggle over adjudication. Community land grants issued under the Spanish and Mexican governments collectively lost 80% of their common land after the infamous Sandoval decision (Raish 1996). The United States v. Sandoval decision of 1897 eradicated any remaining legal ambiguity concerning land grant adjudication and communal lands.

Forest Service Acquisition of Land Grant land

The Treaty of Guadalupe Hidalgo attempted to hold the United States responsible for protecting the interests of land grant heirs, but its courts and government representatives repeatedly failed to do so. Instead, Congress transferred much of the heirs' common holdings into the vast tracts of land that are now the Carson, Santa Fe, and Cibola National Forests (Gonzales 2014; Debuys 1981). The U.S. Forest Service has governed these public lands according to an evolving mission since its creation in 1905 – though official forest management began earlier in 1873. At its beginnings, the agency managed forestland as a natural resource under the "rational management" ideology of Gifford Pinchot, the first head of the Forest Service (Kosek 2006). In 1947, Gifford Pinchot reflected that under his leadership, the Forest Service emphasized the ethos that nature could be "controlled through human stricture" using rational science-based natural resource planning (Pinchot 1998, p. XII). This set the Forest Service up to undervalue uses and resources it could not measure and to prioritize forest profitability through logging – a rational alignment with state capital interests. Public activism against logging and intensive natural resource extraction

gradually transitioned the Forest Service into a conservation minded institution that prioritized wilderness protection and recreation (Kosek 2006). As the Forest Service developed its footing with changing social norms, land grant heirs continued to use their former commons, sometimes using allotted grazing permits and at other times accessing lands illegally. Grazing permits to land grant communities steadily declined through the 1940s and 1960s due to Forest Service concerns that overgrazing livestock caused ecosystem degradation. Land grant heirs grazed sheep and goats for the animal products they produced (Correia 2004). This decision increased resentment from land grant heirs whose grazing practices allowed them to subsist on the land. The past remained present for the heirs, and they insisted on their right to the commons. Grantees resisted exclusion from their commons through formal legal pathways, political activism, and direct action against the Forest Service and other institutions with campaigns of varying intensity and violence (Kosek 2006; Raish 1996; Raish and McSweeney 2008).

Land Grant Resistance and Self-Determination

Community land grant heirs – like Carnué, often of *genízaro* decent – formed with similar buffer community roots and mandated spatial organizations that diverged more acutely after the U.S. period land loss. Land grant heirs did not passively accept state dispossession of their land and cultural identity. Each individual grant decided to resist and take charge of the land tenure transformation in its own way. Even today, community members keep the deception of the Treaty of Guadalupe de Hidalgo in recent memory as they assert their right to natural resources and autonomy in New Mexico (Correia 2010). Game laws, grazing restrictions, and fuelwood harvesting regulations favored use by Anglo settlers and large scale-industries heirs' relationship to physical land. Now without the commons, land grant communities maintain small-scale grazing operations. Today, grantees are less dependent on forest resources and instead earn wages in industry hubs like Albuquerque. Nevertheless, "owning animals reaffirms ties to ancestral lands and heritage" and is important to continuing subsistence land use in the changed landscape (Raish 1996). Retaining what social cohesion they could, heirs managed to organize resistance movements that impact the

relationship between the state and land grant heirs today (Garcia Y Greigo 2008; Gonzales and LaMadrid 2019; Kosek 2006).

The protests did not simply mourn the loss of a way of life but assisted in organizing a strategic resistance to "racial and class antagonism" inherent in enclosure and removal from their common land (Correia 2010). Heirs to the Las Vegas Land Grant burned barns and evicted Anglo settler ranchers during The White Cap Movement in the 1890s. Railroad speculators used barbed wire fences to signify private property ownership and recognizing them as technologies used for dispossession and capitalist enclosure, land grant movement organizers cut them down in droves. In the 1960s, Reies Lopez Tijerina founded the *Alianza Federal de Mercedes* joining together 6,000 land grant heirs throughout New Mexico to reclaim lost land. The movement evicted Anglo "squatters" who possessed or managed their former common lands, and it particularly targeted the Forest Service for implementing exclusionary forest use policies. During the famed Tierra Amarilla Courthouse Raid, Alianza memberss conducted a citizen's arrest of District Attorney Alfonso Sanchez for supporting the privatization of the Tierra Amarilla land grant. Five hundred police officers and National Guard tanks quelled the raid, but it was clear that the former land grant commons were not a space removed of its former stewards. The raid prompted the Forest Service to issue the "Hassell Report" which increased the state budget for range programs and rural development to alleviate disenfranchisement suffered by land grant communities (Raish 1996; Gonzales 2003).

The Current Foundation for Environmental Policy Making

The Forest Service acknowledges the resentment and protest they receive due to the dispossession their land acquisition caused; however, their solution is not to give land back or encourage free movement and use of the forest by land grant heirs (Hassel 1968). A 1968 report commissioned by the Forest Service referred to as "The Hassel Report" detailed the strategy for working with land grant communities. It described land grant communities as "socially and economically behind" due to their isolated subsistence lifeways. "The solution is the entrance of the people into the American

mainstream of life" (Hassel 1968). The solution would be achieved with education, training, and an entrance into the cash economy. The report emphasized that there would be no increase in grazing or extractive forest use by land grant communities. In fact, it stated an objective to "deemphasize grazing as a means to solve the problems in northern New Mexico" (Hassel 1968; Raish 1996). These policy recommendations still mediate interactions between land grant communities and the Forest Service today and underly management decisions in the study area.

Using a different lens, L.M. Garcia Y Greigo, an heir of Carnué writes that survival of land grant communities does not hinge on retrieving acreage from the Forest Service, but instead on the strength in traditions of community and substance that are directly tied to forest use (Garcia Y Greigo 2008). Use of the forest in traditional ways produce community autonomy and are not simply sentimental practices (Gonzales 2014). Represented in these narrative disparities, the struggle between the land grant communities of New Mexico and the U.S. Forest Service continues to evolve and their intertwined history influences environmental management through today.

Chapter 3: Theoretical Framework and Literature Review

The complex and often tense relationship Carnué land grant has with the formal environmental planning process in the forestlands surrounding the community is a geography problem that requires critical spatial thinking to resolve. The spatial reorganization of Carnué, the natural ecosystem of the Sandia Mountain Range, and land ownership and use in the region also reorganize human-environment relationships through time. Geographic research can make sense of the dynamics, by using a political ecology lens to focus on nature-society relationships under capitalism. Primitive accumulation and accumulation by dispossession offer a critical lens to deconstruct the history of land ownership and loss in Cañón de Carnué land grant. Mapping the specific circumstances of capitalist enclosure - the severing of people from physical or metaphysical collective space to generate capital for the state and private owners (Swyngedouw 2005) – gives insight into how land grant heirs resisted the spatial reformation of their reality and illustrates how they continue to participate in reshaping possibilities within enclosure.

Political Ecology

I use political ecology as my theoretical framework in this research. This section of the literature review will provide a general overview of Political Ecology and literatures and scholars I rely on to form my argument and analyze data.

An Overview of Political Ecology

Political Ecology emerged in response to the environmentalism of the 1960s and 1970s where anxiety over so-called finite resources and a preoccupation with the objective harm of "over-population" obscured the destabilizing effects of capitalism on human environment relationships (Benjaminsen 2015; Watts 1997). It challenges an "apolitical ecology" that denies the unequal power relations that govern nature and society by arguing that deconstructing dominant explanations for environmental problems reveal complex political struggles at the root of dispossession, degradation,

and marginalization (Walker 2005; Benjaminsen 2015). The epistemologies that generated the theory emphasize that environmental problems are of social origin (Watts 1997). In practice, political ecologists build on a foundation of empiricism that employs field-based research methods and in-depth historical analysis to construct alternative understandings of truths taken for granted (Benjaminsen 2015). In the long view, these alternative understandings can lead to structural political change and more equitable environmental futures.

An important focus within the field is the separation of nature from society and culture. A common truth taken for granted is the insistence that nature is external to societies "intellectual work and life" (Fitzimmons 1989). Political ecologists deconstruct this idea by asking how this mythic truth came to be and who has power enough to benefit from the narrative (Watts 1997). Conclusions in the literature describe nature as we know it as an abstraction constructed under capitalism. This use of nature as "primordial" justifies the "domination of nature by humans" and witnesses' nature without agency or influence (Fizimmons 1989). However significant a tool political ecology may be for social justice and problem solving it has its weaknesses. Historically, political ecology gravitated towards exploring human-environment relationships in political arenas dominated by men, and often straight men, without an added analysis of gender or sexuality. In seeking to reveal what is obscured, political ecology also has the power to obscure by centering its research on the dominant heads of marginalized or dispossessed groups (Watts 1997). Additionally, political ecology's commitment to justice has been critiqued as "begging research" (Vayda and Walter 1999). A paper by Vayda and Walters (1997) argue that political influences are not always important or at least should not automatically be given priority in research. It creates an environment where researchers begin to look at environmental change with conclusions already drawn and not supported by evidence (Vayda and Walters 1999). Utilizing political ecology effectively then is a delicate practice that researchers undertake in a determined effort to tell the truth.

Primitive Accumulation and Accumulation by Dispossession

Getting to the root of the environmental problems often requires starting where human-environment relationships were first destabilized, producing unequal power and benefit. This root often begins with primitive accumulation, a process that produced the global capitalist landscape that constrains and governs nature and society. While writing on Western Europe's transition out of Feudalism, Marx's identified primitive accumulation as a historical process that divorces the producers from the means of production (Marx 1906). This process includes the enclosure of a commons for capitalist accumulation ("commons" is interpreted as land, bodies, social structures, or ideas) which fundamentally changed social relations and practices (Kelly 2011; Swyngedouw 2005; Glassman 2006). Production is transformed into capital and producers are transformed into wage laborers (Benjaminsen 2015). Primitive accumulation creates a new property configuration based on private ownership and top-down control of land and resources (Swyngedouw 2005). Political ecologists point to this process to explain the separation of society from nature. David Harvey (2005) builds on a concept from Lefebvre that "capitalism survives through the production of space" and argues that "capitalism needs ever expanding spaces where accumulation by dispossession can occur" where it can absorb excess surplus generated by the proletarianized producers. Harvey (2005) calls this a "spatial fix". Overaccumulation of stagnant and unused surplus devalues capital and threatens loss of power and (class) privilege to the bourgeoisie – in this case, redistribution of wealth to reduce surplus is not an option (Harvey 2005). Harvey describes this ongoing search for spaces to enclose under capitalism as accumulation by dispossession. Using this lens, the creation of protected areas (stat controlled parks, refuges, and forests) was created through a type of accumulation by dispossession originating in the first acts of primitive accumulation on the landscape (Kelly 2005; Harvey 2005). This view is somewhat contested as protected areas usually maintain public access and do not appear to directly accumulate capital. However, these state enclosures are not an "uncomplicated good" and their establishment necessarily required removal of native populations from their boundaries and indeed generate profit through natural resource extraction, recreation,

and ecotourism over time (Kelly 2005; Harvey 2005). The enclosure of forests, grasslands, and other areas constructed as “pristine” and needing protection is driven by narratives produced under the changes in social relations primitive accumulation initiated. One central narrative warns that mixing society and nature in these protected areas is objectively followed by degradation and collapse. This justifies state control and the dispossession of marginalized people who have been long time inhabitants and stewards of these areas (Benjaminsen 2015). Therefore, it is critical to account for how primitive accumulation and accumulation by dispossession are not always abrupt and violent forces whose impacts are felt immediately. They are processes of transformation that can occur slowly and repeatedly over time - empowered by world shaping narratives driving dispossession and exclusion from the commons (Kelly 2011).

Degradation Narratives as an Agent of Dispossession

The narrative of environmental degradation is a prominent feature of nature conservation and is a phenomenon used as justification for public policies and the creation of protected areas or other enclosures (Davis 2007). For example, grasslands overgrazed by livestock, deforestation caused by bushfires, or the proliferation of non-native species caused by decreased water quality are all common environmental degradation narratives. It implies a reciprocal relationship between some social group activity and environmental decline (Kosek 2006) This is not to say that all environmental degradation is a mythic social construct, but it is a reminder that narratives – the stories people tell to explain the world - have perspectives and can be agents of dispossession and control. Degradation narratives produce environmental management outcomes and sometimes, influence how certain environments are perceived. European colonists in North Africa used desiccation theory which supported an interpretation that described all deserts and arid regions as “ruined landscapes with destroyed forests” assuming that aridity reflected native people’s mismanagement of their environment (Davis 2016). Using this narrative, colonial forces could ignore the impacts of colonial development on the landscape and ignore the fact that North Africans did not control a majority of the land. Desiccation theory, supported by degradation narratives of deforestation caused by North African land

use practices. This justified appropriation of land and resources from native populations leading to community disenfranchisement (Davis 2016; Davis 2007). In Northern New Mexico, overgrazing degradation narratives are used by the U.S. Government and enable U.S. Forest Service dispossession and control of rural populations. The overgrazing degradation narrative claimed that Navajo Nation sheep herders overgrazed the Colorado Plateau resulting in severe damage to range habitat and an increase in weedy non-native species. However, this does not explain the complex interactions between vegetation, animals, climate, population, and human decisions. Even still, restrictions were placed on herders which further shrank community mobility, autonomy, and cultural ties to land use (Kosek 2006). The literature describes the oppressive use of environmental degradation narratives as a form of accumulation by dispossession. Acts of "caring, improvement, and stewardship of the land" to combat environmental degradation is not simply "a benevolent act". Instead, they are key acts that form institutions of state government that exert power through "proper" care and concern for "well-being."

And so, as Pollini (2010) asks, "to what extent is human-induced environmental degradation a reality or myth?" The answer is complicated, and political ecology's conflation of society and nature can make how findings are presented problematic. Pollini (2010) argues that political ecologists need to "distinguish clearly between nature and culture" because the "significance of environmental changes" do not only depend on the meanings humans give them. While nature is indeed politically defined there is a dimension of the world that is not "the outcome of human agency" (Pollini 2010). Trees and forests exist in the physical world and can be impacted by valueless influences. Additionally, political ecologists should accept a degree of uncertainty when constructing alternative narratives and avoid "begging" research – a romanticized view of marginalized groups being uncomplicated good stewards of the land should not drive research (Pollini 2010; Vaya and Walter 1999). Researchers have attempted to respond to this caution and criticism, but there is an opportunity to expand in this area.

Historical Geography of the Southwest

Drawing from the theoretical framework established above, I use this section to describe the place-based and spatial relationships to land, the state, and community important for this research. This section puts the complex power dynamics in this colonial space in context.

Settler Colonialism and Dispossession

Settler colonialism is a structural process used to remake landscapes in interloping dominant forces' own image (Bacon 2019). While settler colonialism is often nestled within colonialism the two differ in their objectives and outcomes. Veracini (2010) collates several prominent definitions to describe colonialism as "domination imposed by a foreign minority acting in the name of racial or cultural superiority…dogmatically affirmed and imposed". The interests of colonialism are often defined by distant governing powers as exemplified by the expansion of the British empire through the colonization of North America (Veracini 2010). Setting itself apart, settler colonialism is replacement imposed by a foreign power that seeks to become a majority on the landscape. The objective is land and not the surplus value required for empires (Veracini 2010). Settler colonial residencies are permanent and exert "sovereign entitlement" (Veracini 2010). This systemically applied process justifies genocide and land theft of and from Indigenous people and racializes (usually non-white) "others" (Bray 2021; Tuck and Yang 2012; Bacon 2019). Degradation narratives are also inherent in settler colonial structures. It emphasizes fundamental racial differences that place settler civilization against Indigenous savagery (Harris 2004) In this narrative, settlers are the only proper caretakers of the land and therefore have a right to dispossess others of it (Bacon 209). Literature on settler colonialism gravitates to research on dispossession and the fortification of whiteness; however, some scholars urge a more expansive look at the topic. Pulido (2018) argues that chronologically listing dispossessions as singular events caused by settler colonialism ignores the important and formative and ongoing interactions between dispossessed people. For example, violent native land removal practices and the enslavement of African captives inform each other simultaneously under settler colonialism structures. Additionally, the settler state is not always all consuming.

Harris (2004) writes that the availability of agricultural land under settler colonialism can turn wage laborers forced into the cash economy by primitive accumulation back into independent producers who subsist off the land. Understanding settler colonialism as a structure reinforced by specific practices and narratives clarifies its potential vulnerabilities and presents it as not absolute. The literature analyzes both the processes and outcomes of settler colonialism and examines the places where it has weakened or has hidden reach.

Land Grants and Cultural Identity

New Mexico's community land grants – which were given a general overview in Chapter 2 - were established under the settler colonial state of Spain. Community land grants, different from individual land grants given to prominent Spanish leaders and military generals, were populated by captive and missionized native people who were detribalized and integrated into Spanish society by colonial forces (Magnaghi 1990). Early colonization of the Southwest territories saw violent conflict with representatives of the Spanish Crown attempting to subjugate the Indigenous population and force them into Catholicism (Knaut 1995). The first successful permanent colony was led by Juan de Onate's Entrada where he killed and enslaved native people who did not submit to being remade in the Spanish Crowns image (Knaut 1995) ;(Magnaghi 1990). This direct violence provoked the Pueblo Revolt of 1680 where all Pueblo Tribes united to force Onate's army and Franciscan missions out of what is now New Mexico. Twelve years later, the 1692 Vargas expedition forced re-entry into New Mexico with a mission to "pacify" Pueblo people through conversion to Christianity (Knaut 1995). Franciscan friars took advantage of vulnerabilities from post-revolt disorder and marched across the state assigning missionaries to Pueblos, promising peace, and winning "pledges of renewed loyalty" to the Spanish Crown (Knaut 1995). Pueblos fought to stop Spanish resettlement attempts, but the Spain reestablished itself in New Mexico by the following decade (Knaut 1995).

Through both settlement efforts many native people were incorporated into Spanish settlements as ransomed captives divided between two groups: *Indios sirvientes*

("Indian" servants) and *Indios genízaros* (Raish and McSweeney 2008). After being baptized and given Christian names, servants worked until they paid their ransom which secured them the status of *genízaro*. Existing at the bottom of a Spanish caste system, *genízaros* were not able to own land and could claim no social status (Gonzales 2014; Raish and McSweeney 2008). When offered the opportunity to escape their landless status *genízaro* communities settled community land grants in isolated frontier villages continuing the structures of settler colonialism (Damico 2008; Gonzales 2014). The land grants did not take place "upon empty space," but like the first settlement attempts under the Spanish Crown, required the dispossession and replacement of Indigenous Nations and communities with original claim to the territory (Damico 2008). Their marginalization with Spanish society, remote living conditions, and communal governing systems (a condition of settlement) created an independent and closely tied community with its own culture and values (Correia 2008; Gonzales 2014). They were culturally and legally bound to the land. By Spanish decree they could not abandon the settlement even when facing extreme violence from Apache, Comanche, Navajo, and other nomadic tribes in the area. Only a judge could decide if the settlement could be abandoned. Because of these conditions, the land provided a sense of place and was not a commodity to be sold or profited from. The land linked *genízaro* to survival and opportunity. However, the literature notes that their connection to the Spanish Crown and that settler colonial project obscures *genízaro* indigeneity. Today they are not legally recognized as descendants of Indigenous people who are therefore obligated structural protections and natural resource rights (Gonzales 2014). This distinction in social status affects environmental management on land grants today.

Environmental Management

This thesis provides an analysis of social and political relationships to land through the environmental management process. Most environmental management in the study area is collaborative or cooperative and it occurs in partnership with state and federal agencies in addition to local organizations. This section reviews the literature on that form of environmental management to define the style of partnership and collaboration this research discusses.

Cooperative Environmental Management and Governance

The current state of environmental management differs from systems and perspectives that existed in the early years of land grant adjudication. While agencies, organizations, and communities continue to work independently to fulfill needs and missions there is a style of governance that brings many parties together for the purpose of managing collaboratively. This idea of collaborative or cooperative governing may be important for shared management of forest resources in the former land grant commons.

In the 1960's, a centralized and top-down governance structure controlled environmental management in the United States through regulation and fines (Benson et. al 2011; Ferreyra 2018). Engagement by members of the public and other stakeholders – grassroots organizations, NGOs, and the like – was limited to response and defense initiatives, which limited their power to effect change and influence management processes. Since the 1980s, in large part due to local activism and the implementation of several environmental laws, environmental management has transitioned to a decentralized form of governance hailed as more efficient, effective, and equitable for ecosystem care and local communities (Benson et. al 2011). This is also linked to increasing neoliberalism in the United States around the same period. The literature cited in this section do not directly refer to neoliberalism, but scholars focused on environmental management outside of the United States do point to growing neoliberalism in environmental policymaking – specifically in Latin America (Liverman and Vilas 2006) In this system, locally based agencies, NGOs, and community organizations with knowledge and investment in the watershed work to conserve the watershed rather than a distant regulatory entity. This transition began as the state began to intervene in water pollution control under the 1972 Clean Water Act (CWA) which "compelled" states to control non-point source pollution – pollution resulting from many sources such as runoff or habitat loss – in degraded watersheds (Benson et. al 2011;Lubell 2004). Amendments to the act, specifically Section 303, promoted local collaboration to address this issue. From this event, collaborations emerged, designed to facilitate consensus and cooperation – usually face-to- face - among competing stakeholders that would address the diffuse sources

of non-point source pollution and birthing a new philosophy of environmental management and ecological responsibility (Benson et. al 2012).

A large portion of the literature on collaborative governance uses rational institutional theory (RIT) to describe how this management strategy's benefits are self-evident (Benson et. al 2012). The theory states that, "individuals are assumed to be self-interested and utility maximizing" and when constrained by institutions (in this case, institutions are rules determining participation) and resource availability (typically, stakeholders are competing) rational individuals or organizations will organically engage in collaborative solutions. Benson et. al (2012) writes that "the benefits of the outcomes outweigh the transaction costs of collaboration." Presenting collaborative management as rational and solutions focused assumes that stakeholders – who skew towards policy elites' due power and access – will always produce consensus and a plan to address environmental degradation that will be implemented (Lubell 2004). This ignores the common disjuncture between planning and implementation and opens collaborative management up to criticism from more locally accountable groups who view collaboration in this mainstream method as symbolic (Lubell 2004). Lubell (2004) argues that cooperation is necessary, but not sufficient, for collaborative management because who participates is just as important as how the collaborative works together. Successful collaboratives require cooperation – e.g., participation in partnership activities and attitudinal support for implementation of best management practices - from "grassroots stakeholders" or "appropriators" who are defined as people who consume natural resources within the boundaries set by the collaborative (Lubell 2004). Literature in planning and sociology tackle how this is done, but successful case studies are noticeably underrepresented in papers directly discussing collaborative watershed management.

Scale in Cooperative Environmental Management

Collaborative management (this literature focused on collaborative watershed management) is a form of nested governance that relies on the social construction of scale – defined as the varied social and ecological levels under which environmental problems are identified and addressed – and distributed decision making among a

"hierarchy of institutions" (Wyborn and Bixler 2012). Nested governance allows smaller groups to tackle complex problems without bureaucratic barriers and provides space for diverse interests from locally based organizations and other stakeholders to participate in management actions (Wyborn and Bixler 2012). Collaboratives operating in a nested governance structure take on the role of traditional state governance, but without a standardized foundation of legitimacy and accountability. This foundation is required for nested governance to be successful and so collaborative members must negotiate appropriate objectives and culturally appropriate behaviors on their assigned scale to be successful. Without the given state legitimacy collaboratives are faced with a "legitimacy tension" between scales that threaten their ability to govern (Wyborn and Bixler 2012). In North America, the emphasis on local participation and voluntary consent and compliance over legal and regulatory coercion complicate this responsibility as the answer to, "legitimacy for whom and for what purpose?" will vary across members of a collaborative coordinating to address areas of concern (Wyborn and Bixler 2012).

Harrington (2017) argues that collaborative watershed "governance" lacks critical self-awareness which ignores "the politics of embedded reality" and produces phenomena like legitimacy tension. Collaborative watershed management "reflect and reproduce" existing social relations and structures leaving no ambiguity as to why grassroots stakeholders are left out and nature continues to be managed as apart from society and culture (Harrington 2017). Collaborative watershed management appeals to ideals surrounding holistic and community invested governance which, Harrington (2017) concedes, does present useful strategies for overcoming conflict and bureaucratic barriers, however, unchallenged a-political strategies only offer "flawed and skeletal solutions that do little to transform human impacts on insecure water resources". The trap of collaborative watershed management is that through ignoring power they become state actors through their professionalization, forming a repackaged centralized governing body instead of a radically different alternative.

Hydrosocial science's concept of hydrosocial territories (Boelens et. al 2016) may also be used to critique collaborative management to help it resist the intense pull

back towards “top-down” and hegemonic state governance. Additionally, it offers new ways of defining environmental problems and solutions that may circumvent indirect harm caused by collaborative management. Hydrosocial territories are “socially, naturally, and politically constructed spaces that are (re)created through the interactions amongst human practices, water flows, and other structures and institutions” (Boelens et. al 2016, p. 1). By understanding the relationships that construct hydrosocial territories, stakeholders can better deconstruct and dismantle hegemonic governance. Claiming that a watershed is a hydrosocial territory denies the politically neutral veil of collaborative watershed management that stabilizes specific political orders that privilege elites and state power. It reveals unequal distribution of resources and decision-making discourses that enable it within collaborative management practice that led to a process of resource accumulation and “the simultaneous dispossession of vulnerable groups of their livelihoods” (Boelens et. al 2016, p. 3). This promotes local sovereignty and disrupts the political order that makes areas within these socially constructed boundaries “comprehensive, exploitable, and controllable.”

Chapter 4: Research Design and Methods

My methodology relies on two tools – historical text review and interview collection - to identify the narrative ecosystem of environmental planning and stewardship in Carnué and the surrounding area. Historical narratives available in the literature make the foundation heirs and environmental managers in the Sandia Mountain Range and surrounding area work. Additionally, interviews map the current environmental management landscape as community members and managers understand it today. The historical analysis begins when the Spanish Crown establishes the settler city *villa de Albuquerque* – now known as Albuquerque – in New Mexico and ends with the 2021 Cibola National Forest Plan. In interviews, twelve participants discussed their contemporary reflections on land and environmental stewardship but also shared their thoughts on the past. Both methods are necessary to achieve an analysis that will untangle complexity, address structural barriers, and clearly outline community needs. In addition to updating the historical record, interview collection reveals narratives obscured or contradicted in historical documents. Likewise, historic analysis calls into relief relationships, events, and people that interviewees omit or present the perspectives of identities not represented in interviews like nomadic tribal members dispossessed and displaced by Spanish and Spanish poxy settlement of the study area.

The timeline for this research covers spring of 2022. The historical review of text narratives occurred from February 2022 through March 2022, and I completed in-person and video conference interviews March 2022 through early April 2022.

Historical Narrative Analysis

Historical narratives shape how community outsiders like myself understand Carnué and their positioning in the environmental planning arena. Articles, books, and organizational reports do not necessarily represent the lives of community members as they experience them, but they are a critical force in the political and social

construction and reconstruction of the landscape grantees live within. Literature is powerful because of its ability to document and create long lasting records of people and places – it helps illuminate and develop narratives about those people and places as well. This lasting record supports and interferes with the relationship between heirs, environmental managers, and the study region and so is important to include in this research on narrative. Investigating the public record helped tell the broad story of Carnué land grant and their relationship to government agencies, resistance, self-determination, and their ever-changing landscape.

I begin the analysis by outlining the historical circumstances prompting the Spanish Crown to create Cañón de Carnué land grant, the unique land tenure regime on grantee lands, and the subsequent transformation during the U.S. period. I draw from historical literature focused on Cañón de Carnué, the land ownership adjudication process initiated by the Treaty of Guadalupe Hidalgo, and U.S. Forest Service management of acquired land grant commons and Cibola National Forest. Using a narrative focused lens, the analysis expands on the study area overview in Chapter 2 in addition to outlining the mechanisms of primitive accumulation first used to enclose the land grant commons, patterns of accumulation by dispossession underlying ongoing management relationships and practices, and the production of narratives and counter narratives underpinning policies and decision making on the landscape today. This process helped identify starting codes for the interview process. The articles and reports I reviewed include references from University of New Mexico Zimmerman Library and Center for Southwest Research archives including journals, newspapers, and reports. I also cite the Cibola National Forest Plan (1986) and revised 2021 Cibola National Forest Plan and the accompanying Environmental Impact Statement.

Interview Collection

As mentioned in the introduction of this chapter, historical narrative review alone does not sufficiently address the needs of this research. Illustrating the full narrative ecosystem requires that community members speak for themselves revealing contemporary narratives and narrative conflicts with the historical literature. This

interview collection is place based and so additionally updates the historical record on Carnué relationship to land and environmental planning.

To begin interview data collection I started with three contacts affiliated with Carnué land grant. I gathered these three contacts by identifying reoccurring names in the literature and working with my UNM network to find relevant contacts. After I completed the three interviews with my initial contacts, I asked the participants if they recommended other individuals that may be interested in an interview as part of my snowball sampling strategy. Through snowball sampling, I collected twenty contacts. These early contacts were a mix of Carnue land grant heirs and community members, members of nearby land grants, Bernalillo County staff and representatives, and Forest Service employees and affiliates. After recruitment through phone and e-mail I successfully scheduled twelve individuals for an interview. Three contacts did not respond to recruitment and three others agreed to an interview, but I was not able to schedule them. The two remaining contacts did not feel they were the right fit for this research. Two of the twelve interviews occurred in-person at the interviewees request and the remaining ten occurred on Zoom due to COVID-19 Pandemic precautions or convenience. Land grant heirs, community members, or affiliates represented eight of the interviews. The remaining four were federal and county staff from the Forest Service and Bernalillo County.

Land grant heirs tended to have a current or historical leadership role within the grant. Heirship status can be different for each grant, but in Carnué an heir is a matrilineal descendant of an original land grantee. Two heir interviewees presented as female and three presented as male. In the interviews themselves, the majority of heirs acknowledged their *genízaro* or mixed Indigenous heritage, but implied that their more recent ancestry is aligned with Spanish or Hispano (Spanish settler before US annexation of the Southwest). They did not identify as Indigenous. However, younger male heir participants were more likely to directly reference their mixed Indigenous identity or ancestry in conversations concerning contemporary relationships to land. All lived in the study area or had a residence in the study area. The group of community members and affiliates varied in age and included a 50/50

split of white and Hispano individuals. Community members and affiliates were more likely to be paid for their work in the community. This group also skewed male. Female presenting individuals represented most of the federal and county staff from the Forest Service and Bernalillo County and had held their positions for multiple years. Two participants were visibly white. I did not interview any youth – under 18 – for this study. The interviews lasted on average between 30 to 45 minutes with one outstanding interview lasting one hour at the request of the participant.

Interview Coding

I used Otter .ai software to transcribe interviews and later transferred the transcription to Excel for coding. Top line memos detailed when and how each interview occurred and included a summary of the conversation with no individual identifiers. After Otter.ai transcribed the interview, I proofed the language and manually coded each interview highlighting relevant interview sections as they appeared. I used codes derived from the historical narrative analysis for the first three interviews and then added additional codes I noticed were missing. I recoded interviews with new codes as they appeared.

The historical narrative analysis codes are:

Self-determination	Capital	Natural Resources
Place attachment	Future possibilities	Degradation
Collaboration	Forest Service	Relationship to environment
Spatial reformation	Bernalillo County	Culture
Stewardship	Water	Relationship to community
Dispossession	Land loss	

Additional codes added during interview process

Land use	Grassroots activism	Interstate
State law and policy	Environmental problems	Development
Environmental Racism	Historical or cultural memory	Environmental Change

The following questions guided the interview:

1. Tell me about yourself and your connection to Canon de Carnue and the surrounding region?
2. Can you explain your experience with environmental stewardship in the region, and a little about your role?
3. How have management policies or decisions in this area affected you and your relationship to the environment?
4. Have you been able to affect policies or decisions made?
5. What is the relationship between land grant heirs and the environmental planning process?
6. What brought the relationship to this point?
7. What does successful management look like? What enables or prevents that?
8. What is the future of this area?
9. Any important issues that I missed?

Coding Analysis

After the completed coding process, I searched for coded statements that interview participants repeated, statements that aligned with historical narratives, or statements that shape or help transform environmental management policy or stewardship in the study area. From there, I analyzed the codes these statements represented and aggregated them to form critical narrative themes for understanding study area dynamics. The statements that I identified are not isolated thoughts or ideas

interviewees shared. To be selected for analysis, interviewee statements needed to be repeated and deal with the spatial transformation of the region.

Chapter 5: Historical Narrative Review

The study area's historical literature illustrates how past social and political organizations distributed power across the landscape. The narratives in these texts and the context they provide demonstrate what actors stand to lose or gain as the spatial reality of Cañón de Carnué and its former commons abruptly shifts. Though all of this, the text show how the land grant communities' own narrative priorities endure even as colonial and state powers dominate the landscape and frame contemporary environmental issues to their benefit.

Introduction

New Mexico's land grants have a shared history originating with the Spanish occupation of the Southwest, but their stories diverge as their unique relationships with land, state, and community evolve through time. Under the community land grant system, the Spanish Crown authorized tracts of land to *genízaro* and *mestizo* families with the condition that they serve as calvary for important population centers battered by nomadic tribal Nations. Often low caste and landless by law within Spanish society, grantees risked settling hostile outposts to cooperatively steward their own plots in the forests and mountains of New Mexico. When the United States absorbed the grantees into its new nation, the opaque land ownership adjudication process that followed enclosed much of the common land acreage grantees subsisted on. This action transformed land tenure in the region and dispossessed the people. This second wave of colonialism incited a movement to reassert land grant community self-determination in the face of gradual land loss. The ongoing process of – sometimes violent – resistance, reclamation, and compromise between surviving land grant heirs and state power has generated vivid narratives that embedded themselves within New Mexico's state identity and the lore of the West itself. However, the differences between land grant histories are just as important to

understanding New Mexico's landscapes and how their dynamics with the state produce policies governing place and relationships to place. Cañón de Carnuè's navigation of this history enabled heirs to assert their right to traditional land use and collective ownership aiding in the transformation of the region through time alongside powerful institutions like the Forest Service and other governing agencies.

Early Spanish Colonization of Tijeras Canyon

In 1763, the Spanish Crown established San Miguel de Laredo de Carnué, the predecessor to Cañón de Carnué, at the mouth of Tijeras Canyon providing land, natural resources, and increased autonomy for nineteen *mestizo* families. In exchange for land, grantees were required to adhere to the Spanish Crown's Laws of the Indies and act as a military buffer between raids and *Villa de Albuquerque*, a settlement established in 1706 (Archibald 1976;(Brown et. al 2020). Before the Spanish Crown authorized the grant, settlers knew Tijeras Canyon was as a valuable region with springs and intermittently flowing arroyos that provided opportunity for cultivation, livestock grazing, and survival in dry times (Archibald 1976; Swadesh 1976). However, the Mountain Ute, Comanche, and bands of Plains Apache – the literature is not consistent when describing specific bands of Apache - used the ancient canyon pass to successfully launch continuous attacks against the Albuquerque preventing territorial expansion and taking horses and supplies as needed (Archibald 1976; Jones 1962). Albuquerque was especially vulnerable to these raids as early settlers decided to live dispersed throughout the valley in isolated dwellings instead of the defensible and compact settlements described in the Laws of the Indies (Archibald 1976; Jones 1962). As a result, the village settlement remained tethered to Rio Grande and away from the Canyon entrance. This stifling of movement and tenuous dominance over settled territory threatened Albuquerque's role in the settler-colonial project Spain initiated (Damico 2008). The Spanish Crown authorized San Miguel de Laredo de Carnué in a desperate attempt to protect and diffuse the threat of raids and stabilize the region. It is unclear if grantees held conviction in their duty, but they agreed to the difficult task hoping they would have something to show for their participation.

While there may have been an optimistic beginning to their arrangement, the grantees quickly found defense from raids impossible. San Miguel de Laredo de Carnué land grantees were comprised of families forced into low castes due to their mixed Hispanic and native ancestry (Archibald 1976). While not at the bottom of society, they survived primarily by working the land for others and were not highly skilled soldiers (Archibald 1976). Once in the Canyon, grantees experienced heavy human and material losses to attack from raids (Archibald 1976; Engstrand 1978). Settlers did not live through enough calm to complete construction of a plaza or other critical settlement structures (Archibald 1976). By 1771, after eight years of instability, grantees retreated to seek safety in Albuquerque, but the village did not welcome them back. Their community land grant agreement with Spain legally bound them to the land and so they were not allowed to abandon the settlement (Brown et. al 2020). In 1772, Governor Pedro Fermin de Mendinueta returned them to their post where they found hostility towards the grant from surrounding mountain communities unchanged. Grantees could no longer endure the attacks and living with what the literature describes as an unfinished plaza and uncultivated fields. They formally forfeited the grant to the Crown in the same year and presumably reintegrated back into Albuquerque life. In 1779, Fray Francisco Atanasio Dominguez plainly immortalized their painful defeat in epitaph. The land grant, "was a settlement of ranchos like those everywhere, with very good farmlands irrigated from a stream of their own in that place. It was abandoned in the year 1772 because of continual Apache raids." (Archibald 1976, p. 320). Land grants of this type were not guaranteed success in their mission, but they would eventually find occupying the frontier easier as Spain grew out of its focus on protecting established settlements and shifted to a more unified and antagonistic governance strategy in the territory in search of "Peace" (Archibald 1976; Jones 1962; Brown et. al 2020).

Spanish displacement of Faron Apache and "peaceful" resettlement of Tijeras Canyon

Spain would force stability for its settlements through the *Reglamento* of 1772 which sanctioned war against the "Apache" who it identified as a unique threat amongst

nomadic tribal nations (Jones 1962). Robert Archibald (1976) specifies the Faron and Gileños Apache and several texts generalize Plains Apache, but other literature cited on this topic is not specific about tribal bands. Due to the frequent naming of Faron Apache in Archibald's foundational text on Carñue land grant I will specify the Faron Apache in this research.

The Apache were adept combatants who used the introduction of horses to North America to navigate the sprawling dryness of the region for their benefit (Jones 1962); (Gorczyca 2015). Multiple tribal bands were able to raid Albuquerque with relative ease while other territory disputes occupied Spain's military attention (Jones 1962). Initial attempts at treaties were ineffective due to the independence of tribal bands and the drive to retaliate against settler violence which undermined attempts by Spain to establish stable or internally peaceful settlements. The *Reglamento* prompted military authorities in Spain to create the *Provincias Internas del Norte,* a decree placing all military power under single leadership which integrated skilled soldiers who previously fought elsewhere on the frontier with struggling local forces in the region (Jones 1962). This consolidation of power and purpose supported an "Indian Policy" that worked to achieve an all-tribes alliance against the Apache. Their raids assaulted Pueblos in addition to the Spanish. Mendinueta organized several military campaigns with Pueblo allies from Zuni, Acoma, and Laguna and bolstered that army with hundreds of Christianized native peoples from the plains captured in past conflicts (Jones 1962; Moorhead 1975). The aggressive campaigns decimated the Apache population in Central and Northern New Mexico, and survivors "received inducements to become dependent on rations and liquor provided by the government" aimed at disrupting their movement in the region (Archibald 1976; Jones 1962). The increase in violence proved great enough to demoralize nomadic tribal bands and reestablish Spain's footing in the region. By 1787, most Apache yielded, and the Spanish forced their settlement in supervised villages before the U.S. would establish its reservation system (Moorhead 1975). The displacement of Plains Apache people cleared thousands of acres of land from valuable areas like Tijeras Canyon making Spanish colonial expansion into the area possible.

The historical geography of Cañón de Carnué

Raids did not cease after this massive wave of displacement, but the existential threat to Spanish settlement was much diminished. Even so, Albuquerque still required additional protection and once again proxies of Spain settled the Canyon. In 1819, a small group of mixed *mestizo* and *genízaro* families formed Cañón de Carnué land grant – some descendant from the previous grant – reviving the possibility for self-determination and autonomy through isolation in the mountains (Archibald 1976 ;Gonzales 2014). *Mestizo* families could claim some proximity to Spanish heritage and its privileges; however, *genízaro* families were severely subordinated within Spanish society and had little opportunity to win the struggle against their given conditions (Archibald 1978; Magnaghi 1990). *Genízaros* are baptized captives forcibly integrated into Spanish society – typically from conflicts with the Mountain Ute, Plains Apache, Navajo, and Comanche. Spain forced individuals to labor as indentured servants or slaves to Spanish families and could not own land (Archibald 1978; Gonzales 2019). The authorization of Cañón de Carnué marked a controlled end to their landlessness which reconnected these decedents of the plains to land-based lifeways (Gonzales 2019; Arellano 1997). Cañón de Carnué land grantees erected a defensible town plaza as directed of all similar land grants and performed ritual dances within its walls. Nestled in the canyon, the community members of Cañón de Carnué irrigated their farming allotments with acequias and collected wood, and grazed goats in the ejido (Swadesh 1976). Buffalo hunts and trade with the remaining area Comanche supplemented what land grantees could not receive from the land or kin (Gonzales 2014). The community sustained itself in this way until the 1848 Treaty of Guadalupe Hidalgo which marked the end of the Mexican American War and ushered in Manifest Destiny as the prominent ideology governing the land. (US General Accounting Office 2001; Griswold de Castillo 1998).

The 1848 Treaty of Guadalupe Hidalgo and land ownership adjudication

Treaty language reassured the mixed *mestizo* and *genízaro* families of Cañón de Carnué that their land claims would be protected when they became citizens of the

United States (Archibald 1976). However, the newly formed United States placed a burden of proof of land ownership on grantees and protections became uncertain. Navigating the adjudication process required that land grantees demonstrate ownership in ways legible to the Anglo legal system – a system that found them unrecognizable and a barrier to uninterrupted westward expansion (Brown et. al 2020; Griswold de Castillo 1998). Grantees needed to rely heavily on paper documentation, confident translation between Spanish and English, and paid representation in the courts (Dunbar Ortiz 2007). Given the significant barriers, it wasn't until 1871 that land grant heirs of Cañón de Carnué successfully petitioned the U.S. government for recognition using documents and personal testimonies proving their land claim (Archibald 1976; Brown et. al 2020).

They made their case for 90,000 acres granted by the Spanish Crown and maintained under the Mexican government after the Mexican War of Independence (Archibald 1976). Characteristic bureaucratic delays ensured the courts did not submit the filing to the Surveyor General – a position charged with verifying property rights in the territory – until 1882 and only in 1886 were testimonies taken from land grant heirs (Brown et. al 2020; US General Accounting Office 2001). The Surveyor General recommended grant confirmation multiple times, but with limitations unsatisfactory to grantees (Brown et. al 2020). Each time a substantially smaller grant was recommended, or mineral and other natural resource rights were legally stripped from the land (Brown et. al 2020). In all cases, Congress declined to move forward with confirmation leaving demoralized grantees re-petitioning for land or stuck in limbo while sitting on land they had stewarded for generations (Brown et. al 2020).

Sandoval V. United States and land loss

The 1897 Supreme Court decision Sandoval V. United States unsettled a long period of no meaningful action (Hall 1991). The ruling held that Spanish and Mexican land grants did not hold sufficient title to common lands surrounding private allotments (Hall 1991). This firmly shut down the possibility that Cañón de Carnué and other land grants sustained through common property ownership could continue the foundations they built (Correia 2009). This was a significant shift for grants that had

not yet received confirmation. The Sandoval decision stripped them of their land base and the United States would only recognize their private home plots (US General Accounting Office 2001 ;Hall 1991). In 1903, the courts patented Cañón de Carnué land grant at 2,000 acres. They then placed the remaining acreage into public domain where it would be seized by prospectors or turned into wilderness managed by the state (Brown et. al 2020 ; Gonzales 2014).

Sandoval V. United States represented a massive loss of land and a betrayal by a government that assured protections under Treaty of Guadalupe Hidalgo (Archibald 1976; Gonzales 2014). The grantees could no longer subsist on the land without free movement on and access to the natural resources tied to the commons (Gonzales 2014; Corriea 2009). Likewise, the ruling threatened to disrupt place attachment beyond private properties and upset community structures grounded in collaboration and communal governance (Gonzales 2019; Corriea 2009). The United States government permitted Cañón de Carnué land grant to exist in the Canyon, but their access to self-determination through traditional lifeways had much diminished. Unable to subsist on the land, community members integrated into the wage economy where entry was required of all citizens of the capitalist Anglo empire (Corriea 2009). For land grantees broadly, this caused substantial migration out of their grants. Without a land base for subsistence or capitalist infrastructure for wages, it also led to poverty within the grant itself.

The Sandoval decision was devastating to land grant heirs who could not have known the court case would act as a de facto deadline for land recognition in the United States. However, the ruling did not represent a complete unraveling of land grant communities. Heirs of Cañón de Carnué point to resilience as a key tool to resist assimilation and erasure as the struggle for self-determination amidst state-sanctioned dispossession continues (Gonzales 2019). Their deep connection to cultural memory, land, and endurance won through overcoming past difficulties played a part in their persistence in the region. Though there is intense pressure, U.S. hegemony and time have failed to eliminate all traces of communal and cooperative relationships to land and stewardship from Cañón de Carnué and its former commons. But resilience and

protest have not definitively won back the commons and traditional land use. The impacts of this conflict are not experienced evenly, but there is little evidence that dominant structures and ideologies born out of Manifest Destiny and capitalism are absolute barriers to alternative or traditional methods of environmental governance and relationship. The damage is significant, but mapping where power was ceded and cooperation between groups yielded equitable benefit illustrates a truer story of land management in the mountains of New Mexico.

The spatial reality of enclosure and dispossession in the U.S. period

To review, in 1819, Spain granted heirs of Cañón de Carnué land grant roughly 90,000 acres of land in what is now known as the Sandia Mountain Range. Following the Spanish Laws of the Indies, grantees established private family allotments and constructed an *acequia* (a democratically managed ditch irrigation system) to water farmland. Community members stewarded the remaining acreage as common land for grazing, wood collection, and traditional uses relevant to their mixed Hispanic and *genízaro* ancestry. Cañón de Carnué heirs maintained ownership of their land when the Spanish colonial territory became Mexico at the end of the Mexican War of Independence in 1821. But Mexico's victory did not settle land tenure conflicts in the area and the United States encroachment into the West sparked disputes that instigated the Mexican American war in 1846. When the Treaty of Guadalupe Hidalgo ended the war in 1848 Mexico ceded the Northern frontier to the United States. The Treaty made land grant heirs U.S. citizens and described conciliatory protections to recognize grantee land ownership. Grantees understood that the treaty would continue their traditional land-based lifeways as they did under both the Mexican and Spanish governments. Time revealed that Treaty language did not reconcile the differences between communal and private relationships to land and failed to outline a structure enabling heirs to retain claim to their commons. This left the new citizens vulnerable as they entered an adjudication process that would either assert their right to persist on the land or eliminate their means of survival. With a clear pathway to achieving white Christian dominance or Manifest Destiny in the

West, the United States had no incentive to keep its Treaty promises or ensure a transparent land adjudication process (Correia 2009). Within a capitalist system, control over land represented economic gain and state security. Not putting common land to work under the new system of government threatened to undermine the benefits of winning the Mexican American war for the U.S. state (Correia 2009). Bureaucratic delays, opaque legal decisions, and profit-driven interference by prospectors further demonstrated the United States' lack of commitment to land grant protections (Newman 1970 ;Gonzales 2003). Grantees resisted the rolling waves of land loss that occurred at the start of the U.S. period, but ultimately the communities had little meaningful power to force full recognition and authority of the land they had held for generations.

Primitive accumulation and accumulation by dispossession

The reduction of Cañón de Carnué land grant to 2,000 acres from its original 90,000 acres represents a fundamental reconfiguration of spatial relationships in the region. The loss transformed regional governance, social structures, and future possibilities for land grant heirs and the benefactors of their dispossession. This historical shift is rooted in the process of primitive accumulation – Karl Marx's theory overviewed in Chapter 3. The environmental and social histories and relationships that produced the collective space in the Cañón de Carnué land grant enabled land-based self-determination and resourcefulness for community members. Enclosure birthed new and constrained relationships to nature, land, and community which pushed grantees into the wage economy in cities throughout New Mexico and made the full scope of traditional lifeways untenable (New Mexico Land Grant Council 2019 ;New Mexico Legislative Council Service 2008). Their distance from state power and dominant Anglo cultural markers meant grantees did not directly benefit from the accumulation and subsequent profit made from the seizure of the commons (Sevilla-Buitrago 2015). Land grant heirs retained their private family allotments and access to their historical acequia providing enough of a community foundation to reassert themselves on the landscape and resist further land loss. Grantees adapted to the initial spatial reformation of Cañón de Carnué and would have to engage with further state-initiated

reformations as they continued to persist in the Canyon. Primitive accumulation describes the first processes that transforms a landscape and human relationships to it, but the accumulation of capital is not limited to that initial mobilization of enclosure. Under the system of capitalism, capital must continually accumulate even if primitive accumulation has already occurred, and communal spaces have been absorbed. Enclosure is not a complete process that happens at one time, but an ongoing coercive transformation of space that perpetually reshapes spatial realities while placing the collective in direct conflict with state power (Kelly 2011) ;(Harvey 2011).

The United States government held firm control of the territory by the time the state of New Mexico entered the union in 1912. Federal and state agencies oversaw the creation of water projects and the extraction of timber from forest areas in support of development and industrialization. Railroads and interstates transported people, capital, and Manifest Destiny across the West. This reallocation of natural resources promoted population growth statewide, but Tijeras Canyon likely remained isolated until Henry Ford's automobiles became widely available and highway construction boomed (Caron and Santos 2008). Established in 1926, Route 66 National Historic ran through the Southwest and Tijeras Canyon bringing with it an increase in commercial opportunities that prompted the development of roadside hotels and gas stations (Caton and Santos 2007; Tijeras Canyon/Carnuel Plan 2007). The new accessibility of the scenic area also attracted new residential developments created by Anglo settlers and other travelers (Tijeras Canyon/Carnuel Plan 2007). The development and commerce in the region remained only moderately obtrusive and now that grantees relied on wages and external resources to survive, the additions to the region may not have been entirely unwelcome. The construction of I-40 was different. In 1956, the Federal Highway Act authorized the U.S. Interstate Highway System which created high-speed interstates that would eventually sidestep Route 66's simple two-lane road (Caton and Santos 2007). By the 1970s, the state authorized a multi-lane high speed I-40 to cut through Tijeras Canyon, splitting the north side of Cañón de Carnué from the south side and claiming the land in-between for the state (Tijeras Canyon/Carnuel Plan 2007). The interstate, which spreads to six

lanes, destroyed safe passage for wildlife who use the canyon as a corridor and created a physical barrier between century old neighbors.

This demonstrates how the state accumulation on Cañón de Carnué land grant's commons that occurred shortly after the signing of the Treaty of Guadalupe Hidalgo was not a final and comprehensive act of dispossession against land grant heirs. Marx theorizes that the profits gained from accumulation will fall producing a crisis of overaccumulation (Harvey 2003). Surplus capital must be absorbed for the system to maintain stability and so Capitalism reorganizes itself to maximize profits. David Harvey (2003, p. 63) builds on a concept from Lefebvre that "capitalism survives through the production of space" and argues that "capitalism needs ever expanding spaces where accumulation by dispossession can occur". Remaining community lands, the acequia, place attachment and the inevitable collective reimagining of traditional practices under new governance structures were all refugees from capitalist enclosure. These actions and ideas can produce new spaces that revive past losses and shape new futures, but they can also be remade to absorb surplus and assist in capitalist expansion. For instance, the state claimed additional land grant land to invest in the interstate. The construction expended excess capital that would later return dividends as the interstate increased possibilities for uninhibited transportation to and from goods and services. The process of capital accumulation replaced a space constructed around light pass-through tourism and forest reserves with one that could support heavy recreation, growth, and development. All made possible by the repeated dispossession of land grant heirs and the malleability of spatial relationships. The first significant act of enclosure against land grant heirs following the Sandoval decision and the subsequent capture of additional lands through interstate construction clearly follow the coercive production of capitalist space Marx and Harvey describe as primitive accumulation and primitive accumulation by dispossession. Illustrating the ongoing process of accumulation and dispossession in Cañón de Carnué is critical to understanding the political and spatial context of landscape transformation and power struggle in the region. This knowledge generates an understanding that under capitalism no space exists in a stable state and that all

spaces are exploitable for eventual benefit to a dominant power. And it follows that this includes spaces intended for public good.

Transformed relationships to place and natural resources

At the turn of the 20th century the Supreme Court reinterpreted the protection of traditional land tenure described in the 1848 Treaty of Guadalupe Hidalgo and denied full recognition of community land grant property ownership. If common land granted by the Spanish Crown or Mexican government was not adjudicated before the Sandoval decision of 1897 it was forcibly relinquished – emphasizing the United States' inability to accommodate common land tenure. In the case of Cañón de Carnué, private owners and developers took control of a portion of that land and the newly forming U.S. Forest Service placed the sizable remainder into the Manzano Forest Reserves in 1906 to provide water and timber for the Nation's benefit (USDA). The Reserve included the Sandia Mountains and a section of the Manzano Mountains. Later, the Reserve became the Manzano National Forest and then the Cibola National Forest in 1931 (East Mountain Historical Society 2020). As the public became more involved in state forest interests, Congress expanded the agency's mission to manage forests for multiple uses and benefits and for the sustained yield for renewable resources (USDA; Hobert 2004). National Forests are public land and theoretically open and accessible to all, but the Forest Service restricted usage in ways that disproportionately restricted traditional use activities. Land grant heirs passed through forest boundaries to collect and cut wood and for free-range herding. These activities now required limited fee-based permits and the barriers to secure them manifested the same hardships of the land ownership adjudication process decades before. The cost and paperwork prevented equal access to resources in the forest, and over time fewer permits were offered each year as recreational and scenic area development increased. The Forest Service insisted that grazing and wood collection caused ecosystem degradation which reflected an expanding value system that now included protection of natural resources through exclusivity and conservation. Overgrazing concerns in-particular limited use access and restricted herding to concentrated areas within the forest. In this context, the layers of loss and change are complex, Cañón de Carnué is

surrounded by their former common lands - acquired as a direct result of Indigenous dispossession and displacement. Now these same lands are public lands and the Hispano land grant community is barred from traditional use of them.

Protected areas replicate some qualities of a commons where access is free or subsidized and collective stewardship is encouraged. However, National Parks are indeed enclosures that maintain the conditions for capitalist accumulation while those same conditions are obscured by the benefits they offer to society. The dispossession necessary for the existence of National Forests, Open Spaces, and public parks is veiled by the assumed "uncomplicated good" they produce (Kelly 2011). The narrative supporting the creation and environmental management strategies of conservation and natural resource-oriented agencies legitimizes their presence on the land and presents their top-down governance structures as objectively successful. The dominant land ethic underwriting early forest policy embraced the Country's birthright to growth and cultivation of all lands by the State. Forest Reserves protected nature for future harvesting and development displacing existing communities and human-environment organizations. As Anglo settlers and other citizens were increasingly affected by the negative consequences of mining forests for their natural resources, organized public protest demanded multiple uses in forestlands. Environmental planning began to include the interests of wildlife and recreation, but the Forest Service enacted the new protections by upholding the belief of pristine wilderness to rationalize its policies.

The idea of pristine wilderness is a "cultural construction" that presents humans as entirely outside of sacred and solitary nature (Cronon 1996). The mainstream environmental movement and associated conservation actions have historically reinforced this idea through exclusionary policies that deny the complex and often intimate history of human-environment relationships. In part a reaction to frontier overdevelopment and intensive cultivation, this narrative tends to attribute human use and interactions with nature, outside of the limited scope of recreation and standing in awe, as violent and unnatural (Cronon 1996). The conditions coerced upon nature and society within capitalist enclosure undo relationships to collective space and

reorganize society in relationship to ownership and capital. It produces a duality where nature either exists for state building or to be left alone – unknowable to human understanding. The dominance of these separationist ideas suppresses alternative ideologies guiding knowledge and community ties nature and wilderness. Rising to prominence through the 1990s Chicano movement, land grantees grew to describe their reciprocal connection to ancestral homelands as *querencia* (Gonzales 2019; Arellano 1997). This land ethic acknowledges the cultural memory knitted into natural landscapes like wilderness. The recognition of home in nature produces land use practices that state institutions have difficulty interpreting. Misalignment between traditional place-based users and those who benefit from dominant land use ideologies – in Carnué and beyond – generates conflict and as the relationship between the two has evolved, yields opportunities for shared solutions.

Improving possibilities for land grants in contested space

The 1985 and 2021 Cibola National Forest Land Management plans demonstrate the growth of Cañón de Carnué's relationship to the U.S. Forest Service though time and how competing land use narratives can hybridize to enable cooperation between groups. The National Forest Management Act of 1976 created the forest planning process in response to ecosystem degradation from timber harvesting. Forest Plans would help the U.S. Forest Service balance multiple uses and define the long-term direction of management for parcels of land (USDA). The Forest Service developed the first forest plan for Cibola National Forest in 1985 outlining ecological concerns, policy goals, and monitoring requirements for the area. There is no mention of land grants or traditional use in the plans over 300 pages effectively erasing their presence on the landscape and excluding the community from formal forest management. The Act requires forest plans be revised every 15 years, but due to the projects scope, cost, and changing environmental needs the Forest Service did not produce a new plan until 2021. This effort looks dramatically different, the connection to traditional users have to the land and their unique uses are accounted for throughout e plan. There are no public reports that describe changes made to make this specific forest planning process more inclusive; however, the institutionalized accounting for land grant forest

needs holds the Forest Service accountable to coordination with heirs – a pathway to increased self-determination for grantees. The Sandia Mountain wilderness remains a contested space under capitalist enclosure and yet the struggle for multiple uses through time is forcing the production of hybrid space offering a glimpse of new possibilities.

Chapter 6: Interview Narratives

I interviewed twelve individuals from February to April with a personal or professional connection to environmental management and stewardship of the Carnué land grant and the surrounding Open Space and Wilderness Areas. This group includes Carnué land grant heirs, agency employees, community members affiliated with Carnué, and formal representatives of New Mexico land grant interests. In conversation, participants shared their relationship to land stewardship, community, and culture while describing their interpretation of historic landscape transformations and the environmental planning process in the region. These results are organized into four categories: 1. Placing the physical environment, 2. Responses to landscape change, 3. Points of conflict and possibility, 4. Shared needs and moving forward. Seven reoccurring interview themes aligned with those categories and supporting narrative arguments. I included details about interviewee race, age, and gender in Chapter 4, and generalize participant identities here to maintain the anonymity of study participants.

Placing the Physical Environment and Community in Context

Early interview questions encouraged participants to reflect on their connection to Carnué and the surrounding region including their experience with environmental stewardship and historical and current environmental planning decisions and policies. Participants often responded to this line of inquiry by orienting their personal or professional histories to the physical landscape and the communities in that landscape. These descriptions generally began with a story dating back to the first settlement of the region, a reiteration of organizational mission statements, or a justification for some ecological or land use action. Themes in this category align with interview participants placing the landscape in context. Subsequent themes and narratives build off these initial understandings of place, community obligation, natural resources, and environmental change. Three themes best align with this category:

Human-environment relationships and the importance of memory

This theme is representative of statements under the following codes: stewardship, relationship to environment, relationship to community, place attachment, and historical or cultural memory. Land grant heirs tended to describe their relationships to place and community in terms of multiple generations and their connection to specific physical features in the grant. For example, one interviewee said, “it’s hard to talk about the village without people knowing the landmarks.” They recalled grandparents’ agricultural practices in detail and various cousins who lived in either Carnuel or San Antonio de Padua, the two primary village settlements in the grant. For example, “we were all from there, from Carnuel.” In an insistent tone, heirs and land grant representatives would begin sentences with “I remember” or refer to how the landscape or community looked or behaved, “back then.” In describing the physical landscape an interviewee starts, “We climbed the mountains south, you can't do that anymore...” or “[in my childhood] there were very few invasive species and very few trees period. Now you can't even hardly get to there without cutting through the underbrush.” This style of processing differed from how agency employees and non-heir environmental managers described their place connections. This group foregrounded recreation, natural beauty, and ecological fragility in their descriptions of place attachment and centered their organizational role and mission while explaining relationships to the study area. Memory appeared less frequently and in general terms, for example: “we are…working with entities that have been stewards of the land that were here before us.” Based on these reoccurring conversation points, human-environment relationships in connection to cultural or historical memory were especially important to how participants positioned themselves in the environmental planning and policy space. Additionally, the narrative arguments these descriptions support provide insight into how actors assert their presence on the landscape and justify their methods of stewardship. The highlighted quotes capture distinct narratives in this theme.

> …in a very subordinated way we were given an opportunity, if you're willing to take the risks of living in a place like Carnuel, subject to attack, then you could own your own land and be your own person – Land grant heir

Oftentimes in the same breath, land grant heirs and their affiliated community members expressed a deep connection to land and a strong memory of their early struggles as a grant. It seemed that land and struggle were inextricably tied and the grant itself represented opportunity for either loss or prosperity depending on ever changing circumstances not always in the grantees control. Without a steady state to rely on, grantees take on a position of protection to balance the risks apparently inherent in their status. Remembering their collective losses is not only a resistance tool against cultural and social erasure, but the practice builds community resolve for a protective model of stewardship. "I want to preserve the little that we have" is a common statement amongst interviewees." While answering a question about the future of the land grant one heir states in a matter-of-fact tone, "They've [state entities have] taken a lot of stuff already, they're going to do whatever, but I'm going to try my best to protect what we do have." Another grantee describes community response to current and historic struggles, "it seems like they've tried to eliminate our community in any and every way possible. So, the fact that we still are organized as a land grant community, we still have a system of our own management, and we still advocate for the lands that we lost." Their sentence trails off, but the interviewees tone indicates a pride in their community. For participating Carnué land grant heirs, struggle against social subordination and land loss is best navigated with experience despite the pain it has caused the community. In clear terms, an interviewee stated, "we've constantly known how to struggle, we've lived on the margins, and our communities know what it means to sort of survive. And that adaptability and survivability and under all conditions has meant that they've been able to still maintain that sort of connection to culture. And part of that culture is the actual struggle"

> Our stewardship is about that place in context of a defense settlement, but also keeping the memories of all the people that were engaged in the relationship of that place, through conflict, and through collaboration... that's something that we forget in stewardship, about the memory of people that made the place…the way we [western natural resource management] think of wilderness, right, Wilderness is devoid of people. But that's entirely not really the reality – Land grant heir

Nearly all interviewees directly acknowledged the important role of Indigenous pueblos and land grants in the study area ecosystem. However, individuals differed in describing how that role manifested in their day-to-day environmental stewardship and personal place attachment. These differences illude to the specific community or organizational obligations interviewees hold and how historic human-environment relationships inform the environmental planning process across interest groups. Additionally, it identifies an underlying tension in how landscape memory is treated in policymaking and the opaque tangibility of acknowledgement. Land grant community members are adamant that the land was never devoid of people and that their stewardship honors those people and their shared connection to place.

Responses to Landscape Change

The study area has undergone several landscape transformations that impact how environmental planning and traditional land use occur today. Focusing on changes initiated after U.S. era capitalism swept New Mexico, study participants discussed interstate highway construction through the village of Carnuel, Wilderness Area land use restrictions and the complexities of recreation pressure, and the role of "multi-million dollar" housing developments in wildlife and natural resources management. Interviewees discussed points where they were active participants in shaping the transformation process through resistance, activism, and collaboration, and share where they felt change was an inevitable force. Experience with change clarifies the diverse political stances taken up by community members and management agencies and how each group might attempt to solve environmental problems and cooperate with one another. This category continues to work through how coexisting with

struggle – in this case, state dominated landscape change - shapes decision making and community an ethos of protection.

Spatial reformation and the drivers of environmental problems

This theme is representative of statements under the following codes: environmental change, environmental problem, land loss, water, interstate, land use, access, and dispossession. Narratives in this theme remark on the spatial transformation of Carñue land grant following the Treaty of Guadalupe Hidalgo and the subsequent social and environmental reorganizations the region experienced as a result of state development. They also grapple with ecological changes that are not obviously state driven like climate change, drought, and invasive species encroachment. When asked how they were affected by environmental management policies and historical landscape changes, participants typically described a specific event and connected it to a key stewardship practice or community value. This line of questioning also prompted interviewees to define environmental problems in relationship to social and physical landscape change. In this way, outlining the specific mechanisms of spatial reformation allowed individuals to discuss the dynamic nature of the study area and the actions or determination required to persist within it. The highlighted quotes emphasize the distinct narratives that support this theme.

> I don't feel like they really did take that into consideration about my grandfather having an orchard and how it fed people, you know. They just kind of was like…we're just going through…that's it. So, they took their land. And they…went ahead and passed the freeway right in the middle there – Land grant heir

For land grant heirs, interstate construction started without community consent and now I-40 is a painful "scar" on the landscape. According to interviewees, the interstate paved over streams and several family orchards that supported land-based subsistence and bonded generations through communal harvest. Grantees in Carñue point to the orchards as a symbol of prosperity, self-sufficiency, and community care. A study participant mourns the loss of an important food source and a culture of mutual aid in the aftermath of the interstate, explaining, "all that little by little…just

started dying off. I mean, once the orchard was gone, I think things changed". They continued to explain how the interstate created a barrier between families and villages, cutting off access to community and cultural traditions. Based on interviewee responses, the interstate represents a loss of self-determination.

> It can be very challenging, because we are an urban district, and the population is growing. And, you know, the population sees it as recreation, they don't see…these historical uses of traditional communities, for plant collections, for spiritual purposes, or for fuel wood…the livelihood needs of managing the land…it is a challenge. – Environmental manager

For multiple land grant community members, the creation of the Forest Reserves began a slow reduction of land grant access and use rights that increased in pace when the Forest Service expanded its mission to balance multiple uses – including recreation. Recreation has increasingly become an important land use in the Sandia Ranger District due in part to its proximity to Albuquerque, New Mexico's largest city. The forestlands are easily accessed by use of the interstate and so are utilized by droves of hikers interested in scenic views and nature trails. The Forest Service must manage the district for this use which causes tension with land grant heirs despite significant improvements in the two parties' relationship in recent years. An interviewee stated this problem, "I think some of the barriers to the land grant having a good relationship [with the Forest Service] is the management…priorities of the federal lands in the area…if you look at their [Cibola National Forest] forest plan compared to let's say, the Carson and Santa Fe Forest Plans, it's incredibly heavy on recreation". But land grant community members and affiliated groups have different interpretations of the central tension point based on their relationship to the environmental planning process.

Land grant community members who officially represent the grant in a leadership or paid role interact with the Forest Service regularly and prioritize policy making and participation in the collaborative process. Community members without a broad official role in the grant keep minimal if any contact with the Forest Service and are not concerned with the forest plan but are frustrated with the liability risk of

recreational overflow onto their land. One heir made the difficulty clear after explaining how a recent lawsuit severely drained the grant's finances, "how can you protect this land, and still share it, you know, but you still have the public entity that's coming on to the land, and then they're suing us, if something happens?" Individuals expressed similar frustration with hikers wandering through their backyards and cultural sites.

> Our bylaws date back to 1819, so we really try to make sure everybody adheres to it… the property our acequia runs through now, besides the private properties…a good part of it's owned by the Bernalillo County Open Space. So, we work real closely with them making sure that… not only are they not stepping on our bylaws, but also the visitors that visit there also adhere to our bylaws and respect the land… - Land grant heir

Grantees lost thousands of acres of land but maintained control of their acequias. The acequias are a cultural stronghold on the land and protecting them cultivates community connection and asserts the priority right of traditional land use in the study area. Land grant community members and affiliates underscore the power of acequia ownership and water rights throughout interviews. Multiple participants asked if I knew the land grant held water rights, and in a discussion about development or environmental policies disrupting traditional use and land grant autonomy one individual declared, "we own the water rights in our land grant, which is better than gold." The tone implied that a water right was a power to be wielded to protect remaining community assets and combat overstepping outsiders. There are two main acequia systems in the Carnue land grant, the Canon de Carnue ditch system in the village of Carnuel and the Acequia Madre de San Antonio ditch systemin in the village of San Antonio de Padua. Grantees explain that the water source for both have dried up due to drought, upstream water diversions, and private well drilling in housing subdivisions, but they remain optimistic about the waters return. An interviewee said, "our *acequias* went dry probably about seven, eight years ago. With the amount of people that are up there now and [they have] their wells dug, it definitely drained or lowered the water table…I don't know if those waters will come back in my lifetime. But I'm hoping they do at some point". A second

participant reiterates the cautious optimism, “God willing, water will return.” In the meantime, they work to keep the *acequia* and the area around it clean and clear of obstructions.

The *acequias* eventually leave the land grant boundary and run through land managed by Bernalillo County and a collection of private properties. The acequia commissioners, Mayordomo, and *parciantes* stay in communication with Bernalillo County to ensure the Open Space recreators and developers respect the ditch and avoid tampering with its flows. Unfortunately, unauthorized interference with the *acequia* has soured the land grant community’s relationship with the county in the past. While grantees appreciate supportive relationships with specific county employees, many argue that Bernalillo County has also been inconsistent in itsmanagement of activities that threaten the health of the acequia. Land grant community members recognize that the acequia operates within a shared landscape, and so the county and other land managers in the study area share responsibility for its upkeep. Interviewees inside and outside of the land grant don’t expect a policy resolution for this. Instead, all parties call for communication and mutual understanding. One interviewee explains, “We don't have a keen interest in making policy changes. So much as we try to stay in contact, to the extent necessary to remind government entities, business entities, that the *acequia madre de San Antonio*, the system that emanates from the springs in the Ojo Grande subdivision is a political subdivision of the state of New Mexico. You can't just stop the ditch, you can't use it without approaching the acequia Association officers...”.

Transplants to the area generally comply with the legal requirement to respect the *acequia* and enjoy a positive relationship with the *acequias* caretakers. When asked how aware non-land grant neighbors were of the system, an interviewee replied, “Our *acequia* runs through their properties, we have a three-foot easement on both sides. So, every year we would have a procession that went all the way up to the [Holy Cross Church] …the *Matachines* would process up there in a dance and…the priests would bless them, bless the stream, and come down. So, they're very familiar…we've always got along with them pretty well.” Land grant community members say that

they have been living with most of the housing around their property for decades and see the landscape as already fairly developed. Increased development is not a major concern, but one interviewee projected that, “regional demand on water” will be a “potential issue for water from our system.”

Grantees and community members speak confidently about the legal standing of the *acequias* and their water rights and as a result speak confidently about their control of the landscape and authority of their use in conversations concerning water or areas near the ditch. The labor and volunteer hours required to keep the *acequias* clean is difficult to manage, but anxieties over land loss and cultural erasure abate in discussing the meaning and management of water resources and the ditch system. In this context, interviewees concerns turn to ecological threats to wildlife and invasive species encroachment. The lack of water in the study area has a visible affect on the birds, coyotes and mountain lions that community members have observed for years. An interviewee recalls observing birds and deer circling dry areas, “they’re just looking for the water, there’s no water”. The same interviewee then turns their frustration to the county for not doing enough to protect wildlife in the area - further demonstrating the tenuous relationship heirs have with the county. “we don't have any, there's no control over what happens to the water once it exits a boundary. And so the village people, I mean, we've had them come to the meetings and say, hey, you know, I used to have water running through my, you know, along my property, it's not there anymore, what's happened.”

The spatial reformation of the study area produced a dynamic landscape where relationships are constantly shifting, and environmental problems have many layers of complexity. Even with the complexity, however, the land grant maintains a strong footing thanks to their water rights and the cultural foundation of the acequia. In detailing the grassroots activism of community members to protect the acequia an interviewee said, “the culture and tradition of our villages to be a quiet little village. That's all we wanted.”

La Querencia and pathways to self-determination

Codes in this theme are self-determination, land ethic, community, protection, culture, and development. Individuals linked to the land grant expressed their own goals for their community and non-grant environmental managers shared their thoughts on the ability for grantees to maintain community and land connectivity. Two interviewees directly referenced *la querencia* and the term itself is represented in yellow on the Cañón de Carnué Land Grant seal. The landscape changes in the region transformed how land grant heirs could exist on the land and how *querencia* is practiced. Today, grantees suggest this means youth empowerment, growing the community, and healing from historic harms. Interviewees describe diverse methods to achieve self-determination following decades of dispossession, but ultimately agree on a want for the grant to sustain itself economically and strengthen cultural traditions. When asked what successful environmental management and stewardship looks like in the study area most participants looked inward at their own communities – this included land grant heirs, affiliated community members, and environmental managers who lived in the study area. This theme highlights community goals and values and identifies cultural and structural shifts in progress. It also underscores why traditional land use is critical for the longevity of the Carnue land grant.

> they're not just important symbolically, like, no, they're deeply and truly important. You know, once you unplug people from their traditional uses from the access, then, you know, it leads to cultural demise, it kills a culture, you know, generational poverty happened in New Mexico, the root of it, you can very much [say] it was that loss, that displaced people, you have out migration, you have, dependency…migration was gonna have to happen anyway…but imagine if these communities could have retained a land base. – Land grant heir

Land grant heirs seek to reclaim the community sustainability they lost due to the enclosure of their commons and the subsequent development of their historical territory. This pathway to self-determination ideally leads to unimpeded cultural and traditional land use practices community wide. In pursuing agency over their remaining land, heirs also pursue a return to exist quietly in the isolated Canyon. One heir states their long-term goals and short-term goals in conversation, “our goal is to

try to acquire the lands that were originally granted…the area that we have is now substantially smaller than [what was] granted….” They then describe that their goal for right now is to, “maintain [the remaining common areas of the grant] as a clean area for use by the heirs”.

Carnue land grant is one of the few land grants that receive an annual income and so heirs leverage these funds for economic development initiatives. They constructed the Rock Canyon Taproom and a land grant meeting hall to serve as a community gathering spot and rental space. The grant also rents land to billboards and is working to build an RV park to diversify revenue streams. One interviewee explains that the grant doesn’t want to grow exponentially, but they hope these projects bring economic stability so the grant can remain resilient and avoid further land loss. Fortifying the remaining land base is a group effort and individually heirs strive to hold on to what remains. A study participant discusses how they will not be compelled to sell their land, referencing historical land acquisition tactics steeped in environmental racism, “I’m not my grandpa, I speak English, and I will not sell my land.” They follow by saying other community members won’t either. Balancing growth and protection is not easy and some grantees warn that an overly defensive stance may stifle the grants ability progress, “I wish we could have some forward progress not in change so much as the mentality sometimes of the village…it's very protective. But not always to the good. And I think that is only…going to happen with time and with generational change”.

Points of conflict and possibility

The uneven power distribution between land grant community members and state and county agency contribute to conflicts about the appropriate land use for a space and how collaboration should occur. This category reviews those points of conflict, how those conflicts are defined by interviewees, and the connection these conflicts have to future possibilities on the landscape. There is a consensus that the landscape is shared, and that the patchwork of ownership requires that everyone work together to achieve mutually beneficial goals, but this complexity develops into a major barrier

when various parties do not agree on how or why the environmental planning process is unfolding. Interview results illuminated narrative struggles where the stories participants told contradicted each other and identified the structural hurdles collaborators were fighting to overcome. Many of these narratives stem from the spatial reformation of the landscape and the constraints history has placed on actors in the study area. Interviewees express frustration with the process and each other, but also remark on how policy decisions made decades before and external forces undermine their genuine efforts to maintain flexibility and cooperatively steward the study area.

Narrative struggle

Two key narrative constructions frame the several points of struggle that persist throughout the interview results. For Carnue land grant, they are informing environmental planning and stewardship on their ancestral lands. The history of that land is present in all that they do, and grantees have a responsibility to maintain that ancestral and cultural connection. These connections are inextricably linked to their survival as a community. Federal and County agencies in the area generally appreciate this position but are interested first and foremost in balancing the multiple use needs of everyone. The environmental management framework governing Open Space and Wilderness emphasizes equal access to public lands for all as law and regulations allow. The nuances of historical obligation and the agency of land grants is not upfront in their mission. Therefore, individuals enter partnerships where one group is encouraged to govern from a placeless orientation – a landscape with no past – and another group is starting from a deeply rooted place where the past is always in motion with the present. Understanding this struggle may lead to overcoming the conflicts it causes and provides opportunity to imagine new modes of collaboration and environmental management. Codes in this theme are: conflict, land use, narrative struggle, barriers, and difference.

"you're gonna have to deal with us, we're gonna have to deal with you" – Community member

This leading quote reads as tongue-in-cheek but presents a truth about the nature of this problem. Many narratives and alternative narratives exist in the world without consequence. Conflict can arise when two seemingly incompatible narratives meet and a struggle for dominance characterizes the landscape the narratives exist within. History shows that often the narrative utilized by the powerful is the winner, but in the case of the Sandia Wilderness and the surrounding area, the dominant narrative exists with the less dominant narrative alternative. The dominant group – state backed government agencies – cedes some of its power to accommodate collaboration. As a result, everyone must deal with each other in all the complexity that this collaboration requires.

Interview results show that Carnué land grant's goal is not necessarily retaining a number of specific land uses on a list in their former common lands. Likewise, heirs do not express a want to remove second-wave settlers from the area. Instead, land grant community members express wanting access. For example, one individual explains, "We've been working…to get the Forest Service and these land managers…to take into consideration traditional uses that people have. So not only [can we] get back grazing because…we're not sure how many people would necessarily be interested in grazing goats and sheep again...but to make sure that their traditional uses… their access to religious pilgrimage and spiritual sites is still there". This quote demonstrates how the community acknowledges the spatial changes to the area and how this has affected their land use. Grazing the forestlands are no longer as important as they were historically, but free access remains central to land grant needs. To an extent, non-land grant partners get this: "they've been super great, and also really good advocates for their land and preserving the culture and the history of it and teaching people about that. And I think that's, that's really important".

Institutional constraints and the limits of collaboration

Despite conflict and difficulty, most interviewees celebrate the progress that all parties have made together. Most dramatically, the relationship between the land

grant and the Forest Service has improved. Individuals commended the efforts of employees and volunteers to produce the 2021 Cibola National Forest Plan and recalled fond memories of educational tours and conversations that have guided efficient collaboration. Additionally, federal and county agency affiliated participants recognize a positive shift in environmental planning culture that facilitates partnership and strives for flexibility. In this context, communication issues and disagreements over who and what land is primarily for are frustrating barriers, but not completely insurmountable in the long run. The ultimate limiting factors on successful collaboration and land grant self-determination are the institutional rigidity that individuals have little control of. The U.S. government (state power) dictates what is possible for the Forest Service and the County, and the agencies consequently place those limitations and priorities on the landscape they govern. The narratives the land grant community and agency employees enlist are hybridized locally to local collaborative management and communication, but the state maintains final control over structural change and policy implementation. This theme details institutional constrains critical to limiting the ability of Carnue land grant to shape the environmental planning process. Codes used are: state law and policy, barriers, and collaboration.

> Traditionally we have really focused on, you know, what we're required to do by law. – Environmental Manager

Today, federal and county agency staff and their affiliated groups continue to work with the requirements of state law and policy, but also look for opportunities to be flexible and do more than the law requires to keep a positive and productive relationship with land grants and tribal nations. Land grant community members remark that this is a dramatic shift for the Forest Service in particular, “we're not back where we were in the 1980s, where…the whole [1985 Forest Plan] planning process in the 80s is kind of mysterious, because…Wilderness Areas are created here…and the land grants did react. And so in that planning process, you see them sending protest letters, and so on, and the Forest Service heard nothing. So, this [2021 Forest Plan] planning process has been much better”. The interviewee mentions the impact

of the 1964 Wilderness Act which created Wilderness Areas in the Sandia Mountains which restricted activities like grazing and mechanical wood cutting (USDA Forest Service) which presents a strong example of the narrative struggle underlying partnership in the area. According to the Forest Service website, Wilderness areas, "help the environment and the economy" and "preserve and protect the natural ecosystems and wild areas and provided opportunities for solitude and retrospective primitive recreation." An interviewee explains, "legally…that affects our ability to work with them to meet the needs that they have, because of the constraints of the laws". Legally, Wilderness Areas cannot accommodate Carnue land grants free access for ancestral land use. To reduce conflict, interviewees working locally attempt to broaden – but not subvert – what wilderness can be for traditional communities while meeting the management requirements of the Wilderness Act. But a positive relationship with supportive partnering employees does not eliminate the fact that traditional land is restricted at the federal level. One interviewee is not fully convinced of the longevity of these relationships, "I have no doubt in my mind that it could definitely revert and go back to the Forest Service not listening to the local community."

As mentioned before, most land grant community members have no meaningful interaction with the forest service and instead focus most of their environmental stewardship and management on land grant land, spots of spiritual or historical significance, and the areas the acequias pass through. In this context, land grant heirs and community members lean on the fact that in 2004 land grants were formally recognized as political subdivisions of the state. Grantees have used this status to ensure their inclusion in the Environmental planning process and assert their autonomy on the landscape. Because of this status, neighboring agencies and organizations are required to distinguish Carnue land grant from the general public in their engagement. Multiple interviewees called this cooperative agency status a "government to government" relationship where "They cannot govern us. We can't govern them." This status helps the grant satisfy its protective pathway to self-determination but does not legally bound agency partners to consult with or incorporate the needs of the grant on non-grant lands. In this way, political

subdivision status provides limited power to force traditional use and access where it is not permitted. Interviewees recognize this and cautiously point out that legal processes for Pueblos and other Tribal Nations is different. One interviewee explains, “we can be a cooperating, they're considered a cooperating agency, because they're a government entity…that's different than the requirement to consult with a Pueblo…there's a difference there” they continue, “I'm required by law to consult under certain circumstances, you know, there is a, there's a trigger point that requires me to engage”. In what appeared to be a general effort to not overstep, interviewees occasionally referenced their *genízaro* identity and deep roots in the area. One participant said, “we are not immigrants”, but also focused on discussing their Hispanic ancestry as what tied them to the land. Participants did not claim that the land grant was a tribal nation, but did consider their long history in the region cause for elevated legal standing. For now, cooperation has yielded positive results and allowed all parties to govern their land according to their values, but as free access remains important to Carnue self-determination this legal standing constrains that possibility. One interviewee explains that legal requirements are the minimum standard, and they try to think about what is the right thing to do to foster a just and productive partnership, “[I ask] why am I not required to [consult with land grants]? I should. And, I want to, because I think it's the right thing to do for the management of the land.” Once again, the interim solution to gaps or inadequacies in policy is flexibility and communication, a participant explains, “a round table concept where everybody comes to the table and it's not just about I have to consult with you, because that's what the law says. And I have to do this with you because that's what the law says. It's really about everyone coming together and having a shared conversation”. The human element has been effective for some but flawed in the long term, one participant shares, “that's why we're trying to get this codified, because so far, we've made a lot of progress, but it's a lot of personal one to one relationship. And with the constant change in in management and managers…people go on details, they're gone for four months, your project hits the wall, you wait for them to come back, things have changed. So, you know, it's a lot of feels like one step forward, two

steps back. So this really [does] need to be codified, it has to be in the law has to be in federal statute, to ensure that this conversation keeps going."

Shared needs and the long-term view

The closing category focuses on interview participants reflections on their own needs for effective participation in the collaborative environmental planning process and what the future of the region looks like. Individuals approached these ideas with both skepticism and hope and nearly all interviewed described the future as positive if specific needs were met. Many of these thoughts were shared as the interview concluded and participants were asked to share final thoughts and reflections. This category details actions and resources needed to secure a better future for Carnué land grant and the collective environmental planning process in the region. It also chards what is possible in the short and long-term and how community members will define this period of land management in the study area.

A collective wish for capacity

Institutional constrains created barriers to mutually beneficial collaboration and even stirred conflict in relationships, but individuals affiliated with the land grant and federal or county agencies directly named lack of resources and capacity as a governance problem in the region. This lack of resources and capacity negatively impacted the collaborative process, but the need for capacity also manifests in internal struggles. Interviewees lamented the lack of time, training, staff, and money to resolve problems thus exacerbating challenges various parties experienced. Without capacity, the land grant struggles to participate in the professionalized environmental planning process, establish clear communication and support amongst heirs participating in grassroots stewardship, and contributes to the continued threats to land loss and self-determination on the land. For federal and county employees, their relatively small teams have difficulty reaching all the potential partners in the study area, staying educated on land grant needs and implementing collaboratively developed projects. The need for capacity building details an urgent problem that all

parties have little resources to overcome. While study participants have hope for the future the need for capacity threatens to constrain that future and exacerbates environmental and social problems. The magnitude of the problem is great, and the lack of resources puts resolving it further out of reach. Codes used are: capacity, resources, collaboration, future possibilities.

> I think my frustration is, I see something that has so many possibilities and opportunities to help and help the village help the environment. And I don't feel like it's visible to us. And I don't think it's being acted upon. So any funds or education or training that could happen, would definitely benefit the land grant – Land grant heir

Interviewees fight to maintain Carñue as a quiet and isolated land grant, but at times they feel too isolated. With land grant community members perhaps occupied with communicating back and forth with federal and county agency staff to protect the grants remaining land and to reclaim land access other individuals not in those roles feel left out of the loop. Additionally, one participant argues that not all land grant community members have the "education" or skillset to understand and address local environmental and economic problems. Not having streamlined communication within the grant, one participant shrugs, "we don't even have a newsletter" or a member base caught up with causes the grant is working to organize around is a major blow to the grant's overall capacity. Because of this lack, an interviewee said, "I really feel like sometimes things fall through the cracks". Even taking on economic opportunities that may aid in the grantees self-determination on their land becomes a difficult task, an interviewee explains discussing potential cell tower construction on land grant land, "we definitely do not have the resources to address those [opportunities] in an educated way". Interviewees emphatically agreed that no one person was to blame. Instead, they named the rural state of the grant, the lack of paid professional staff, and the complexity of navigating the patchwork of land ownership in the Sandias. All were strains on the existing resources and collective efforts of the grant.

A few interviewees mentioned their disappointment in the general communication and resources they receive as heirs outside of formal leadership positions with the grant but remain committed to grassroots stewardship of their land even if those practices are not directly engaging government institutions, “I really do feel like we're definitely trying to protect the small area that we have. And…keep it from just becoming a dump site because we do have issues with that”. A non-grant community member also points to grassroots stewardship. Non-lant grant interviewees were likewise committed to supporting local actions to keep the under-resourced patchwork clean for community use, “I think there's a lot of people like me out here who do just take personal ownership, in addition to like, more organized like cleanup days and things but, you know, if all goes … to help preserve the land, people show up in in great numbers, because it's something you know, that we really value. It's like that's why we live out here. Because we really value what this land holds”.

In the professionalized space of environmental land management, interviewees spoke favorably of communication with the Forest Service, and while communication breakdowns with Bernalillo County have happened and are resented, interviewees do acknowledge a genuine effort on both sides. However, interviewees still lamented the lack of capacity. Participants interpreted this lack as not enough time to engage, the inequity of relying on community volunteers to participate in the public planning process, and inadequate resources to address the magnitude of environmental and social problems affecting the region. One interviewee explained that they did not attend meetings and planning sessions in the formal environmental planning space, “it’s tough for any of us working every day to become involved. You know unless there’s a threat of blood flowing. It’s tough to take time off.” Other interviewees echoed this sentiment complaining of inaccessible mid-day meetings and personal constrains on their time. This is an issue for regional environmental planning because of environmental problems cross boundaries. One interviewee spoke of the need to have wide participation in all forms of environmental stewardship when managing wildlife crossings in the study area, “if I don't get buy in from the community members, the project will fail 100%, because people's backyards back up on to the creek, and what they do with their backyards will make or break the ability for

wildlife to feel comfortable enough to cross and pass by". Additionally, if community members are not participating due to lack of capacity they are not able to inform what policies are being produced to govern the landscape.

One interviewee spoke generally of missing key participants at the metaphorical table of collaboration, "we don't have the capacity to create the table and manage the table. And I think that's a big challenge, too." This framing of the problem speaks to the limited power individuals feel even working within a powerful state backed institution due to lack of resources. Carnue land grant sat at the table during the forest planning process and their participation informed the language and priorities in the 2021 Cibola National Forest Plan. But due to the lack of staff capacity and financial resources to address the magnitude of issues in the region, multiple interviewees were skeptical of the meaningful changes the plan could initiate. One interviewee said, "I suggest [that the] new plan is aspirational…it lacks the ability to be implemented. Which is sad. And it's not just us, it's all over." The interviewee sent no ire to individuals, but instead expressed frustration at the impossibility of transforming a powerful and ridged governance structure. It is apparent that locally, individuals attached to powerful state institutions are allocated little power and resources to navigate or restructure the path laid before them. They may receive the capacity to meet legal requirements through their mission but are constrained if they attempt to fulfill more expansive site-specific needs. An interviewee continues listing the Forest Service's implementation constraints, "there's no funding or even mechanisms".

Hope looks to the future

Study participants work to shape the regional landscape into a space able to accommodate their stewardship and community goals. The narratives interviewees use in that shaping reflect back the complexity and rigidity found in the environmental planning process itself. For all individuals, their work – in its many forms – contributes to realizing a better future where everyone's needs are in reach and the opportunity for land grant political marginalization is diminished. Participants are not starry eyed about this possibility and refer to their hopes for the future as

dreams or faint possibilities. But understanding hope and future projections is important identifying where study participants connect on shared values and the path forward to improved relationships amongst users and collaborators. Statements coded "future possibilities" form this theme and the following highlighted quotes showcase distinct narratives that inform the future of Carnue land grant and the surrounding area.

> How do we meet economic development needs, health and welfare needs, and also live well and be environmental stewards? …I don't see it really, as a problem. I see it just as a multifaceted challenge that is definitely worthy of dealing with…[if] people that want to do the work – Community Member

Local environmental stewardship and intentional collaborative environmental planning are connected to the health and well being of the people and wildlife in the Carñue land grant and the surrounding area. Individuals have hit significant institutional barriers to maintaining this necessary connectivity but seek to address the challenge through controllable means like individual relationships, communication, and partnership A second interviewee stated, "predict that it could be still a good future, if you have the right people. And I think we could still have a good future. If people try to work together".

Internally, the land grant community is concentrating energy into community building and long-term youth empowerment. One interviewee intimately feels this responsibility, "my past generations did what they did to see that I have a future here, it's my job now to do what I can to positively make this so that the future generations will… have this." Another explains what future capacity building measures could look like if the grant generates more revenue from the economic development projects underway, "…possibly hiring a professional staff and …if they [the Board of Trustees] use it on administrative costs, then that's going to free them up from some of those little day to day things they typically take care of. And I can see land grants, be able to be more engaged, having the time to be more informed and dealing with these federal land managers".

Overall, the diverse participants with their own needs and land use goals agree that a holistic approach is best to protect the environment. Study participants share the value of ecosystem care and protection. A participant explains, “For me, it all ties together…it's not [about] one thing…just conserving land and water…it's about how it fits into…benefiting humans, and… supporting our ecosystem, you know, just like the whole thing.”

Chapter 7: Discussion and Conclusion

Implications and significance

The narrative themes present in the interview results tell a story of environmental governance and its limitations and possibilities in the study area. How study participants use narrative identifies the main challenges and concerns complicating the environmental planning process and identifies the reality of environmental policy creation and implementation on the landscape. The Carnué land grant community has refused to fade away and the collective strength and consistency of the narratives they enlisted pressure federal and county agencies to incorporate their needs into collaborative decision-making and planning processes. Where possible, grantees and affiliated community members leverage the authority of their water rights and legal status to move land use decisions to their benefit. Still, federal and state policies and historic dispossession undermine the authentic inclusion of land grant community members in the formal environmental planning process. Meaningful relationships and cooperative stewardship with local level managers and leaders is not enough to reorganize state institutions constructed for purposes at odds with land grant goals and lifeways. Additionally, interview results imply that institutional power and therefore capacity and resources, are not concentrated with local managers which produces plans of action with ephemeral outcomes for grantees. The promise of long-term change through collaboration and favorable outcomes for land grant self-determination outside of their current land appears to be a symbolic in this context. This misalignment between encouraging local intent and state constraining outcomes exacerbates conflict, environmental problems, and forces Carnué land grant to maintain an outwardly protective stance. Many grantees see the protective stance as unremarkable, but some community members suggest it stifles the growth and vitality of Carnué. What unfolds locally on current land grant acreage is exceedingly

important to grantees and maintaining cultural traditions and investing in youth empowerment are critical to Carnué's sustainability.

Reconciling historical and interview narratives

Much of the land grant literature focuses on the historical formation of land grants and land use conflicts in the 80s and 90s. Interview results clarified how Carnué operates on the landscape today and provides details on contemporary land use values and goals. For example, the literature focuses on the importance of grazing and wood collection to land grant culture and community sustainability. In interviews, participants discussed those uses, but emphasized that open access to the land for cultural and traditional use – agency in the landscape – was the true goal. These findings are significant because they distinguish Carnué and the study area from other locations in New Mexico with their own land use struggles and outline the weak points of collaboration that land managers must address to reach the future hopes for the inhabitants of the shared landscape.

In fact, the repeating appearance of grazing and wood cutting as a primary land use for land grant subsistence and self-determination in historical and interview analysis indicates a limitation in Carnué's contemporary narrative permeation. The several narratives that Carnué uses in the collaborative management process with federal and county staff don't necessarily articulate a collective vision that will produce policy outcomes that reshape the environmental planning process in the study area to grantees benefit. Carnué's heirs use narratives that draw from landscape memory, protection, water rights, and their legal status as a subdivision of the state to affect management and local stewardship, but these narratives focus on the grants remaining acreage. The layered complexity of the study area: competing management interests within and outside of the grant, lack of resources and capacity, and strictly defined land use laws and policies like the Wilderness Act have perhaps convoluted a clear and detailed message about how heirs can benefit from the collaborative management process beyond protection and what off grant actions are necessary to strengthen land

grant self-determination. And importantly, not all grantees are immediately interested in extending their already limited capacity to increased planning efforts with the Forest Service and Bernalillo County. Even so, grantees and community participants consistently express that open control and access to their former land is a serious goal, but without an outline of what this means the grazing and wood collection narrative – with its relative simplicity and regional familiarity – takes hold and informs how managers understand what is possible for land grant/agency planning.

According to interviewees and new collaborative planning documents like the 2021 Forest Plan, now is the time where the relationships between land grants and federal and county agencies are more positive and generative than they have ever been. This creates an encouraging foundation for collaboration and an opportunity for heirs outline their specific interest in open access to forestlands in the study area in a way that supports skeptical community members and is legible to area managers. Likewise, federal and county managers should understand that grazing and wood collection narratives are overrepresented and that wishes for increased collaboration and communication are tools that improve relationships and not necessarily final stewardship solutions. Future possibilities will remain abstract and inconsistent if actors in the space remain misaligned in their intentions and needs – even if the misalignment is peaceful for now. And due to the uneven power distribution amongst actors in the study area, collaboration and communication led by agencies may take hold as the primary goal and outcome for environmental management. To reach a state that goes beyond simply maintaining positive relationships, Carnué may choose to clarify their desired environmental management shaping narrative and strategically work to ensure it permeates texts and ongoing stewardship discussions. This broadens the baseline protective stance heirs tend to maintain and requires that federal and county managers in the area respond to directly to land grant needs instead of generally acknowledging their history and attachment to the land through collaboration and communication.

Recommendations

This study did not focus on a specific method of land use, planning document, or environmental problem. This broad lens provides a foundation of understanding of contemporary relationships to land and land use in the study region which is useful for addressing structural barriers and enabling effective and respectful cooperative management. However, this wide perspective cannot address all the intricacies of local land management and the power dynamics animated within. Building off this work, the nuances of power and policy could be explored in more detail to offer precise critique or policy recommendations. Future work may benefit from centering specific narrative concerns such as the Cibola National Forest Plan implementation process, the ongoing impacts of drought and drying on the *acequia* and *acequia* management, or an analysis of youth empowerment on the land grant. These are all prime topics for further study. Additionally, this research acknowledges that the creation of Carnué land grant necessitated the dispossession of Indigenous nations and lifeways but does not offer a deep analysis of the subject. Further research in the study area should engage Pueblos and Tribal communities. The resulting research could contribute to discussions about *genízaro* identity.

Cited texts and interviews recall *la querencia*, a land ethic grounded in reciprocal relationship to environment, community, and culture. The limited, but reoccurring appearance of the term suggest a lasting narrative with the potential to help develop the clarity of Carnué's environmental management narrative and supports building a coalition with neighboring Pueblo and Tribal Nations who maintain a similar relationship to land in their stewardship practices. Coalitions build power through numbers and may force flexibility into rigid laws and policies enabling a more equitable collaborative planning process. Additionally, fostering coalition building through *la querencia* may be a restorative method to address displacement and violence initiated by the Spanish Crown and its proxies against native people. The *genízaro* origins of Carnué complicate but don't eliminate the need to grapple with the land grant role in the dispossession of nomadic tribal members. The shared value in *la querencia* could provide a path forward.

Finally, the land grant literature in New Mexico includes heavy analysis of land grant relationship to the Forest Service. Narratives of direct-action protest and conflict are prevalent and seep into the popular understanding of what land grants value and how they operate. For Carnué, the historical relationship with the Forest Service has been important, but recently most of their active struggle is with Bernalillo County. An examination of why Forest Service related narratives are overwhelmingly dominant today and updating the literature on contemporary land grant narratives could contribute to a more nuanced view of land grant self-determination and need across the state.

References Cited

Agriculture, U. S. D. o. 2019. Cibola National Forest Draft Land Management Plan - Draft Environmental Impact Statement 469.

Archibald, R. 1976. Cañon de Carnuè: Settlement of a Grant. *New Mexico Historical Review* 51 (4):17.

Arellano, J. E. 1997. La Querencia: La Raza Bioregionalism *New Mexico Historical Review* 72 (1):31-37.

Bacon, J. M. 2019. Settler colonialism as eco-social structure and the production of colonial ecological violence. *Environmental Sociology* 5 (1):59-69.

Benjaminsen, T. A. 2015. Political Ecologies of Environmetnal Degradation and Marginalization. In *Routledge Handbook of political ecology* ed. J. M. Gavin Bridge, Tom Perreault, 668. United Kingdom Taylor & Francis

Benson, D., A. Jordan, H. Cook, and L. Smith. 2013. Collaborative environmental governance: Are watershed partnerships swimming or are they sinking? *Land Use Policy* 30 (1):748-757.

Boelens, R., J. Hoogesteger, E. Swyngedouw, J. Vos, and P. Wester. 2016. Hydrosocial territories: a political ecology perspective. *Water International* 41 (1):1-14.

Bowden, J. J. 1969. Private Land Claims in the Southwest, Southern Methodist University

———. 1973. Spanish and Mexican land grants in the Southwest. 8 (2):467-512.

Bray, L. A. 2021. Settler colonialism and rural environmental injustice: water inequality on the Navajo Nation *Rural Sociology* 86 (3):586-610.

Caton, K., and C. A. Santos. 2007. Heritage Tourism on Route 66: Deconstructing Nostalgia. *Journal of Travel Research* 45 (4):371-386.

Correia, D. 2008a. Land grant speculation in New Mexico during the territorial period *natrual resources journal* 48 (4):924-947.

———. 2008b. Taking timber, earth, and water: The Denver and Rio Grande railroad and the struggle for New Mexico's land grants. 48 (4):949-962.

———. 2010. "Retribution will be their reward": New Mexico's Las Gorras Blancas and the fight for the Las Vegas land grant commons. *Radical History Review* (108).

Council, N. M. L. G. 2019. New Mexico Land Grant Council Annual Report 49.

County, B. 2007. Tijeras Canyon/Carnuel Plan 2007, 32.

Cronon, W. 1996. The trouble with wilderness: Or, getting back to the wrong nature. *Environmental History* 1 (1):7-28.

Damico, D. H. 2008. The Cebolleta land grant: Multicultural cooperation and contention *Natrual Resouces Journal* 48 (4):963-981.

Davis, D. K. 2005. Potential forests: degradation narratives, science, and environmental policy in protectorate Morocco, 1912-1956. *Environmental History* 10 (2):211-238.

———. 2016. *The arid lands: history, power, knowledge*: MIT Press.

———. 2017. *Resurrecting the granary of rome: environmental history and french colonial expansion in North Africa*: Ohio University Press.
Debuys, W. 1981. Fractions of justice: A legal and social history of the Las Trampas Land Grant, New Mexico *New Mexico Historical Review* 56 (1).
Dinwoodie, D. H. 1986. Hispanos, and land reform A New Deal struggle in New Mexico. *Western Historical Quarterly* 17 (3):291-323.
Division, C. o. A. P. a. R. D. O. S. 2014. Resource Management Plan for Tijeras Arroyo Biological Zone.
Eastman, C. 1991. Community land grants: The legacy *The Social Science Journal* 28 (1):101-117.
Ellis, R. N. 1975. *New Mexico Historic Documents*. Albuquerque University of New Mexico Press
Engstrand, I. W. 1978. Land grant problems in the Southwest: The Spanish and Mexican heritage. *New Mexico Historical Review* 53 (4).
Fitzsimmons, M. 1989. The matter of nature. *Antipode* 21 (2):106-120.
Glassman, J. 2006. Primitive accumulation, accumulation by dispossession, accumulation by 'extra-economic' means. *Progress in Human Geography* 30 (5):608-625.
Gomez, P. 1985. The history of adjudication of the common lands of Spanish and Mexican land grants *Natrual Resouces Journal* 25 (4):1039-1080.
Gonzales, M. 2014. The Genizaro land grant settlements of New Mexico. *Journal of the Southwest* 56 (4):583-602.
Gonzales, P. B. 2003. Struggle for Survival: The hispanic land grants of New Mexico, 1848-2001. *Agricultrual History* 77 (2):293-324.
Gorczyca, D. L. 2015. Water, bison, and horses: Natural resources and their impacts on native raids and relations in late, Spanish colonial New Mexico. *The Gettysburg Historical Journal* 14.
Griego, M. G. Y. 2008. Persistence and disintegration: New Mexico's community land grants in historical perspective *Natrual Resouces Journal* 48 (4):847-856.
Hall, G. E. 1991. San Miguel del Bado and the loss of the common lands of New Mexico community land grants *New Mexico Historical Review* 66 (4).
Harris, C. 2004. How did colonialism dispossess? Commonts from an edge of empire. *Annals of the Associan of American Geographers* 94 (1):165-182.
Harvey, D. 2003. The 'new' imperialism: accumulation by dispossession. In *The New Imperialism* 63-87: Oxford University Press.
———. 2011. The future of the commons *Radical History Review* 109:101-107.
Hassell, M. J. 1968. The people of Northern New Mexico and the National Forests 1-32: Forest Service
Hoberg, G. 2004. Science, Politics, and U.S. Forest Service Law: The Battle over the Forest Service Planning Rule *Natrual Resouces Journal* 44 (1):28.
III, S. H. N. 1970. The Sante Fe Ring: A letter to the "New York Sun". *Journal of the Southwest* 12 (3):269-288.
Jr., O. L. J. 1962. Pueblo Indian Auxiliaries in New Mexico. *New Mexico Historical Review* 37 (2):30.
Karl Marx, G. E. U. 1906. Capital: A critique of political economy: Modern Library

Kelly, A. B. 2011a. Conservation practice ad primitive accumulation. *Journal of Peasant Studies* 38 (4):683-701.
———. 2011b. Conservation practice as primitive accumulation. *Journal of Peasant Studies* 38 (4).
Knaut, A. L. 1995. *The pueblo revolt of 1680*: University of Oklahoma Press.
Kosek, J. 2006. *Understories: The political life of forests in Northern New Mexico*: Duke University Press.
Liverman, D. M., and S. Vilas. 2006. Neoliberalism and the Environment in Latin America. *Annual Review of Environment and Resources* 31 (1):327-363.
Magnaghi, R. M. 1990. Plains indians in New Mexico: The genizaro experience *Great Plains Quarterly* 10 (2):86-95.
McSweeney, C. R. a. A. M. 2008. Land grants and the U.S. Forest Service. *Natural Resources Journal* 48 (4):1039-1055.
Michael J. Gippert, V. L. D. 1996. The nature of land and resource management planning under the National Forest Management Act. *Environmental Law* 3 (149):61.
Moises Gonzales, E. R. L. 2019. *Nación Genízara: Ethnogenesis, Place, and Identity in New Mexico*. United States: University of New Mexico Press.
Moorhead, M. L. 1975. Spanish Deportation of Hostile Apaches: The Policy and the Practice *Arizona and the West* 17 (3):17.
Office, U. S. G. A. 2001. Traty of Guadalupe Hidalgo - Definition and list of community land grants in New Mexico 49.
Olsen, B. 1999. The Forest Service, water yield and community stability: Defining the contours of an agency commitment to include land grant communities in the timber management process *natrual resources journal* 39 (4):819-843.
Perelman, M. 2007. Primitive accumulation from feudalism to neolibralism *Capitalism Nature Socialism* 18 (2):44-61.
Pinchot, G. 1998. *Breaking new ground*: Island Press.
Pollini, J. 2010. Environmental degradation narratives in Madagascar: From colonial hegemonies to humanist revisionism *Geoforum* 41:711-722.
Pulido, L. 2018. Geographies of race and ethnicity II: Settler colonialism and nonnative people of color. *Progress in Human Geography* 42 (2):309-318.
Raish, C. 1995. Historic land use and grazing patterns in Northern New Mexico In *Desired future conditions for Southwestern riparian ecosystems: Bringing interests and concerns together* 18-22: United States Department of Agriculture
Service, N. M. L. C. 2008. Land Grant Committee Final Report to the Forty-Ninth Legislature First Session 88.
Service, U. F. 2022. *Sandia Ranger District* [Website]. USDA Forest Service 2022 [cited April 20 2022]. Available from https://www.fs.usda.gov/detail/cibola/home/?cid=fsbdev3_065706.
Service, U. S. F. 1985. Cibola National Forest Land and Resource Management Plan 357.
———. 2021. Cibola National Forest Land Management Plan 260.
Sevilla-Buitrago, A. 2015. Capitalis formations of enclosure: space and the extinction of the commons *Antipode* 47 (4).

Steele, A. R. 1949. The repartimiento system of native labor in colonial spanish america 1549-1601, University of New Mexico, United States.
Swyngedouw, E. 2005. Dispossessing H2O: the contested terrain of water privitization *Capitalism Nature Socialism* 16 (1):81-98.
Tijeras, V. o. 2003. Village of Tijeras comprehensive master plan
Timelines of the East Mountains. 2020. United States: East Mountain Historical Society
Tom Perreault, G. B. a. J. M. 2015. *The routledge handbook of political ecology* New York: Routledge.
Veracini, L. 2010. *Settler colonialism: A theoretical overview*. New York: Palgrave MacMillan.
Walker, P. A. 2005. Political ecology: where is the ecology. *Progress in Human Geography* 29 (1):73-82.
Walters, A. P. V. a. B. B. 1999. Against Political Ecology. *Human Ecology* 27 (1):167-179.
Wells, A. H. 1928. The Community Acequia: Its Origin and Development. *The Southwestern Historical Quarterly* 31 (3):261.
Wolfe, P. 2006. Settler colonialism and the elimination of the native. *Journal of Genocide Research* 8 (4):387-409.
Yang, E. T. a. K. W. 2012. Decolonization is not a metaphor. *Decolonization: Indigeneity, education, and society* 1 (1):1-40.