Decolonizing conservation: Incorporating Indigenous practices and Traditional knowledge into contemporary conservation practices in California

By

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Personal Statement:

Having grown up in California, I could confidently say that more Californians my age could tell you what mission they reported on for the fifth grade "mission project" than what actually happened at those missions. I think this disregard for the Indigenous history of California goes much beyond this, and it is my concern this disregard will impact – and has impacted – conservation projects. As a conservation scientist myself, I believe the idea of nature includes the humans that live on that Land and the humans that historically lived on that Land. As a white person I know it is my responsibility to be accountable for the violence inflicted and advantages taken by other white people. White privilege is more than skin deep – it is generational – although I was not the perpetrator of these crimes, I now benefit from the circumstances that these events have created. If I intend on pursuing a career in conservation, I need to make it clear my intentions are prioritizing an ecosystem's health and the people that have lived there above all else. White biologists who are not incorporating Indigenous knowledge and history into their work are doing themselves, the community living on that Land, and the Land itself a great disservice. In this thesis, I intend to deliberately capitalize specific words, such as "Land," "Traditional Knowledge," and "Tribe." This is done to respect identities, institutions, and collective rights that have been historically deemed illegitimate. I choose to capitalize Land to respect the autonomy of the environment and to emphasize humans do not own the Land. I will use the term "Indigenous," the exceptions are documents and laws that require I use the term "Indian" in order to provide the maximum amount of clarity and accessibility. I want to make it clear that I do not resonate with using that term as a non-Indigenous person, as I believe it perpetuates the lack of knowledge that colonists never cared to remedy. Despite this, I cannot rewrite history and do not wish to underscore the numerous horrors that are written into that history. I do not wish to senselessly write about genocide and re-traumatize people that live and experience the consequences of that, but my intended audience for this paper is not Indigenous people – as these groups tend to know and understand the information I am presenting – but other conservation biologists as they need to understand the impact of history. Genocide is not a random tragedy, genocide is a direct act of targeted evil and must be addressed and rectified.

Land acknowledgement statement:

I honor and acknowledge that the state of California rests on Traditional territories and ancestral Land that over 100 Indigenous Tribes have resided on and cared for. I honor and acknowledge that the University of Colorado's four campuses are on the traditional territories and ancestral homelands of the Cheyenne, Arapaho, Ute, Apache, Comanche, Kiowa, Lakota, Pueblo and Shoshone Nations. Further, I acknowledge the 48 contemporary tribal nations historically tied to the lands that comprise what is now called Colorado. I am a settler with ancestral ties to continental Europe. Historically, white settler's survival depended on the support and exploitation of Indigenous Peoples. The vast majority of settlers today struggle to acknowledge the truth of our colonial history. I continue to learn from Indigenous writers and storytellers and I

seek to live on this Land as the settler that I am, working for and with its Indigenous Peoples. I celebrate the contributions Indigenous Peoples have made to protect this Land.

Introduction:

It is very difficult to discuss the origin of capitalism and western global hegemony without a eurocentric lens and a focus on the white, western stories, as they are the perpetrators. Questions that act as the foundation for western education are the same ones that urged globalization and colonization: What is man? Where did man come from? How will man continue to develop? (Baker, 2012). National education in the United States struggles to address these questions without obliging its own colonial supremacy and ignoring the violence and genocidal consequences. It seems that in many highschools in the US, the subject "World History" is denotative to "European History."

The story of European "exploration" has been told many times, Christopher Columbus is a household name, and Thanksgiving is a national holiday. As much as a scholar can mention any subsequent violence, modern discussion of world history hinges on the actions of the western world. By placing the perpetrators as the axis, we ignore the other rich histories and societies that were developing alongside western society and persevered after the genocide and trauma western expansion incurred.

Wallerstein's world system's analysis positions the contemporary world state as deteriorating. Pushed by structures of capitalism and colonialism that have been enabled by legacies of violence justified by illegitimate science. Wallerstein has formed his analysis as a culmination of dependence theory, Marxism, and "total history" theory by the Annales school.

Guided by Wallerstein's world system analysis, this thesis will apply conflict transformation models to contemporary conservation conflicts between United States national agencies and Indigenous communities living in colonized spaces along the coastline of California. In order to achieve responsible and successful conservation, scientists should be collaborating with Indigenous communities that have direct ties to the Land in which the scientists are analyzing.

Traditional Ecological Knowledge prioritizes Indigenous knowledge, moral values, and spiritual beliefs and utilizes generational and current localized understanding of an ecosystem (Devereux, 2021). Incorporating Traditional Ecological Knowledge into conservation projects would not just respect moral, ancestral, and spiritual values, but integrate direct observations of the Land that have been passed over generations – providing scientists with an untapped data pool of predictionary factors for how that ecosystem has and will get affected by change (Devereux, 2021). This thesis aims to support the integration of Traditional Ecological Knowledge into conservation science and Land management.

Wallerstein's analysis presents a sustainability problem that has been caused by colonial intervention and is meant to be applied to any field in which these interactions have affected. Integrating Traditional Ecological Knowledge as well as conservation conflict models – such as the conservation conflict transformation model and the conservation conflict hotspot model – could be the solution for successful, sustainable, and responsible conservation.

This thesis will begin with introducing the theoretical methods that serve as the framework for the perspective of this paper. These will be followed by a brief history of how global colonization has contributed to conservation and climate science and the history of Indigenous Peoples in California. Lastly, I will provide a brief explanation of conservation conflict transformation models before analyzing modern-day case studies in California. These case studies are intended to be brief and represent the culmination of the theoretical methods and history discussed.

Theoretical Methods

I believe it is important to understand a little bit about the social theorists before implementing their social theories. Immanuel Wallerstein grew up in New York City in the 1940s, a hub for intellectual stimulation and diversity of people. For Wallerstein, New York City acted as "both a haven for refugee intellectuals and the prime vantage point for seeing the world as a whole." (Goldfrank, 2000).

Being exposed to this type of worldly diversity strongly influenced how holistic Wallerstein's future intellectual ventures would be. By adopting the Wallerstein world system's perspective, it becomes imperative to understand the historical context behind a conflict. Rather than working as a theory for the social world, Wallerstein viewed his world systems analysis as, "a protest against the way in which social scientific inquiry was structured for all of us at its inception in the middle of the nineteenth century." (Wallerstein, 2000) The analysis could be posed as a protest to the foundational theories in anthropology and life science that enable lingering discriminatory actions in the field today.

Wallerstein's PhD research compared nationalist movements in two African states: the Ivory Coast and Ghana (Wallerstein, 1964). His dissertation and continued work in Africa left him with strong impressions of the consequences of Western imperialism on the autonomy of Indigenous governance (Wallerstein, 1980). "It was a false perspective to take a unit like a 'tribe' and seek to analyze its operations," he wrote, "without reference to the fact that, in a colonial situation, the governing institutions of a 'tribe,' far from being 'sovereign,' were closely circumscribed by the laws (and customs) of a larger entity of which they were an indissociable part, the colony" (Wallerstein 2004).

Wallerstein employed methods of social and political science to translate results of historic conflicts into action against a contemporarily unjust system (Duplessis, 1998). Due to his work on institutionalized exploitation, he is remembered by fellow world system analysts as “an intrepid protagonist of human equality and an innovative and influential social scientist who led a scholarly movement to build a coherent framework for understanding the emergence and development of global capitalism” (Chase-Dunn, Smith, Manning et al, 2020).

Wallerstein was inspired by and based his own theory on dependence theory, Marxism, and the Annales school of thought. Before being able to understand his world system’s theory, Wallerstein emphasized the importance of understanding how his guiding theories interact with each other. Through Wallerstein’s perspective, these three tenets could not exist without the other. Utilizing total history informs the public on institutionalized discrimination. These institutions are fueled and enforced globally by Marxism and expressed through Dependence Theory.

Dependence Theory

Dependence theory functions in Wallerstein’s world system analysis as the primary contextualizing perspective for the different economic levels, thus different power wields, of the world’s countries. Customarily, we would see the words “developed” versus “developing,” but these words reflect the Western ideal of development – economic power. As the idea of development varies depending on the culture, it is not an accurate term. Dependence theory, developed in the late 1950s by the United Nations Economic Commission for Latin America (ECLA) works as a better alternative. It works under the assumption that contemporary social change within societies is largely impacted by the connections between a global intersocietal economic network composed of core, periphery, and semi-periphery nations (Chase-Dunn, Hall, 1991).

The core are described as powerful, industrialized nations that have a large influence on the movement of materials and may have a history of imperialism. Core nations are known for multiple industrial sectors and a greater proportion of their workforce in higher waged labor (Shapiro, 2023). Examples of contemporary core nations include the United States, Japan, and much of Western Europe (Chase-Dunn, Kawano, Brewer, 2000). Nations classified as peripheral are much less industrialized and contribute the majority of raw natural resources to world trade. Peripheral nations typically have weak State functions and a greater proportion of lower-wage or unwaged work (Shapiro, 2023). Rather than gaining access into the global market, periphery nations are limited by established trade constraints that, more often than not, direct their market to their former colonizing power (Shapiro, 2023). The Republic of Congo, Afghanistan, and Cuba would all be examples of periphery nations (Chase-Dunn, Kawano, Brewer, 2000).

The intermediate sphere between core and periphery nations are known as the semi-periphery nations. In previous world system analysis, these nations have been described as proximate to core nations, often seeking entry into core-status while avoiding decline into the periphery state, yet with no distinctive mode of production (Wallerstein, 2004). Recently, there has been a shift in perspective to defining semi-periphery nations with much more complexity. Stephen Shapiro, who prefers to use the term "zemi-peripheries," describes those regions in a sub-imperialist role, enacting policies on the periphery that the core does not engage in directly and intermingling the production processes that distinguish the core and periphery (Shapiro, 2023). For the sake of clarity and continuity with references, this thesis will use the term semi-periphery.

It is imperative to mention that these categories can exist within countries themselves, becoming periphery zones or semi-periphery zones within their nation. The core is, in nature, exploitative of both the periphery and the semi-periphery, reinforcing the legacy of power seized through colonization or imperialism. Peripheral countries, dependent on the core for capital, are stuck in an endless cycle of providing raw materials and labor. The result of these intersocietal relationships is global inequality.

Indigenous Tribes in California after colonial invasion are an example of a periphery zone within a colonized state. This exploitative relationship began with the Spanish arrival and implementation of missions up and down the coast and continued after the United States gained control of the Land and used violent force and unfair laws to extract Indigenous labor and resources. The core forces, in this case, are Spain and the United States, both influenced by access to materials and capital. The next section will cover Marxism and sustainability within capitalist systems.

Marxism

Wallerstein uses Marxism to explain the functioning relationship between core, periphery, and semi-periphery nations. A world-system constitutes that there is a large geographic zone in which internal exchange of essential goods and capital is met by a division of labor between nation states (Wallerstein, 2004). Wallerstein argues that the dominant modern world system favors capitalist nations, thus the interactions between countries are hinged on capitalist intentions and goals (Wallerstein, 2004). This automatically puts traditionally less capitalistic Tribal Nations at a disadvantage, oftentimes they are not viewed as equal to capitalist countries.

The modern world-system gives priority to the endless accumulation of capital; meaning people and firms are accumulating capital in order to just accumulate more capital (Wallerstein, 2004). If the goal is to accumulate more capital; sellers of a product want to create the widest gap possible between the costs of production and sales price, which creates the highest profit margin. With this goal, capitalist countries are either in a state of growth or – by their own definition – a state of decay. This means there is no room for sustainability in a capitalist economy.

The way to achieve maximum success in capitalist standards would be to create a monopoly, which entails maintaining complete control over selling a product thus control over its profit (Lerner, 1995). Rather than achieving a complete monopoly, it is much easier to create a quasi-monopoly, in which the seller would only need the support and machinery of a relatively strong state (Wallerstein, 2004). Quasi-monopolies can be maintained by declaring patents for new products, state restrictions on import and export, and state subsidies and tax benefits (Wallerstein, 2004). Strong states, such as the core nations, are able to absorb regulations on products that would debilitate a nation in the periphery. Along with their willingness to pay high prices, core nations use their power as quasi-monopolies to control and profit from high-value products (Wallerstein, 2004). Periphery nations are left to compete with each other in order to serve the demands of the core nations, while still absorbing the damaging production and disposal activities and major withdrawals of energy and natural resources. This is called ecologically unequal exchange (Jorgenson, 2016).

This separation of labor – as well as the power system itself – can only exist with the simultaneous presence of both universalist and anti-universalist sentiments (i.e. racism, sexism) (Wallerstein, 2004). There are many ways in which universalism can be expressed, yet generally it means the prioritization of general rules applying equally to all persons (Anttonen et al, 2012). Although this position calls for equality, universalism ignores the disparities between levels of access different individuals may have, thus ultimately justifying their own advantage or privilege (Wallerstein, 2004). Anti-universalism, the active institutional discrimination against all persons in a given identity, exists to perpetuate, enforce, and justify unequal rankings that are recognized world-wide (Wallerstein, 2004). These two principles have to co-exist to enforce the global division of labor between core states and peripheral states.

Ecologically unequal exchange highlights how high-income nations shift the burden of extracting materials and waste produced by those processes on poorer nations – especially in the agricultural, mining, and manufacturing sectors (Dorninger, 2021). These burdens can be embodied in four biophysical resources: raw materials, energy, land, and labor (Dorninger, 2021). An example to illustrate unequal exchange could be Tanzanian resources becoming open to foreign investment in the late 1900s following structural reforms led by the International Monetary Fund and the World Bank. Despite gaining political independence from Britain in 1961, Tanzania remained economically dependent and heavily relied on the British and a few Western partners (Frame, 2014). This neo-colonized state is what laid the foundation for Tanzania's 1998 mineral code reform. This reform led to allowing 100 per cent foreign ownership over mineral resource trade, unrestricted repatriation of profits and capital, and excessive tax concessions (Frame, 2014). This grossly devalued the precious minerals Tanzania possesses while promoting Land dispossession, degradation to the environment, and loss of access to shared resources (Frame, 2014). Mineral extraction is an extremely wasteful process;

the soil and rocks removed through the process are infertile due to the accumulation of lead and mercury (Frame, 2014). Allowing foreign companies to have this much power over the mining industry promoted offshore tax evasion while crippling Tanzania's economic development (Frame, 2014).

Although a comparison could be made between unequal exchange and plunder, as they both involve moving capital from politically weak states to politically strong states, plunder differs from unequal exchange as it irreparably damages the weaker region's production systems (Wallerstein, 2004). The core nations do not want to cause irreparable damage to the peripheral countries if there is more profit that can be extorted – instead the peripheral countries are slowly bled out and kept weak in order to be used again. This relationship expresses the paradoxic coexistence between universalist and anti-universalist sentiments.

Total History by the Annales School

Lastly, Wallerstein gravely placed importance on understanding history. Without learning the appropriate history behind a situation, many of the nuances will be missed and justice will be lost. This is why Wallerstein references the Annales School as a founding pillar of his own theory.

The Annales School was founded in a French journal titled "Annales d'histoire économique et sociale" published in 1929 by Marc Bloch and Lucien Febvre (Burke, 1990). The school emerged out of a protest against the empiricist nature of traditional French historiography – which was very political and event-based (Wallerstein, 2004). Bloch and Febvre argued that a "total history" would prioritize the economic and social underpinnings – especially those that are systematic – while examining historical development.

French historian Fernand Braudel started to teach the Annales School of historical thought in 1945. Braudel taught that traditional, empiricist French history blinded the public from recognizing the underlying social structures while also criticizing any social scientists' search for a timeless, eternal truth (Wallerstein, 2004). This major critique of institutional historical perspective had also raised questions about the neglected histories of many oppressed groups; including women, Indigenous peoples, and groups with non-hetero sexual dispositions or practices.

By utilizing total history and the focus on neglected histories, conservationists and land managers can make responsible decisions regarding the Land itself. For many years, California has neglected its Indigenous history and thus negatively impacted the environment and long term sustainability of the state.

Contextualizing western science: foundational theories

Social Darwinism has been used as a quasi-biological explanation for an organicist fallacy to explain and measure social evolution, racial distinctions, and national development. The theory of Social Darwinism operates on the assumptions that the pressure of population growth and depleting resources generates a struggle for existence, biological laws – such as survival of the fittest – control every aspect of organic life, stronger physical and mental traits spread in a population through inheritance, and that subsequent inheritance leads to the success of some populations and the elimination of others (Darwin, 2011; Hawkins, 1997).

In the recent past, Social Darwinism was used to legitimize the eugenics movement – which was far from a fringe theory. In 1921, the journal *Science*, published the coverage of the International conference on eugenics as their cover story (Osborn, 1921). Because of the intense violence caused by the eugenics movement, which lasted until the 1940s, and the harmful stereotypes that resulted from it, special attention must be paid to the legitimacy and ethicality behind theory and what we classify as science.

Foundational theories in many of our highly famous, well respected naturalists were able to legitimize extremely racist sentiments with unfounded and unclear science. For example, Charles Darwin claimed the gap between man and ape would increase once Aboriginal people and Indigenous peoples of Africa were extinct:

“The break will then be rendered wider, for it will intervene between man in a more civilized state, as we may hope, than the Caucasian, and some ape as low as a baboon, instead of as at present between the negro or Australian and the gorilla.” Charles Darwin (Darwin, 1871).

Discriminatory sentiments masked as legitimate scientific claims, such as Social Darwinism, are a part of what justifies western expansion and colonization. Conspicuous social darwinist language has been cast away from use in contemporary anthropology. For example, the word “primitive,” which denotes a group of people at the lowest stage of an intersocietal hierarchy, no longer appears prevalent in anthropological literature. Instead, it is much more common now to read “development.” Although less obvious, the mechanism of “development” operates for the same purpose as “primitive.” Both terms reinforce that there are cultural/societal evolutionary stages, supplementing the notion that the “most developed” can always act as a model for the “less developed.”

The term “third world,” has a similar mechanistic utility as “development;” it works as a vague category of analysis to separate the “modern” from the “primitive.” In *The Sociology of the Third World: Disparity and Involvement,* written in 1975, British sociologist John Goldthorpe used the term third world to distinguish the affluent industrial countries – labeled as “The East” and “The West” – from the poor countries that are able to retain value through their rich resources (Williams, 1994). A frightening perspective is one that frames complex cultures and

societies as simply a resource for more industrial nations. This minimization and dehumanization is what enables “The West” and “The East” to take advantage of communities and inflict violence for the sake of accumulating more wealth and power.

Conservation, Colonization in the World System

Human civilization faces an enormous task of balancing reducing the ecological impacts of humans with enhancing forms of economic and social development. This issue becomes especially pertinent in periphery states, where the consequences of climate change and the damaging production practices are centralized (Amoo & Layi Fagbenie, 2020). This task is further materialized under the assumptions that were created by the popularization of social darwinism and development concepts: modeling economic and social development in peripheral states after core states will enhance the quality of life of the people living in the peripheral.

Rich, core nations put extreme pressure on the global environment by prioritizing accumulation of endless capital over the impermanence of resources, the fragility of ecosystems, and the health of the natural world (Jorgenson, 2016). The core nations’ disregard for the environment started with Western expansion, exploration, and the subsequent genocides of both Indigenous Peoples and cultures around the world. Wallerstein’s perspective frames our global environmental crises as one that core nations, global superpowers are responsible for.

Upon assessing responsibility for climate change, historical contributions must be taken into account as cumulative carbon dioxide (CO2) emissions are causing the climate events we observe today (Evans, 2021). Although there has been a rapid increase in greenhouse gas emissions since 1958, it is not unlikely that the effects we are experiencing today could be from a cumulation of emissions that started rising at the turn of the 18th century with the onset of industrial revolution (NASA 2024; US EPA, n.d.). This is because the ocean is very slow to respond to high greenhouse gas emissions, taking decades to hundreds of years to impact the climate (US EPA, n.d.). This means that the CO2 emissions from hundreds of years ago contribute to what we currently experience – and that what we emit today will affect hundreds of years into the future. An analysis from Carbon Brief analyzed emissions from 1850-2021 and found the United States has contributed around 20% to the global total. (Evans, 2021) China comes in second with 11%, then Russia with 11%, followed by Brazil with 5% of total emissions (Evans, 2021). These measurements took into account fossil fuels, cement, land use, and forestry.

It makes sense that the nations responsible for climate change should also be the ones taking the most formative steps to improving mitigation, adaptation, and resilience. These figures unequivocally put climate responsibility on core nations, but the climatic consequences are disproportionately falling on periphery countries or periphery communities within core nations. In 2011, Palau and the Marshall Islands sought an opinion on whether countries have a legal responsibility for their own emission’s impact on other nations from the United Nations court

(UN) (UN News, 2011). This gained little traction with the UN. Yet in March of 2023, this idea was revisited in a legal case brought to the UN spearheaded by the Pacific nation of Vanuatu, co-sponsored by 130 countries including Britain, France, and Germany (UN Environment Programme, 2023). Vanuatu, situated in the Pacific "Ring of Fire," had just experienced two destructive category 4 cyclones and an earthquake of 6.5 magnitude weeks prior to the legal case, impacting over 80% of the island population (UN Environment Programme, 2023). This small nation is on the frontlines of the climate crises, experiencing disastrous consequences of rising sea level, ocean acidification, and increased frequency and severity of natural disasters (UN Environment Programme, 2023). This case emphasizes that the nations on the frontlines of the climate crises are not the same ones responsible for the crises itself. The legal case demanded that the UN must ask the International Court of Justice to rule on countries' obligations to address climate change (UN Environment Programme, 2023). The International Court of Justice has yet to release a result (International Court of Justice, 2024).

In the United States, arguably the nation that carries the most responsibility for climate change, the consequences of the climate crises are being felt disproportionately by poorer neighborhoods, largely consisting of people of color (Evans, 2021; United States Government, 2023). These communities lack access to adequate flood infrastructure, green spaces, safe housing, and other resources that would help protect people from climate impact (United States Government, 2023). Exclusionary housing practices – such as historic redlining – have limited these communities' access to heat and flood reductive infrastructure and environmental amenities while these neighborhoods maintain the highest risk for both floods and heatwaves (United States Government, 2023). As safe water supplies dwindle, food systems are disrupted, infrastructure is damaged, health challenges arise, and ecosystems change as a result of climate change, the United States' most vulnerable populations will be lower income people and people of color.

Most of the Earth's environmental damage can be attributed to an exhaustion of primary resources, the true cost of infrastructure, and the consequences of waste disposal. The largest expansion consequence of all is the damage that has been done and is being done to Indigenous groups and their cultural practices around the world.

The United States' Fifth National Climate Assessment recognized Indigenous peoples as one of the highest affected groups by the climate crises (United States Government, 2023). Climate change is expected to displace millions of people in the US, which Indigenous Peoples have experienced since the nation's conception. On top of the decreased housing security and exacerbated grief and anxiety, Indigenous Peoples will be repeatedly confronted with loss of traditional resources and practices; rising temperatures and extreme natural events have shifted the ranges of Pacific salmon, wild rice, and moose (United States Government, 2023). Increased severity of natural disasters has also increased the risk of destroying burial sites or ceremonial sites.

Indigenous Peoples were among the first groups to notice climate change and many are vital advocates against the crises as they are also the first to face the direct consequences (United States Government, 2023; Climate Atlas of Canada, 2019). These initiatives begin with Traditional Ecological Knowledge and include planning and policy initiatives, youth movements, cross-community collaborative efforts, and the expansion of renewable energy (United States Government, 2023).

An Indigenous village in Alaska, Newtok, is a community especially vulnerable to the effects of climate change and subsequent severe weather events, flooding, and rising sea levels as it is situated in low-lying terrain (Ristroph, 2021). After observing decades of melting permafrost and severe erosion, in 2022, the community was forced to relocate without the funding or assistance needed to do so (Ristroph, 2021; Schwing, 2022). With outdated infrastructure, the community was having a hard time getting everyone to safety – and in 2022, there were still 200 people stuck in Newtok after a severe storm (Schwing, 2022).

By eliminating not just the communities themselves, but the access to proper Land, the ability to practice language, and the Indigenous perspective on Land usage, core nations are disregarding an extremely important ally in the fight against environmental degradation. In order to start repairing this historic tragedy, scientists and policy makers need to advocate for the Indigenous Peoples to gain both Land sovereignty and a major voice in conservation decisions.

History of Indigenous Tribes living in the state of California

Before the European invasion, there were over 100 Tribes residing in California, all with distinct cultures and languages. In all of North America, California has always been the home of the largest number of different Indigenous Tribes and cultures (Ansari, n.d.). Although it would be impossible to cover the nuances and natures of all of these tribes, it is extremely important to acknowledge some of the cultural practices and lifestyles that existed long before the attacks of the Spanish colonists and the Mexican and United States governments.

There is still debate in the archaeological record about the peopling of this region. There is evidence suggesting that maritime culture in California dates as far back as 13,000 years ago during the Paleoindian times. The Kelp Highway theory refers to the coast of Alta California providing a roadmap for migration down the coast, providing a wide variety of marine and terrestrial resources (Braje et al, 2017). Productivity, diversity, and availability of marine and aquatic food sources vary greatly up and down the coast, which contributes to the variation of human adaptations along the coast. Variations in adaptations could also be accredited to the diversity of environmental conditions, California offering a wide variety from Redwood forests to arid deserts.

The Kelp Highway theory is supported by Phil Orr's discovery of human remains (CA-SRI-173) that established the presence of Paleoindians on the northern Channel Islands around 13,000 radiocarbon years before present (Johnson et al, 2002). Widely undisputed evidence pairs well with Orr's, such as Terry Jones' analysis of the estuarine shell midden at the Cross Creek Site (CA-SLO-1797) that dated as early as 10,200 radiocarbon years before present. (Jones et al, 2001) These discoveries imply that many Indigenous tribes that reside in California have much deeper roots than previously thought (Erlandson, 2016). This is supported further by the linguistic and cultural diversity expressed by the tribes that made home in California, this level of complexity could only have been as a result of thousands of years of development.

Tribes such as the Tolowa, Shasta, Karok, Yurok Hupa Whilikut, Chilula, Chimarike, and the Wiyot Tribes resided around rivers and coastal bays in the forested portion of Northwestern California. Many of these Tribes relied on the redwood trees as a means to build their homes, craft furniture and create dugout canoes for transportation (Castillo, 2024). In order to access these materials, redwoods were felled at the base with fire and then split with elkhorn wedges. Acorn and salmon were key food sources for Tribes living in Northwestern California. Culturally, there was a great emphasis on wealth in these Tribes verified by the private ownership of food resources (Castillo, 2024). The wealthiest men in these communities would be responsible for sponsoring the World Renewal Ceremony. Held in the largest villages, this ceremony sought to prevent future natural disasters (Castillo, 2024).

Figure 1: Map of Tribal territories before colonial contact, provided by the California Indian Library Collection.

Indigenous use of fire extended beyond access to materials, fire was employed to keep the country open, communicate, cultural practice, manage wildlife and vegetation, and enhance growth (Van Wagtendonk et al, 2018). As redwood is a fire-enhanced facultative sprouter, the

use of fire by Indigenous Peoples in Northern California reinforces the value of Traditional Ecological Knowledge and generational, localized understanding of an environment (Van Wagtendonk et al, 2018). Indigenous use of fire mirrors contemporary controlled burning, a practice that was only achievable through learning the scientific implications of biological organization and reproductive response of vegetation. In 2022, cultural burning was affirmed and protected by the California state legislature (Rivas, 2021).

These Tribes differed from their neighbors in Northeast California, such as the Modoc, Achumawi, and the Atsugewi Tribes. These Tribes experienced a vastly different environment, relying on the resources the desert provided such as root bulb, tuber berries, rabbit, and deer (Castillo, 2024). Although these communities were independent of each other, they were connected across Tribes through marriage ties and trade, wherein the access to volcanic material in the Northeast supplied obsidian as a valuable trade material (Castillo, 2024).

Many Tribes lived in the Central region of California, including the Bear River, Mattale, Lassick, Nogatl, Wintun, Yana, Yahi, Maidu, Sinkyone, Wailaki, Kato, Yuki, Pomo, Lake Miwok, Wappo, Coast Miwok, Interior Miwok, Monache, Yokuts, Costanoan, Esselen, Salinan, and the Tubatulabal Tribes. The environment differed greatly between Tribal communities, but the food sources remained similar: salmon, acorn, deer, rabbits, pronghorn, and elk were abundant throughout the region. This abundant food supply enabled these fiercely independent Tribes to establish villages of up to 1000 individuals (Castillo, 2024). The basket weaving in this region was very intricate, utilizing both twine and coiled variety of artistry (Castillo, 2024).

Central California, primarily the northern portion, was the region in which the Kuksu religion was notably practiced. The religion transcended Tribal boundaries, suggested to have started out as merely an association of Shamans, but grew to employ grand ceremonial displays of increasing complexity – many of which sought to ensure the world's natural processes (Loeb, 1926). Ceremonial dances were held in roundhouses, very large structures that expanded three to four feet into the Earth (Alvarado, 2023).

Tribes on the coastline of Southern California, such as the Chumash, Alliklik, Kitanemuk, Serrano, Gabrielino Luiseno Cahuilla, and the Kumeyaay Tribes, relied on a diversity of seafood from the ocean, bays, and wetlands. Tribes along the coast could support very large communities, with some Chumash villages exceeding 1000 individuals (Castillo, 2024). The Chumash Tribe manufactured tomols – or plank canoes – using driftwood or redwood as a fishing vessel. These boats could be anywhere from eight to thirty feet, with the typical size carrying a crew of three to four people (Santa Barbara Museum of Natural History). It was not uncommon for structures to be made from whale bone (Castillo, 2024).

In the interior of Southern California, tribes such as the Serrano, Luiseno, Cahuilla, and the Kumeyaay tribes did not have the same rich access to seafood, instead, these Tribes benefitted from an abundance of rabbit, deer, acorn, seeds, and grasses. These smaller, interior tribes engaged in clay pottery (Castillo, 2024). The practical Kumeyaay tribe have a record of making a clay vessel for one purpose, but repeatedly using it for another. For example, a cooking pot could be used to store seeds (Campbell, 2000).

The communities residing in Southern California each had a chieftain, sometimes female, who was assisted by a crier or assistant to organize events and resolve disputes (Castillo, 2024). Similar to many other Indigenous communities in California, there were classes that separated the elite from the less successful (Castillo, 2024). Throughout the region, Shaman were known and greatly respected (Castillo, 2024).

Indigenous communities in California were well established, had intricate and well-developed social systems within the Tribe and between Tribes. These communities worked with the Earth and the Land, extracting only what they needed. Once the Spanish invaded, California would never be the same. Humans that have resided in the Land for as far back as 13,000 years ago would have nearly everything stolen from them (Braje et al, 2017). This next section will document the genocide and ethnocide of the numerous Tribes that lived in California before colonization and the stark resilience displayed by the Indigenous Peoples throughout.

Under the guise of development, European settlers launched an unexpected attack on the entire Indigenous population of California, starting with the communities in Southern California, completely disregarding the rich, well developed societies that have formed for thousands of years. In 1579, Francis Drake, an English explorer spent five weeks in California living with an Indigenous tribe. Before he left, he claimed the Land for England, basing the claim on “the right of discovery” (California Parks and Recreation, 1988). Within the next 40 years, Spanish explorers would do the same thing, both countries completely disregarding the sovereignty of the Indigenous tribes.

Although there could have been immediate consequences from these European explorers in the form of disease introduction, the concentrated attack began in 1769 with the establishment of the first Spanish mission. Spanish perpetrators viewed the Indigenous Peoples as subjects of the Spanish Crown that needed to be conditioned to serve the king and the Christian God (Heizer 1978). Missions were far from religious institutions, rather they were brutal labor camps with no adequate space or nutrition created with the intention to force religious and cultural assimilation and enact cruel punishments (Forbes, 1964). The failure to provide Indigenous Peoples living in missions with native foodstuffs and familiar nutrition resulted in mass death (Popper, 2016). The Spanish viewed the Indigenous Peoples as “little more than an energy source which cost nothing to acquire or maintain,” reflecting this sentiment, the missions were built by Indigenous hands

(Banning, 1978). As the missions were established, the invaders introduced domestic agricultural animals that decimated native food. This destroyed access to food led Tribes living outside of the missions to depend on the invaders as they could no longer remain economically independent (Castillo, 2024).

Social control – of primarily Tribes on the coast – enforced by the missions was a part of the Franciscan Spaniards intentions to force submission to the crown and Christian God. One of the ways social control was maintained was through controlling and rewriting sexual relationships between Indigenous Peoples to replicate the norms defined by Catholic marriage (Jackson, 2021). Another notion of social control was creating a disciplined labor force; Indigenous Peoples in the mission system were forced to work to not just provide for themselves, but responsible for providing a surplus that went to the people working the missions (Jackson, 2021). It is important to note that Spanish control prioritized cost effectiveness, resulting in the inhumane treatment and enslavement of Indigenous Peoples.

Padre Antonio de la Concepción Horra of Mission San Miguel reported this to the viceroy in Mexico in 1799: “The treatment shown to the Indians is the most cruel I have ever read in history. For the slightest things, they receive heavy flogging, are shackled and put in the stocks, and treated with so much cruelty that they are kept whole days without water.” As punishment for this report, he was declared insane and removed from California (Heizer 1978).

There were many acts of resistance attempting to prevent the Spanish from gaining control over the California coast. Many Indigenous Peoples living in missions continued to worship their ancestral deities and perform dances and rituals in secret (Castillo, 2024). It was not uncommon for Indigenous Peoples in the mission system to view the Spanish padres as powerful witches who could only be defeated through asassination (Castillo, 2024). This led to many secret killings of the padres, such as poisonings, but also resulted in more violent forms of resistance (Castillo, 2024). In 1775, a group of Kumeyaay people organized to burn Mission San Diego to the ground after the Spaniards repeatedly engaged in numerous occasions of sexual assault (Castillo, 2024; Joan Buse, 2021). In 1785, a group of Gabrielinos inside Mission San Gabriel organized with Tribes residing in close proximity to wage an attack on the Mission. (Hackel, S) However, the corporal of the mission guard received an advanced warning and the revolutionaries were arrested and interrogated (Beebe & Senkewicz, 2007). Another form of resistance was desertion from ancestral Lands, such as in 1795 when Indigenous Peoples attempted to flee from San Francisco (Bancroft, 1963). Even non-violent resistance was not tolerated by the Spaniards, any captured escapees were to be punished (Bancroft, 1963).

Although the acts of resistance were formidable, one of the most powerful weapons that the Spanish possessed was the disease they brought with them. The Spanish have long lived as urbanized populations, keeping domestic animals that carried “the diseases of civilization,”

including smallpox, measles, mumps, and influenza – diseases that the Indigenous Peoples in California never encountered (Boyd, 1999). Many "virgin soil" epidemics – a disease spreading through a population that has never experienced it and thus do not have the immunities to fight it – broke out along the Northern Coast of the Americas. The excessive labor demands paired with very dirty living conditions enforced by the Missionaries contributed to the Indigenous population's inability to fight any virgin soil epidemic (Castillo, 2024). These included the 1770s smallpox, 1830s malaria, 1838 influenza, and 1844 dysentery outbreaks (Boyd, 1999). More often than not, children would suffer the most from these epidemics, especially with the missionary practice to separate children and house them in filthy barracks (Castillo, 2024). Sherburne F. Cook, a demographer who conducted studies on the missions, concluded 60% of the population decline of Indigenous Peoples in missions were due to introduced diseases (Castillo, 2024).

The mission system would resultantly claim the lives of around 100,000 Indigenous people, or one third of the aboriginal population of California (Castillo, 2024). Although missions disregarded the cultural and political independence between the Tribes, Indigenous Peoples persevered by maintaining separate housing while in multi-Tribal missionary built villages and speaking their own native languages (Castillo, 2024).

A tangible example for early suppression of Indigenous ecological practices could be Spanish governor José Joaquín de Arrillaga prohibiting the use of fire in 1793 (Van Wagtendonk et al, 2018). In his proclamation, he referred to the Indigenous use of fire as "childishness [that] has been unduly tolerated," and prohibited "all kinds of burning, not only in the vicinity of the towns, but in the most remote distances" (Popper, 2016). This restriction was instructed to be enforced by all means necessary.

Once Mexico gained independence from Spain, California's landscape began to shift dramatically with the secularization of the missions. This secularization intended that one half of the missions would belong to the Indigenous peoples residing there and the other half would belong to the priests and other officials (Heizer 1978). Despite this intention, Indigenous slave labor was still well taken advantage of (Castillo, 2024). In order to secure majority Mexican land ownership, large land grants were given to wealthy Mexicans – this was met with great opposition by the Indigenous Peoples. Many former fugitive mission Indigenous Peoples and interior Tribesmen would form guerilla bands to lead efforts to re-assert their sovereignty (Castillo, 2024). This opposition was absolutely not tolerated and in many cases, such as the expedition led by José Maria Amador in 1837, resulted in the mass killing of Indigenous Peoples (Heizer 1978).

Amador wrote of his party, "...invited the wild Indians and their Christian companions to come and have a feast of pinole and dried meat… the troops, the civilians, and the auxiliaries

surrounded them and tied them up… we separated 100 Christians. At every half mile or mile we put six of them on their knees to say their prayers, making them understand that they were about to die. Each one was shot with four arrows… Those who refused to die immediately were killed with spears… We baptized all the Indians (non-Christians) and afterward they were shot in the back" (Heizer 1978).

Not too long after gold was discovered in California in 1948, the Mexican-American war ended and the Treaty of Guadalupe Hidalgo was signed.(Treaty of Guadalupe Hidalgo, 1848; The Library of Congress, n.d.). Before the gold rush, the non-Indigenous population in California was a few thousands, by 1949 that population exceeded 100,000 (California Parks and Recreation, 1988). The invasion prompted by the lust for gold resulted in a period of dispossession, sexual assault, and mass murder (Castillo, 2024). The new American settlers were favored for labor over the Indigenous Peoples, simultaneously while the invaders searching for gold chased Tribes out of remote, previously safer Land for the sake of the precious mineral (Shaler, 2020). Amidst the gold rush, many dams and other human made water diversions in the Central Valley rivers prevented salmon from accessing 95% of their spawning and rearing habitat (NOAA Fisheries, 2023). Under a new colonial power, the Indigenous Peoples in California were again subjugated and left with no opportunities.

An Oustemah Nisenan woman named Betsy recalled the time in which aboriginal life was changed by the arrival of gold hunters: "A life of ease and peace was interrupted when I was a little girl by the arrival of the whitemen. Each day the population increased and the Indians feared the invaders and great consternation prevailed… as gold excitement advanced, we were moved again and again, each time in haste. Indian children… when taken into town would blacken their faces with dirt so the newcomers would not steal them" (Castillo, 2024).

As a result of colonial greed, various paramilitary death squads were established with the sole purpose to terrorize local Indigenous Tribes (Castillo, 2024). Combined with many random killings, 100,000 Indigenous Peoples were murdered by individual miners, leaving the population at a staggering 70,000 individuals (Castillo, 2024). There was little that could be done to counter such extreme violence, yet there was still strength in Indigenous resistance. In 1851, several Miwok tribes waged armed resistance against the miners that occupied their territory; one tribe destroyed a trading-post owned by an American who had captured and kept 12 Indigenous women as his "wives" (Castillo, 2024). As a result of this, a violent campaign was waged by the American settlers against the Indigenous Peoples of Yosemite (Castillo, 2024). These paramilitary campaigns against the Tribes would eventually be reimbursed by both the state and federal governments (Castillo, 2024). In 1851 and 1852, California legislature passed an authorization of $1,100,000 for suppression of Indigenous People's "hostilities" (California Parks and Recreation, 1988).

On April 22, 1850, California ruled on the Act for the Government and Protection of Indians, which was meant to facilitate the interactions between white settlers and the Indigenous Peoples living in colonized spaces – when it really just facilitated slavery, enabled separation of families, and reinforced the absence of any protection or rights for Indigenous Peoples (Johnston-Dodds, 2002). After the gold rush, there was not enough space for the new wave of settlers – especially with the Indigenous communities that had previously lived there – California's solution was to completely void the Indigenous population of any rights over Land. The 1850 act gave landowners the right to apply to the Justice of the Peace for the removal of any Indigenous Peoples residing in their lands (Johnston-Dodds, 2002). While providing the Justice of the Peace would serve as the jurisdiction over all complaints between white settlers and Indigenous Peoples, it voided every case, testimony, or complaint an Indigenous person made against a white person (Johnston-Dodds, 2002). On top of taking away any right of autonomous defense, under this act, if an Indigenous person was convicted of a crime, any white person could come and contract for the Indigenous person's service or labor and in return would pay the person's criminal fine – creating a legal slave trade (Johnston-Dodds, 2002). This act also introduced the discrimination of the Indigenous population on the basis of alcohol consumption – which contemporarily persists as an extremely harmful stereotype – preventing anyone from selling or administering alcohol to an Indigenous person (Johnston-Dodds, 2002; Covone, 2022). This was paired with a provision that if an Indigenous person was found within the vicinity of where alcohol was being sold, that person could be liable for arrest and within 24 hours could be sold to the highest white bidder and termed for a period of service not to exceed 4 months (Johnston-Dodds, 2002). These two provisions paired together created an endless cycle of enslavement; oftentimes, the Indigenous person released from 4 months of service would be returned to a place in the city where alcohol was served, once again making them liable for arrest returning them to work under another white person (California Parks and Recreation, 1988). The 1850 act provided any theft by an Indigenous person could be subject to at most 25 lashes, and fines not to exceed $200 dollars; whereas a white person could abuse an Indigenous child and face a maximum $10 fine (Johnston-Dodds, 2002).

Although all of the provisions within the act are extremely disturbing, possibly the most despicable was the provision allowing whites to remove Indigenous children from their families and obtain control of these children for an indentured servitude until their age of majority (for males, eighteen years, for females, fifteen years) (Johnston-Dodds, 2002). In 1860, this specific provision was amended to state Indigenous children of any "vagrant" family could be put under the custody of whites for enslavement until men were aged to 40 and women to 35 (California Parks and Recreation, 1988). This amendment reinforced the enslavement of Indigenous Peoples for a much longer period of time, to be taken at a younger age, and instigated many killings of parents and kidnappings of Indigenous children (Castillo, 2024).

Due to language barriers, insufficient attempts to mend those barriers, and the lack of consultation from the majority of tribes, treaties that were made between the Indigenous population in California and the federal government were not substantial. During this time, Congress created a commission to validate land titles in California. Despite being required by law to inform the Tribes of this, no one bothered to, so no land claims were submitted by any Tribe (Castillo, 2024). This legally completely dispossessed any and all Land that Indigenous Peoples claimed at that point.

In 1852, the federal government drafted 18 treaties that would have set aside 7,488,000 acres of Land – one third of California – for Indigenous use and funds for materials and food to allow the tribes to be self-sufficient (California Parks and Recreation, 1988). The California state government refuted this action, believing that any material or agriculturally rich Land to be extremely valuable. In a secret session in the senate, it was decided that these 18 treaties would not be ratified and instead would be placed in secret files where they would remain for the next 53 years (California Parks and Recreation, 1988). In 1871, the US congress declared it would no longer negotiate treaties (California Parks and Recreation, 1988).

Reservations were established in barren Land that offered nothing to support Tribes and Indigenous communities (Castillo, 2024; California Parks and Recreation, 1988). Many of these established reservations were never legally owned by Indigenous Peoples and could not be long-term places of living (Castillo, 2024; California Parks and Recreation, 1988). In 1870, the federal government passed the operation of reserves to the Quaker Church, which created another round of forced religious assimilation (California Parks and Recreation, 1988). During this same time, the Ghost Dance religious movement spread throughout California, an Indigenous pan-Tribal cultural practice that reflected the belief that the end of the world was near and that dead relatives would return with the disappearance of the whites (California Parks and Recreation, 1988). The Ghost Dance acted as a rebellion to genocidal policies throughout Indigenous Tribes in the United States; today several tribes, including the Caddo Nation of Oklahoma, still observe the practice (Mark, 2024).

Although many remaining Indigenous populations chose to avoid confrontation with Americans, partly due to terrible living conditions resulting in mass starvation, the last organized violent resistance force erupted between 1860-73 (Castillo, 2024). What started as Yurok, Karok, Hupa, and other tribes defending themselves against Americans that routinely murdered them, stole their children, burned their villages, and kidnapped them into sexual slavery was met with a response by the Americans to murder nearby peaceful Indigenous communities (Castillo, 2024). Notably, the Indian Island massacre in Humboldt Bay, wherein a small group of white men massacred over 50 women and children of Tuluwat, a village that had existed for over 1,000 years (Crandell, 2005). The resistance maintained until 1864 when they surrendered (Castillo, 2024).

Forced assimilation intended to destroy any semblance of cultural autonomy the Indigenous population of California had left took various forms – one of which being offered education. These schools were organized so that each classroom would fit three to four students and that no two tribes were placed in the same room in order to reinforce the forced assimilation and apprehension of English (California Parks and Recreation, 1988). The Indigenous Peoples very soon recognized these schools as a threat to their culture and destroyed a day school in Potrero in 1888 and burned down another school at Tule river in 1890 (California Parks and Recreation, 1988).

By 1900, every single Indigenous person in California that had managed to survive had experienced irreparable grief and loss. Demographer S.F, Cook determined the Indigenous population had been decimated down to just 16,000 individuals (Castillo, 2024). This reflection of only 131 years of colonization, along with the rediscovery of the 1852 treaties, prompted many non-Indigenous and Indigenous groups to be formed in an attempt to aid tribes in securing Land (Castillo, 2024). Notably, the Native sons of the Golden West, the Indian Welfare Committee of the Federated Women's Clubs, the California Indian Rights Association, Inc., the Northern California Indian Association, the Mission Indian Federation, and the Women's Christian Temperance Union. These groups became very active in the battle for Land, better education, rights of citizenship, and settlement of unfulfilled treaty conditions (California Parks and Recreation, 1988).

10,000 Indigenous Peoples had fought in the first world war before the 1924 Indian Citizenship Act was passed in California, which declared Indigenous Peoples as citizens. This should have provided Indigenous Peoples with freedom of religion, but it would be more than 50 years before that right was guaranteed (California Parks and Recreation, 1988). Dances were extremely restricted by California law, as they represented cultural strength and hope for the Indigenous population (California Parks and Recreation, 1988).

In 1934, two major legislations were passed, the Indian Reorganization Act and the Johnson O’Malley Act. The Indian Reorganization Act passed based the assumption that the path to assimilation would be achieved by granting the Tribal government to work like a democracy, provided that Indigenous Land was kept in trust, forests were managed on a sustained yield basis, $10,000,000 revolving fund established for economic development, and loans were given to attend trade/vocational schools (California Parks and Recreation, 1988). The Johnson O’Malley Act provided federal funding to local school districts to pay costs for reservation residents in lieu of local taxes, which removed the only argument against Indigenous children attending public school (California Parks and Recreation, 1988).

At the end of World War 2, three major organizations were established: the Native American Church, the National Congress of American Indians, and the Federated Indians of California. This began a shift towards incorporating Indigenous perspectives into the government (California Parks and Recreation, 1988).

In 1951, the Bureau of Indian Affairs began to put into motion a plan to end all services to Indigenous Peoples in California and transfer all authority over federal reservations to the state. This became known as Termination and was written into California law under the Rancheria Act of 1958 (Castillo, 2024). Termination allowed tribes to vote on how to divide their Land with the receivers of that Land given the opportunity to sell or pay property taxes from that point forward (Castillo, 2024). Although the government promised economic independence, what happened instead was the Tribes that terminated were forced into a position to sell their Land or take out loans, had Tribal institutions and traditions disrupted, and left smaller Tribes more impoverished than ever (Castillo, 2024).

Social justice movements in the 1960s, especially the Civil Rights movement, led to much greater acknowledgement of the injustices that Indigenous peoples in America have experienced. Organizations were established to promote Indigenous self-determination and non-biased education in schools (California Parks and Recreation, 1988). Ronald Reagan established American Indian day on the fourth Friday of every September (California Parks and Recreation, 1988). Also in the 1960s, many major California universities created Native American Studies departments (California Parks and Recreation, 1988).

By the 1960s, there was an entirely new generation of young highly educated Indigenous leaders who were committed to defending Tribal rights and sovereignty. In the fall of 1969, nearly 100 Indigenous college students occupied the Alcatraz Island as a form of protest (Castillo, 2024). This new generation was very important for the revitalization of the Indigenous population in California, in 1978, the Native American Heritage Commission was established. This commission sought to work as a liaison between state, federal, and tribal governments and has protected burial sites, sacred places, and provided access to native plants (Castillo, 2024).

Despite facing the most extreme adversity, Indigenous Peoples in California – and across the United States – have persisted and persevered. This displays an unimaginable amount of strength, bravery, and genius.

Conservation, Green Capitalism, and Intermediaries in the United States

This following discussion will explore how the foundation of contemporary conservation in the United States is oriented to benefit white, upper class communities – and how that enables modern discrimination. The beginning of conservation in the United States began with the establishment of national parks in 1872. Western conservation is influenced by western ideology:

it separates man from nature and fearfully reveres the concept of "untouched wilderness" (Cronon, 1996). National parks are not "untouched," they are man made. In order to create these parks, there first had to be a forced removal, criminalization, and genocide of Indigenous American Peoples (Lee et al, 2023).

How does conservation of the Land not include the people that have lived on that Land for thousands of years? Because it never has. John Muir, considered "the father of national parks," believed Indigenous Peoples to be dirty, barbaric, and hideous (Merchant, 2003). He wrote that the Mono People of Yosemite Valley "seemed to have no right place in the landscape," and was "glad to see them fading out of sight" as he traveled farther into the valley (Muir, 1894).

Benefits of national parks are very clear and hard to dispute. Not only do they allow animals to have a living space, parks provide natural sound and green space to humans, which have been identified to improve physical health, mental health and social relationships (Buxton et al, 2021; Li et al, 2021). But who is receiving these benefits? 41% of the United States is made up of non-white people (United States Census Bureau, 2023). Despite this – from 2010 to 2020, across the 419 established national parks – only 22% of visitors were people of color and 77% of visitors were white (Ebbs & Dwyer, 2020). These parks were established to assert white hegemony over the Land, and today, the majority of visitors are white people.

National parks are just a microcosm for the greater lack of diversity in the field of conservation. In a study conducted in 2014 by Dorceta Taylor, a combined 286 grantmaking foundations, government agencies, and conservation and preservation organizations were analyzed based on gender, racial, and class diversity. Taylor found the percentage of minorities on either boards or general staff of these environmental organizations did not exceed 16%, minorities occupy less than 12% of leadership positions, and the majority of members and volunteers of these organizations were primarily white (Taylor, 2014). Although all three types of environmental organizations made progress on gender diversity, most of those gains were to white women (Taylor, 2014). This exemplifies the selective diversity that favors white women; a reflection of a bias – whether unconscious or not – wherein white executives are more likely to promote or hire white people over people of color (Austin, 2023). Although environmental organizations express a desire to diversify their staff, another study conducted by Taylor revealed fewer organizations are voluntarily reporting their diversity statistics (Taylor, 2014; Taylor, 2018).

Although these organizations claim that the largest barrier to hiring minorities is few job openings or lack of applications, that claim fails to acknowledge that these jobs are primarily advertised through informal networks such as word of mouth (Taylor, 2014). Informal networks just facilitate unconscious bias, replication of the already white workplace, and make it much more difficult for anyone outside of the traditional environmental networks to even find out about the job (Taylor, 2014). I don't believe lack of applications can be a legitimate reason for

lack of diversity in these organizations if the applications are primarily advertised to a white audience.

Lack of diversity is not just a problem inside these organizations, but also in their outreach and collaboration efforts. Out of the 286 institutions studied by Taylor, very few of them engaged in collaboration with ethnic minority or low-income institutions or groups (Taylor, 2014). This is disturbing as it means that minorities are not being as involved at any stage of conservation decisions as they should be. This will inevitably lead to ignoring minority communities and their voices.

Following the 2015 Paris Climate Change Conference, where the UN acknowledged the need for urgent action to address the climate crisis, many capitalist countries favored a solution coined as 'green capitalism' (Rhodes, 2016). This solution would establish a market in greenhouse gasses and promote technological innovations that could assist in cutting emissions (Rhodes, 2016). Although there is substantial evidence to suggest innovative technologies could prove to be invaluable tools in reducing emissions, the prospect of modeling the solution to the climate crises based on the very thing that created the crises in the first place – capitalism – does not make sense. As Wallerstein discussed, with capitalism comes the inevitable unrestrained growth, waste, and socioeconomic inequalities. In many campaigns that stem from green capitalism, the approach may not be ethical, there is an increased risk of oversight in contractors, and more opportunities for various forms of exploitation.

What was once a direct interaction between government and Indigenous groups is now skewed through multiple intermediaries. Due to green capitalism, corporations are directly exploiting Indigenous groups and Land. This does not dissolve the government or its agencies of any responsibility as they have the power to intervene. Oil companies – large contributors to both environmental pollution and global warming have been the subjects of numerous lawsuits by Indigenous groups (Conley, 2023). Two Tribes in Washington state, the Makah Indian Tribe and the Shoalwater Bay Indian Tribe filed two separate complaints against six oil giants for climate deception (Conley, 2023). The lawsuits cited recent documents that scientists at Shell had warned the company of their potential climate impact as far back as the 1980s – yet their warnings were ignored (Conley, 2023). The Tribes are suing as their Land and communities are especially vulnerable due to their vicinity to the Pacific Ocean. Because of sea level rise, the Tribes have spent a significant amount of money on preparations to move and rebuild (Conley, 2023).

When there is an imbalance in power, it is likely that the goals of the higher-powered group will outweigh the goals of the lower-powered group (Magee, 2020). Conservation is the summit at which scientists, governments, or non-governmental organizations (NGOs) have to collaborate with various communities and private companies to attempt to do what is best for the Land. With

so many perspectives of a single issue to consider, it is very easy – and oftentimes the default – to disregard the opinions of the people with the least power (Magee, 2020). In the United States the people with the least power are the same ones that have been historically discriminated against: Indigenous Peoples, people of color, and people of poor economic status. These are the groups that contemporary conservation efforts need to pay special attention to as they are the most vulnerable to environmental discrimination.

Although it is integral to address historical discrimination, implement sustainable curricula, and increase diversity in education, politics, and the conservation field – it is not enough (Bratman & DeLince, 2022). Science is oftentimes inaccessible, reserved for those privileged with the money, experience, and time to research complex topics and understand field-specific verbiage. While this sentiment is common throughout many fields of academia, conservation science – in particular – has to include people outside of the scientific realm. This can lead to an eliteness and a lack of communication between scientific projects and the non-scientific person. This elitist perspective needs to be dismantled and replaced with the sentiment that knowledge does not belong to anyone and a well-rounded conservation solution includes knowledge that has been traditionally excluded (Bratman & DeLince, 2022).

Conservation Conflict Analysis

A conflict arises when there are different ideas about the outcome of a circumstance that holds significant meaning to one of the involved parties. I believe that when conflicts arise in conservation, it is easy for state and government agencies to prioritize solutions that work out well in the short-term, yet avoid ones that surpass superficiality. Conservationists, governments, communities, and Indigenous communities have separate knowledge, skills, and experiences that all groups can mutually benefit from – but only if the space is made to listen.

For Indigenous groups, underneath every present dispute regarding the Land, there is a history of intense discrimination. I do not believe state and government agencies do a thorough job of recognizing there is more to a conflict than just what is at hand presently. I do not believe proper reconciliation has been made for there to be equal stakeholders.

In this thesis, I will analyze contemporary conservation disputes through the conservation conflict transformation model (CCT) and conservation conflict hotspots (CCH) (Madden & McQuinn, 2014; Lecuyer et al, 2022). In the past, conservation practices have only emphasized the biological and ecological needs of a species, while disregarding the social, anthropomorphic complexities that come in tow (Bennet et al, 2017). The CCT model acknowledges that although conservation is rooted in biology, human psychology and unmet needs are often where reparations begin (Madden & McQuinn, 2014). Whereas CCT provides a foundation for understanding depth of conflict, CCH measures the social response a conservation solution could invoke (Lecuyer et al, 2022).

CCT defines a successful conservation project as one where conservationists engage with the community they are working with through asking questions, building trust, listening to community built solutions, and empowering that community to take a leadership role in the implementation of the solution (Madden & McQuinn, 2014). By taking the time to listen, the conservationists give the community an opportunity to voice their grievances and provide localized, generational knowledge – thus giving the conservationists the information they need to be responsible and successful (Devereux, 2021).

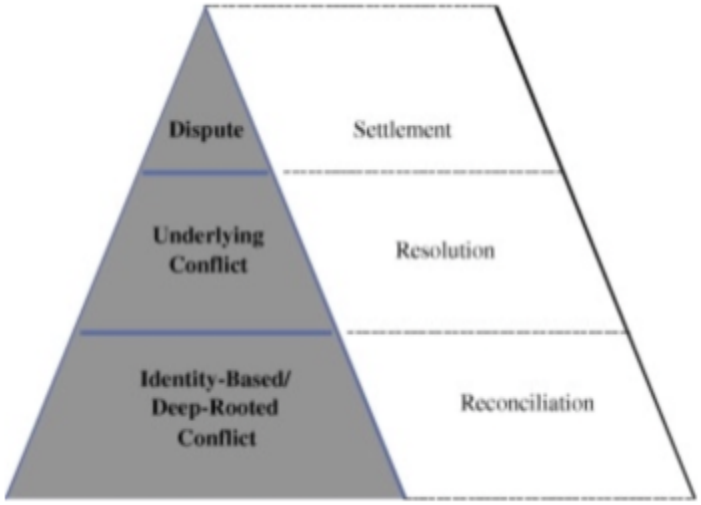

Figure 2: The conservation conflict transformation model. The tip of the triangle is the most surface level of conflict and requires the simplest solution: settlement. As the layers descend, the conflict becomes more complex and thus requires a more complex solution (Madden & McQuinn, 2014).

In CCT, the conflict is classified in three different categories: the dispute, the underlying conflict, and the identity-based/deep-rooted conflict (Madden & McQuinn, 2014). As the triangle increases (Figure 2) in depth, it becomes harder to come to a solution. That difficulty is necessary to endure if proper reparations are intended. The first level, dispute, is the material subject itself (Madden & McQuinn, 2014). For example, if the newly reintroduced wolves in the Rocky Mountains were hunting livestock, the dispute would be livestock depredation. For a dispute, there needs to be a settlement, which is just fixing the physical loss (Madden & McQuinn, 2014).

The secondary level is classified as underlying conflict, which implies there may be a history of unsettled disputes that aren't readily obvious (Madden & McQuinn, 2014). For example, there is a hypothetical community of small-scale ranchers that are being outcompeted by larger ranches taking more than their fair share of federal subsidies. When the reintroduced wolves start hunting the smaller rancher's livestock, there is now a much deeper issue than just the livestock depredation – the ranchers feel as though no one is protecting them and as a result, their livelihoods may be at stake. This depth of conflict requires resolution, which means addressing the past interactions in conjunction with the present (Madden & McQuinn, 2014).

The deepest level of conflict is identity-based, this goes beyond material implications and involves conflicts where the values, beliefs, or psychological needs attached to a person's

identity are put at stake (Madden & McQuinn, 2014). For example, when Western colonists invaded North America, they destroyed the Land. The destruction of the Land meant genocide of Indigenous Peoples and the extermination of many predators native to America, including the grey wolf – which symbolizes strong supernatural strength among many Indigenous Tribes (Wollert, 2017). In a hypothetical situation, a conflict arises between ranchers who demand rights to lethally control the wolves and the Ute Mountain Ute Tribe demands implementation of non-lethal control methods. This conflict is about much more than material loss or trophic balance, it is about the generations of families who have been murdered and generations of culture that has been destroyed at the hands of white colonists. At this depth of conflict, reconciliation – tactical action that respects the identity and acknowledges the value of the situation – is required. Although some groups may need to relinquish some control of the outcome, addressing these varying levels of conflict increases the opportunities for win-win scenarios (Madden & McQuinn, 2014).

CCH recognizes human values as fundamental to measuring the implications of a proposed decision (Lecuyer et al, 2022). The first step to manage the outcome is to recognize any stakeholder's conservation values. Conservation values can be any opinions, needs, or concerns that one group presents regarding the Land or the biodiversity at stake (Lecuyer et al, 2022). These values can present through economic, cultural, emotional, or scientific parameters (Lecuyer et al, 2022). The World Wildlife Fund (WWF) uses conservation values as a means to garner a lot of their donations. Although their symbolic adoption program does not provide targeted support to the "adopted" elephant, tiger, or giant panda – the foundation uses these charismatic animals because they know these are the ones that other humans are emotionally connected to (World Wildlife Fund, 2024). Another example of a conservation value could be a biologist's concern with how increasing sea water levels will affect the marsh ecosystem they manage in Sachuest Point National Wildlife Refuge in Rhode Island; in order to do their job they need to enact a strategy to counter the rise in water by implementing thin-layer deposition (Massachusetts Wildlife, 2017). Responsible ecological response becomes their primary conservation value. These two examples were used to exemplify how wide of a range conservation values can manifest, all of which are important to consider when measuring the tolerance of any conservation decision.

Conservation values inform the expected tolerance that any group may have in association with a conservation decision. As tolerance becomes lower, the probability of resentment increases – which just creates more conflict (Lecuyer et al, 2022). When humans lose resources or lack a voice in the decision, tolerance levels are sure to be lower. These are areas that are the most likely to refute the conservation decision. Tolerance levels could also be raised if there are positive conservation values associated with the outcome of a decision. In one geographic space, tolerance can differ greatly.

There are two types of risk perception CCH (Figure 3) encourages attention to: cognitive risk perception and affective risk perception (Lecuyer et al, 2022). Cognitive risk measures the potential loss and harm that may be caused by an outcome (Lecuyer et al, 2022). For example, cognitive risk would be increased for a community that is reliant on the resources of an ecosystem that is missing a keystone species, like a top predator. Without this predator, the ecosystem may experience a domino-effect that results in decreased biodiversity and species abundance, which in turn affects the community that relies on the abundance of those resources (Wallach et al, 2017). On the other hand, affective risk perception represents the dread or worry about the outcome of a decision (Lecuyer et al, 2022). For example, a top predator is about to be reintroduced in an ecosystem near a community that has never interacted with and knows nothing about that predator, so they fear for their safety. These two types of risk perception are separate entities and may exist with or without each other.

While a traditional ecological approach would measure ecological impact through the abundance of habitat, prey abundance, and human activity – CCH recommends additionally adopting tolerance level and risk perception to gauge potential conflicts between humans, landscape, and wildlife (Lecuyer et al, 2022). CCH presents a model that compares and combines impact, intolerance, and risk perception on a spatial scale – which then predicts locations where conservation conflict could arise (Lecuyer et al, 2022). The darkest areas in the resulting model would imply the areas where the conflict may be most likely, but can also inform where it would be the most socially and ecologically responsible location to enact a conservation strategy. In a study utilizing this strategy as it pertained to human-tiger interactions in Kerinci Seblat, Sumatra, Indonesia: combining social and ecological data resulted in predictions of tolerance that were 32 times greater than models based on just social data (Lecuyer et al, 2022; Struebig, 2018). This approach allows for greater consideration of preventative measures

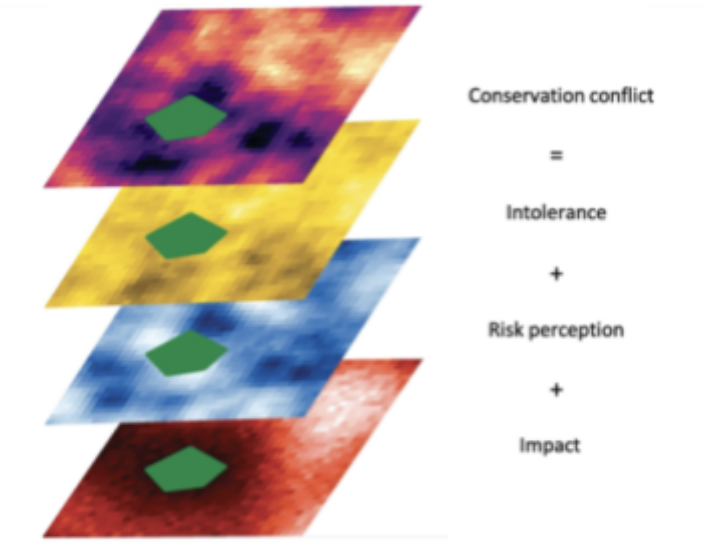

Figure 3: The conservation conflict hotspot model is used as a theoretical indicator to pinpoint where the deepest conflict will take place. This model takes into account in what location will accumulate the most impact, risk perception, and intolerance. By combining these three factors, we are able to create a heatmap to predict in what areas conflict will arise. (Lecuyer et al, 2022)

that could potentially mitigate conflict. These could be anticipated compensation, zoning measures, or strategies to alleviate harm (Lecuyer et al, 2022).

There are many facets that need to be considered in responsible conservation decision making, these two models are a great starting point to integrate all of these angles. I will use these terms and strategies exemplified in these two models to analyze conservation conflicts and outcomes between Indigenous Peoples and government agencies.

Case Study #1: Chumash Heritage National Marine Sanctuary and the protection of *Lisamu'*, Morro Rock, in Chicqwat', Morro Bay, CA

Since 2013, the Northern Chumash Tribal Council has been campaigning for an establishment of a 7,573-square mile marine sanctuary that would include 156 miles of California's central coastline (Sloss, 2023; Chumash Heritage National Marine Sanctuary, 2023). The implementation of this sanctuary would limit offshore drilling, acoustic underwater testing, provide funding for research, provide protection to onshore and offshore Chumash heritage sites, and connect the Greater Farallones and Monterey Bay National Marine Sanctuaries to the Channel Islands National Marine Sanctuary – creating a combined 20,000 subsequent square miles of protected coastline (Sloss, 2023). This would be the first Tribal nominated national marine sanctuary designation in the United States (Chumash Heritage National Marine Sanctuary, 2023).

"The ocean is our life, we call it the '*Atishwin*. The life of the Chumash people is intertwined with the ocean," Violet Sage Walker, the chair of the Northern Chumash Tribal Council, said. "The ocean is where life first begins, and when there is no ocean there will be no us" (Chumash Heritage National Marine Sanctuary, 2023).

The nomination for the sanctuary was accepted by the National Oceanic and Atmospheric Administration (NOAA) in 2015 and placed on an official list for future consideration (Chumash Heritage National Marine Sanctuary, 2023). NOAA announced on August 24, 2023, a proposal to move forward with the sanctuary's designation – with one exception (NOAA Fisheries, 2023). Lisamu' – or Morro Rock – would not be included within the sanctuary's borders.

"Lisamu' has been a place of spiritual significance for the Chumash for thousands of years, bringing life and food for our people," Sage Walker said (Northern Chumash Tribal Council, 2022).

Lisamu' is a sacred site for the Chumash People, and intended to serve as the heritage hub within the sanctuary. Amidst the genocide of Indigenous Peoples in California in 1889, 40% of Lisamu' was mined as rock quarry to make the breakwater in Chicqwat' – Morro Bay (Northern Chumash Tribal Council, 2022; Northern Chumash Tribal Council, 2023). When justice for marginalized

groups was amplified in the 1960's, Lisamu' was formally classified as a California Registered Historical Landmark (Northern Chumash Tribal Council, 2023). It was not until 2022 that the breakwater stones were recovered by the United States Army Corps of Engineers and returned to the heritage site (Northern Chumash Tribal Council, 2022).

NOAA fisheries left out Lisamu' in favor of an offshore wind-energy project that would cover 376 square miles 20 to 40 miles offshore from Morro Bay (Sloss, 2023). The project would be the largest of its kind, proposing up to 200 floating wind turbines that would be anchored to the sea floor (Lopez, 2022). While it could potentially provide power to millions of homes, the ecological consequences are unknown (Sloss, 2023; Fonseca, 2023).

Offshore wind turbines have only been introduced on the East Coast, many of the projects have been canceled or delayed due to higher interest rates and higher prices for turbines, steel and labor costs. In 2022, the Bureau of Ocean Energy Management held an auction for five leases offshore California (Department of the Interior, 2022). This resulted in a collective bid of $751.1 million to lease tens of thousands of offshore acres (Nikolewski, 2023). Equinor, one of the companies that won a lease for 80,062 acres, has previously threatened to pull out of projects in New York, but ensures that the company is on the Pacific coast for the long term (Nikolewski, 2023).

While the core, powerful entity is the government, the exploitation of Indigenous Land is perpetuated through the offshore wind energy corporations – making those companies the intermediary force that we often see in modern exploitation. Favoring the corporation and the push for green energy rather than preserving Tribal values or input reflects the contradictory values of green capitalism. While the offshore turbines could supply energy to millions of homes, the success of this project is not guaranteed – especially with how it has gone on the East Coast (Sloss, 2023; Nikolewski, 2023). The benefits may be large, but the consequences fall directly on the shoulders of the Chumash people; the loss of a cultural landmark that has been the hotspot of historical conflict paired with the unknown ecological impacts create something similar to ecological unequal exchange.

This is where the conflict lies. The Northern Chumash are concerned that the exclusion of Lisamu' does not reflect collaborative management between the government's auction and Indigenous Peoples (Sloss, 2023). While the clear dispute is Land allocation, the true root of the conflict is identity-based and deep-rooted. It was only two years ago that Lisamu' was reconstructed, now it is vulnerable again to unforeseen consequences that could result from the wind project.

There is a broad expanse of conservation value associated with Lisamu' and the proposed marine sanctuary. That expanse of ocean is very biodiverse, attracts many tourists, and holds high

cultural value for the Chumash Peoples (Chumash Heritage National Marine Sanctuary, 2023). This, on top of the cumulative historical ignorance and violence enacted by the United States, would promote low tolerance among the Chumash Peoples in regards to the wind energy project. There is also a great amount of affective risk perception, as there are no predictions on the environmental impacts that the clean energy project may elicit. In a situation that requires reconciliation, the targeted area – Chicqwat' (Morro Bay) – would have the highest likelihood of more conflict.

On the other hand, NOAA fisheries and clean energy advocates value the necessary transition people must make from fossil fuels to clean energy (Sloss, 2023). While clean energy is important, there is a difference between consultation and collaboration. While the designation of the marine sanctuary would be an excellent new model for collaborative Indigenous management of the Land, the prioritization of the wind energy project over the intended heritage hub would undermine that. How would the project have changed if the Northern Chumash were included from the beginning? If the government is to expect the Tribe to accept the offshore project, they need to prioritize Indigenous values just as much as their own.

In Late 2023, the Northern Chumash Peoples and other supporters held Rally at the Rock, a last ditch effort to garner support to include Chicqwat', Morro Bay, in the sanctuary. In order for reconciliation, the Tribe needs to be involved in decision making, not just consulted. The location of the proposed wind energy project displays an ignorance regarding the value that the Land holds and the violent history that should haunt the Californian Government. No resolutions have been announced by NOAA Fisheries or the Northern Chumash Peoples.

Case Study #2: The Winnemem Wintu Tribe's efforts to reestablish access to Chinook Salmon spawning sites surrounding the Shasta Dam, CA

In 1945, the construction of the Shasta Dam just north of Redding was finalized – resulting in the displacement of the Winnemem Wintu Tribe and the blocking of the passage to Mt. Shasta, a vital spawning site for winter-run Chinook salmon. (James et al, 2022) In 1937, the year before construction started, the Winnemem Wintu Peoples moved from their ancestral home under the premise that the United States government would provide them Lands elsewhere and the infrastructure to rebuild. Instead – with the construction of the dam – the government took 4,800 acres of Winnemem Wintu Land and Lake Shasta flooded thousands of acres of communal Tribal Land (Arthur, 2013). The Winnemem Wintu never received Land, infrastructure, or compensation. Although recognized by the California senate, the Tribe is still not formally recognized by the federal government.

"We lost our rights, we lost our Lands. And now, that's a cause for celebration?" Caleen Sisk, the Chief and spiritual leader of the Winnemem Wintu Tribe said. "We only have broken promises" (Arthur, 2013).

Following the Tribe's forced removal from their ancestral Land, the Chinook salmon, having lost access to a vital spawning site, were now endangered. Chinook salmon are anadromous, meaning adults travel upstream to spawn in freshwater and the hatched juveniles swim downstream to live out adulthood in the ocean. *Nur*, Winnemem Wintu's word for salmon, are essential to the Tribe's culture. In their creation story, Nur gifted humans with their voice (James et al, 2022).

"We're supposed to speak up for salmon because of that gift," Sisk said. "Whatever happens to salmon happens to us" (James et al, 2022).

Due to global warming, worsening drought conditions, and extreme heat, in 2021, the water flowing from the dam was so warm that a mere 2.56% of the eggs hatched by the salmon survived to swim downstream (James et al, 2022). State officials moved forward with a reintroduction plan that involved transporting adult individuals by truck into the McCloud River, above the Shasta Dam (James et al, 2022). Once these adults spawn and die, the offspring would be transported by truck back into the waters below the dam (James et al, 2022).

The Winnemem Wintu Tribe opposed this plan, as it made use of hatchery-raised fish and they believed that these fish are no longer fit for living in the wild (James et al, 2022). Instead, they proposed to use salmon that were transplanted from the Sacramento River to New Zealand in the beginning of the 20th century (Winnemem Wintu Tribe, 2016). The Tribe also proposed – instead of using trucks each year – the construction of a swimway (Winnemem Wintu Tribe, 2016). This swimway would provide a connection from the Sacramento River to the McCloud River, aiding the adult salmon's directionality with a pump system and holding pool. After hatching in the McCloud River, there would be a pipe constructed back into a creek that leads to the Sacramento River for the juveniles to travel back to the ocean. This returning pipe would be gravity driven.

The two different strategies for the salmon reintroduction plan exhibit how Traditional Ecological Knowledge can prove to be especially valuable. The state's plan to transport adult and offspring salmon via truck embeds humans as essential to the success of a process that would occur naturally if it weren't for the man-made barriers. If humans decided to stop funding this project, the ecosystem would fall apart again. Rather than adding more human encroachment, the Tribal plan seeks to simply work around the barriers that were created. Instead of the success of the plan relying on longevity of funding and human engagement, the success of the plan would rely on the ability of the salmon to do what they are naturally capable of.

Sisk and the Tribe are convinced that the fish from New Zealand will yield especially successful results as they have adapted to swimming mountains upstream (James et al, 2022). Leaders of the tribe had traveled to New Zealand to confirm the salmon's lineage through DNA tests, but

were told by government scientists they'll need the fish tested for pathogens as well (Dadigan, 2018). Despite this roadblock, Ngai Tahu, the Maori People of the South Island in New Zealand, have offered to send fertilized eggs (James et al, 2022).

Due to the Winnemem Wintu Tribe's history of displacement and broken promises combined with the spiritual importance of Nur, salmon, this is an identity-based, deep-rooted conflict. All of the parties involved value the reintroduction of the salmon, but for the Winnemem Wintu tribe, the value is much deeper than just restoring a damaged ecosystem – it means the revitalization of their ancestral Land. This situation requires reconciliation – directly involving the Tribe with the decision making in this conservation strategy.

This is how reconciliation began between this Tribe and the state. At the beginning of 2023, California Department of Fish and Wildlife and NOAA Fisheries signed an agreement with the Winnemem Wintu Tribe, including them as a "co-equal" in the salmon conservation efforts (James, 2023). Along with this, the state and federal agencies pledged to study the possibility of retrieving salmon from New Zealand and the state department provided a $2.3 million dollar grant to assist in the Tribal efforts (James, 2023).

"We can't change the wrongs that were done in the past, but we have an obligation in the present to make it better," Chuck Bonham, director of the California Department of Fish and Wildlife said. "With this agreement we are bringing life back to the McCloud River" (James, 2023).

Sisk commented how this willingness to work with the Tribe represents a big change and is excited to provide creative solutions to keep the fish wild (James, 2023). Working collaboratively will provide each group with a breadth of knowledge that could not have been accessed without the agreement and recognition of the Tribe. This is the first step towards true reconciliation.

Sisk said "If salmon get to come back, just maybe there's a little way for the Winnemem to continue to exist too."

Conclusion

President Joe Biden has enacted multiple executive orders providing the incorporation of Indigenous knowledge into Land use projects (Prabhakar & Mallory, 2022). Yet there is still work to be done. Many Tribes feel as though they are not receiving adequate consultation before large scale Land projects are set in motion. This year in Arizona and New Mexico, the Tohono O'odham Nation and the San Carlos Apache Tribe have brought up grievances about the route of the construction of a power line that has intersected ancestral Land (Joselow, 2024). Having not been consulted about the project, the Tribes asked a federal judge in January, 2024 to halt work on the construction. Neither of the Tribes oppose clean energy, yet both wish to have Tribal sovereignty respected (Joselow, 2024).

The same sentiment is shared by Tribes across the United States. The same Tribe fighting the power line, the San Carlos Apache Tribe, are working to stop the construction of a copper mine on sacred Land (Joselow, 2024). A wind farm was ordered to be removed from Osage Nation Land in Oklahoma, as it was opposed by the Osage Nation (Killman, 2023). There is an effort by activists in Nevada to oppose a lithium mine on Tribal Land (Joselow, 2024). Although clean energy is valuable and important for a sustainable future, the Indigenous communities and Land they reside on still mark "the path of least resistance," and thus receive the brunt of the space.

Through this thesis, I have outlined the theoretical methods that may provide an explanation and history to how we can view contemporary conservation. The core power, or colonial Americans, were able to seize control over the Indigenous Tribes of America, the peripheral nations, with the use of incredible violence that was enabled by foundational racist theory. The United State's expansion and exploitation of Indigenous Tribes was and is fueled by the desire for an endless accumulation of capital. The conflicts that arise between Indigenous Tribes and the United States Government are virtually all identity-based conflicts, thus most require reconciliation. I could not supply the history of genocide of all Indigenous Peoples in the United States, yet those histories are very similar to that of the Indigenous Peoples in California: murder, ethnocide, and institutional discrimination. It is important to understand the history of the Land, and the history of the specific Tribe that lives/has lived on that Land, in order to make a socially responsible, long-lasting conservation decision. The colonial invaders viewed the Indigenous population as a barrier to western development, accumulation of capital, and global expansion. The United States has an obligation to provide reparations for the living ancestors of these lost generations. Conservation provides a space for these reparations to be made by incorporating Indigenous voices into Land management. The people killed can not be recovered, but it is of the utmost importance that the Land they lived on be preserved through the integration of Traditional Ecological Knowledge.

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