Addressing food sovereignty through access to Wi'wnu (Huckleberries):

A Case Study of the Warm Springs Indian Reservation

by

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ABSTRACT

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Due to their importance as a traditional food, it is essential to make sure that huckleberries are available for future generations. Promoting huckleberries is taking place through different management strategies and following disturbance, such as fire throughout the Pacific Northwest. Access and co-management objectives are a part of the treaty trust relationship with the federal government due to the Treaty of 1855 for the Warm Springs Tribe. This project focuses on: huckleberry management, history, and impacts of western expansion and voices of tribal stakeholders. Focusing on people and place are important for better understanding how natural resources management is addressing the ecological and social component of the environment. The purpose of the project is to learn more about how access to traditional foods helps the tribes to address food sovereignty. Using the oral history research method and reflexive analysis, key findings included: people are accessing huckleberries, observing changes, and desire greater management emphasis on the resource. They felt the treaty, policy, and people are all key to taking care of huckleberries for the future. Their stories reflected long-standing relationships with berry stands, which could further direct future management for adaptation to climate change and other environmental stressors.

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Preface

Listening to any good story there is a story within a story tucked in yet another story. This story is my story, as I heard observed, witnessed, and sometimes lived. My moccasin prints travel far and wide from the community that I first hailed from. From time immemorial, my story begins before my birth. Local knowledge is steeped within my community; along with long-ranging stories that help us better understand our place among the stars. Within this culture, there are many teachings. They are passed on between generations through activities, actions, and shared spaces. The first teacher, kuthla, to embrace me, gave me my formal name. She lived many of the things that I observe in the story. Many choose to live in the old way as she did turning their hearts to unconditional love. An unexpected part of this journey for me is that I found bits and pieces of her legacy radiating from within me.

Leaving home in pursuit of higher education and living the average Indian experience in that context is riddled with negative statistics. Separated by time and space, my story is similar to my great-grandmother's experience. She grew up at Fort Simcoe, taught western ways, and spent much of her time separated from her community. Coming from a long line of orphans, I always work with foster youth. Despite not being paid minimum wage, living in poverty, I found it necessary to forge my own path. My great-grandpa was a blacksmith, as became his orphaned son.

Many accomplishments on both sides of our homelands are found in my families' history. Even within our own history, those stories are often underscored and

downplayed. Many of our stories are told through the lens of an outside observer or agitator on paper or displayed on a wall. Other authors' work or cultural displays are often good, but it is necessary that we tell our stories as part of living tradition. This is where I usually tell a westerner that I belong to a community, as a member rather than solely only responsible to my role, as a second generation American on my Indian side. On my mother's side, I am old Portland, Oregon with my family arriving by train in the late 1880s.

The people that now make up the Confederated Tribes of Warm Springs are an extreme example of cultural survival. Our stories tell of the beginning of the universe, ice ages, and our place in the world. These stories represent a much broader context given the highly mobile societies of Cascadia, better known as the Pacific Northwest. The drama and lessons are just as relevant today, as back in the day. For instance capitalism is not so different from the monsters espoused by stories. Scientific inquiry fits in with the wisdom gained by tricksters, concurrent with the need to stay humble. Our connection to places includes multiples layers from basic needs to our connection to the Creator.

In this story, I often take a back seat, although it became clear I needed to decolonize my thinking during the research process. Given the permission of an elder linked to my own lineage, I came out asking questions. This story changed me in unexpected ways with each interview. As my legs swung back and forth, sitting in a boarding school dorm, I realized that I did not completely walk away from my childhood dreams. I retain the right to see myself more no different than the generations that came before and receive guidance by the old ways.

My interviews took place with people who began teaching me. They reminded me of how important my work is and the need to take time out to do it right. Indian time is defined in accordance with seasonality and ecosystem functions. An utwai elder told our community to get an education and to use it as a tool, because otherwise you are susceptible to being outsmarted. He said it in English, but it seems more like he meant this is one way to make sure our knowledge and communities continue to face hardships, avoiding continued trickery. He didn't tell us to turn our backs, nor did he say there is only one way for people to live. The utwai elder prepared me for the things I would see, even though I barely stand tall enough to see him.

Introduction

The Columbia River begins in modern day Canada and winds its way to the Pacific Ocean, forming the border between Oregon and Washington states. Some of the river's original inhabitants know the river as Wemułth, or Nchiwana, from the mouth of river to several hundreds of miles inland. The river is considered the lifeblood of the lands according to longstanding local teachings, in which the connectivity and collective properties of water are paramount for supporting life (Aguilar, 2005).

The diverse cultures of the tribes of the Pacific Northwest reflect their relationships with the places they consider home. The land and topography promoted a diversity of cultures, including: "river corridors, arid semi-desert low-land zones marked by rocky canyons and buttes, forests and prairies at higher elevations, and meadows along mountain flanks" (Winthrop, 2014, p. 209). These diverse landscapes and waterways enabled the formation of complex interconnected societies in the Pacific Northwest.

According to Daniel R. Wildcat, in addition to climate change, there are multiple forces driving change for indigenous communities and other marginalized groups. These communities face "multiple social, political, economic, and environmental changes" (2014, p. 509). Climate change impacts indigenous communities more than others because they are place-based and have relationships with local resources. In contrast, US citizens are mobile, often relocating according to patterns associated with capitalism or western expansion (Wildcat, 2012).

The origin story of the United States hinges on a glorified myth of an unsettled landscape. The discourse of settler colonialism tells a story that continues to silence and marginalize the experiences of native peoples. Similarly, exploitative capitalistic forces often impact other local populations. Gentrification and the destabilization of rural communities occurred due to differences in political access. The rhetoric often occurs along racial or class lines and relates to limited economic, educational, or social autonomy. The conditions of urban and rural societies are often attributed to the members of those societies, rather than the commercial interests promoting such conditions (Ortiz-Dunbar, 2014).

Among the traditional foods of Columbia River Indian tribes, retained by the Middle-Columbia Treaty of 1855 with the United States Government, salmon receives the most attention. Until recently, access to huckleberries (*Vaccinium spp.)* had drawn only limited attention from either US authorities or Native American governments by government to government relationship failure to carry out treaty trust obligation through land management (Turner, Gregory, Brooks, Failing, & Satterfield, 2008). In Oregon, relationships between these governments have been slower to develop than in Washington.

In order to better understand the many disruptions of tribal people's regional economy, there is a need to revisit historical and current contexts of issues tribal communities face. Additional steps are necessary for ensuring access to huckleberries from a policy perspective, natural resource management due to changes brought on by western expansion and changing environmental conditions. My study aims to better

understand how access to huckleberries helps the people of the Confederated Tribes of Warm Springs (CTWS) address food sovereignty issues.

This study is important because managing natural resources is often a balancing act. In the past, public land managers ignored the connection between tribal communities and traditional foods. Despite the legacy of opposition, tribal initiatives continue to take hold for many tribal communities. Some of this work is happening due to the centrality of huckleberries as a traditional food. Building on these accomplishments is a solid way to work towards ensuring access to traditional foods for future generations. Furthermore, with the considerable negative impacts on tribal cultures created by westward expansion, oral history represents a window into the past (Hay, 2000) better guiding the present, and future.

Within the literature on environmental justice, native people are underrepresented, despite their long history of dispossession since the arrival of Europeans. Even though native people resist and take part in broader movements, their stories are often overshadowed by the dominant discourse, in which native people are often relegated to the background through the origin myth. Native people advocated for their rights from the first instance of contact. Furthermore, native people are considered the first victims of environmental racism. The natives' beliefs about sovereignty shaped the belief that environmental justice groups deserved a stake in mainstream environmental policy (Cole & Foster, 2001).

Indigenous knowledge is important for sustainable approaches to land management. According to Daniel Wildcat, native people come from "long

multigenerational histories of interaction with their environments that include coping with environmental uncertainty, variability, and change" (2012, p.509). Land managers often overlook the social-ecological interface, or disruptions, caused by western expansion. Since contact with westerners, native people have faced numerous assaults on their culture and livelihoods, with settlement and capitalism being the mechanisms of destruction.

In contrast to the settlers' colonial discourse, native cultures emphasize their ties to nature through storytelling, traditional practices, and ceremony, both historically and currently (Aguilar, 2005; Shaw & Jensen, 1998). However, management often takes place using western methodologies, making it harder to encompass local communities, their contributions, and practices that ensure long-term access to traditional foods and medicines. Western management assumes that people dominate nature, while native people's management came from a worldview emphasizing their membership in the larger community, which included all living and nonliving things (Wildcat, 2012).

Regardless of the numerous assaults to native peoples' connection to place and blind management decisions, the people of Warm Springs continue to assert their right to live in their own way. Oral history brings greater visibility to stories that traditionally do not become a part of dominant discourses. Participants are central contributors during the process and challenge the interviewee to think differently about their own understandings of place, regions, and professional contributions (Hay, 2010). Oral history is appropriate for better understanding participants' experiences and the context for how picking relates to food sovereignty or impacts due to western expansion. By acknowledging the connection of people to places and honoring the treaty reserving their rights, land

managers not only act out treaty trust responsibility but also create a subtle shift in ideology. Food sovereignty directly relates to environmental justice because it means tribes controlling or heavily influencing their own food systems (Lynn et al, 2012).

Warm Springs Indian Reservation (WSIR) is an example with efforts towards cultural continuance on one end of the spectrum and standing against layers of destructive policies and oppression on the other. Bringing these issues to light is difficult because tribal experience are often less visible to the public. The starting point for discussions often include American ideals that native people are a thing of the past, or misunderstandings about the full ramifications of U.S. policies or Western expansion. Native people are often relegated to the background despite their many contributions to the American experience. With so few native people, and differing experiences by community, there are often contributions, especially within the environmental field, that go unsung in typical American consciousness.

This thesis contains a literature review covering history, policy, and background related to the Warm Springs tribe. The rationale is to better understand issues regarding food sovereignty, it is important to uncover layers of colonialism, settler interests, and the rich history held within the Warm Springs Community. The literature review tells much of the story leading up to why the research is important. The history covers pre-contact and post-contact history. Western expansion impacted gender roles, economies, and cultures of native people, including those living along the Columbia River. Capitalism served as the mechanism for change to the environment and incoming systems of governance, which impact the livelihoods of native people. Western bias is an additional avenue that marginalizes the experiences of tribal members. The importance of

huckleberries is one of the constants, despite the changes taking place in the Pacific Northwest. The oral history research method uncovered the quiet strength held within the community. Some key findings included: people go to considerable lengths to make sure the teachings are carried on. They feel good about the continuance of culture. Looking forward, they felt the Treaty of 1855 should be carried out more by people and management. With competition from commercial industry, changes due to climate change, and other environmental stressors, they felt greater emphasis by management and regulation are important. Access helps people: stay culturally connected, remain healthier, assess the well being of plants, and increase the amount of food available from and individual to community level. The policy implications follow a similar trajectory to what interview participants state.

Literature Review

Traditional foods continue to be central to the cultures and communities of the original inhabitants from along the Columbia River. Historically, the fundamental pattern of work moved in accordance with the seasons, although some items were acquired through the market and trading ties (Aguilar, 2005). Winthrop describes the basic seasonal movements and the primary foods:

> "In the pre-reservation era, the seasonal requirements of fishing, gathering, and hunting shaped the Middle Columbia tribes' environmental experience through successive movements across a large landscape. In the spring people traveled to fishing stations; anadromous species such as Chinook salmon (*Oncorhynchus tshawytscha*) were highly valued. Edible roots were gathered in the spring,

> generally between February and June; l*omatium* species such as biscuit root (*Lomatium cous*) and desert parsley (*Lomatium canbyi*) were particularly important. Camas (*Camassia quamash*) occurred in abundance in upland prairies, attracting large numbers through the summer months. Later, usually beginning in August, families traveled to mountain camps to pick black mountain huckleberries (*Vaccinium membranaceum*), a food celebrated in the early-August huckleberry feast. In the fall, mountain meadows provided an ideal locale for hunting mule deer and black-tailed deer (Odocoileus spp.), before the return to permanent villages with the onset of winter (Winthrop, 2014, p. 210).

In addition to these traditional foods, water is considered the most important gift of the Creator by Columbia River tribes. All of life depends on water, and tribal customs reflect a reverence for its cultural and ecological value. For instance, meals start and end with water in recognition of its importance for all beings (Aguilar, 2005; Winthrop, 2014). Many regional tribal management protocols emphasize the importance of water as a starting point for conservation efforts. The map below (Figure 1.) depicts tribes belonging to similar cultural groups that cooperate for managing salmon and other first foods. Infrastructure for and advancements in water usage for the biological needs of fish are often considered by tribal communities (Wilson, 2002). When tribal community members discuss a huckleberry harvest, it is often in the context of living within a seasonal rotation and interdependent trade networks.

Figure 1. Traditional Fishing grounds and neighboring tribes. Columbia River Intertribal Fish Commission.

Many of the middle Columbia River's original inhabitants signed treaties that reserved lands in the form of reservations and rights. The Confederated Tribes of Warm Springs (CTWS) Indian Reservation is located up a tributary of the Columbia River. The reservation contains the traditional foods reserved within the treaty. Additionally, adjacent lands are a part of their usual and accustomed travels reserved for harvesting traditional foods and material by treaty (Aguilar, 2005). Off-reservation rights overlap with those of other tribes, as well as the Federal and State Governments (Biolsi, 2005). The right of people to access their traditional foods is important in terms of retaining cultural connections, the health of the people, and the environment. The treaty signors understood that signing the treaty ensured a continuance of their way of life, including economic opportunities (Aguilar, 2005). Accessing culturally relevant foods that are sustainable is the hallmark of food sovereignty.

The Warm Springs Indian Reservation includes mountainous forest regions that give way to high desert. Tribal members continue to pick huckleberries both on and off the reservation. Some of the largest huckleberry-picking patches are located in the Cascade Mountain range north and south of the Columbia River, within ceded lands (Anzinger, 2002). For the general membership, harvesting the berries takes place following the Huckleberry feast, which is eaten to give thanks. The harvesting of traditional foods is important for the economic and cultural value to many families (Aguilar, 2005).

The Warm Springs Tribes are a confederation made up of people from three distinctly different cultural communities. The Warm Springs and Wasco peoples have historical trading ties. The Paiute lived in adjacent shrub steppe lands, known for raiding villages. The people of continued with their seasonal hunting, gathering, and trade relationships since the signing of the treaty of the middle Columbia River in 1855 (Aguilar, 2005). More than ten million acres were ceded to the United States from CTWS. CTWS retained 640,00 acres, which is about 1 percent of Oregon (Wilkinson, 2005).

According to Aguilar, the Wasco are a sub-group of the Chinook people and are sometimes referred to as Upper-Chinookan by anthropologists. The Wasco peoples lived along the Columbia River, making their living as fishermen, business people, and agriculturists. In contrast, the Warm Springs cultural group travelled more, specializing in berries, roots, deer, and elk as trade items. Similar to the Wasco people, they fished as a part of their season rounds. Their interdependent trade allowed for an exchange of

goods, food, information, and ideas, while the tribes retained distinctive cultures (Aguilar, 2005).

The third cultural group making up the CTWS is the Paiute, who are linked to the broader cultural group the Shoshone. Because the Paiute community had a corrupt Indian Affairs agent, they did not move away from the area in which they had traditionally lived, and they continued their seasonal migrations (Wilkinson, 2005). Shoshone people raided settlements and roads. The military could not tell the Paiute apart from the Shoshone causing greater need to stay mobile (Victor, 1902). The Paiute bands that became a part of Warm Springs were originally from present-day Harney and Malheur Counties. However, because they lived in high desert lands, they needed to travel greater distances for foods (Aguilar, 2005; Engeman, 2009).

In the past, food preservation, environmental conditions, and seasonality determined the availability of foods. Access to traditional foods has been an issue since the first western contact or perhaps even earlier environmental changes, such as the Ice Age (Hines, 1996). Settlers targeted food systems to remove indigenous populations, often appropriating stores for themselves (Dunbar-Ortiz, 2014). Additionally, breaking up the family unit via boarding schools or removing people to areas far from their homelands interrupted food production and the passing down of intergenerational knowledge. Later, environmental practices and differing views of property ownership would continue to hinder indigenous relationships to food systems (Deloria, 1969).

The traditional economy differed from the western economy in many ways. As expansion continued, the western economic system continued to change the local

communities either indirectly or by force. One of the large differences between the two economic systems was that native communities placed a great emphasis on collective well-being, whereas the European notion brought to America was one of private property ownership, with a focus on the individual (Winthrop, 2014). Additionally, Europeans brought with them the concept that working the land created a form of entitlement and that clearing wilderness was a holy mission. They thought of the land as for their use, rather than respect differing concepts regarding ownership. Wealth carried with it an association of being on the moral high ground, and being poor was attributed to defects in people's character or sin (Deloria, 1969; Ortiz-Dunbar, 2014). The more the European descendants established themselves in the region, the more at odds the two opposing economic systems became.

Examples of repeated settlement patterns impacting tribes as settlement moved west. One of the first areas in which these competing interests came to a head included lands transferred to immigrants via the Homestead Act. Private property could be "defended," making it possible to hurt or even murder Indians who were seeking access to their accustomed fishing grounds or to engage in other treaty-reserved activities. In the 1930s, Levi Vanpelt, from a neighboring tribe, was shot and nearly bled to near death while fishing. This contentious issue would go unresolved for sixty more years, until a federal court upheld the right to fish, as agreed to in the treaty. Vanpelt's getting shot helped advance fishing rights because the incident was referred to during the trials that reaffirmed the Indians' right to fish years later (Dupris et al., 2006).

After the change in land ownership following the treaty, new ranchers appropriated reserved areas. The military began chasing the Paiutes, following

homesteading. The volunteers came from the Californian gold rush, better known as genocide to native people. Those inexperienced "frontier savage warfare" honed in on their "Indian Fighter" skills in Western Oregon prior to heading east of the Cascades (Victor, 1902). Following their detainment on the Yakama reservation for a few years, the people of the Warm Springs Indian Reservation agreed to take them in because part of the reservation included the Paiute's traditional lands (Aguilar, 2005) and the tribes' historical differences were downplayed by their mutual need to survive western expansion. While each community has its own unique history, certain elements, such as hardship and the struggle for survival, are repeated themes in all Native American history.

Regional Economies

The traditional economies differed from western economies in the sense that the former included a heavy emphasis on reciprocal relationships and favorable trading ties, rather than personal rights or money. Favorable trading ties meant an overall increase in the standard of living of the village network. Dentalium and wampum served as a basis for trade, in addition to other specialized items. A specialized preserved salmon served as the main food currency for the region. By pounding salmon on a basalt stone with berries and fish oil and then storing the finished product in baskets, the trade item that could last several seasons. The high oil content of the spring Chinook Salmon made it especially well-suited for preservation and thus keeping commerce moving along traditional highways (Aguilar, 2005).

With many of the trade networks being connected by waterways, or by overland travel, preserved salmon was highly sought after because it provided winter sustenance stores and facilitated travel due to its high nutrient content. Most of the trade in the Pacific Northwest took place during social occasions, such as ceremonies or gatherings for gambling (Aguilar, 2005). Locations for trade included places where food was most abundant and also served as locations for social exchange (Anzinger, 2002). Celilo Falls, located along the Columbia River, is thought to have been one of the busiest trading centers in North America. Most trade took place socially via gambling (Aguilar, 2005).

Figure 2. Celilo Falls courtesy of Columbia River Intertribal Fish Commission.

Cultural exchanges and language facilitated trade and information transfer between villages. Along the Columbia River, it was not uncommon for people to know several languages. In addition, Chinook Jargon facilitated trade and social ties between neighboring village communities. Chinook Jargon is mainly comprised of Chinook and Haida words, creating a common means of communication along the west coast, which extended from northern California to the southern part of Alaska. Other words include the names of specialty trade items from other tribes in the region (Aguilar, 2005)

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Gender Roles

Women made many key decisions regarding the timing and management of food resources. Food production centered on women's activities including: food processing, preservation for trade, ceremonies, and storage. Food preservation often took place through collective efforts. In addition to distribution among families, people made sure to gift elders in order to care for all community members (Aguilar, 2005). Furthermore, fire was regularly utilized in the Pacific Northwest to promote huckleberry production, medicines, and camas (Boyd et al., 1999; Ryan et al., 2012). There are historic trails through areas that produce berries and campsites and often deer hunting took place in conjunction with fire setting performed by a knowledgeable person (Boyd, 1999).

The relationship between husbands and wives not only connected communities but also resulted in complimentary skills coming together within their households. Traditionally, children were taught work associated with both gender roles. Rites of passage often solidified their roles into more formal positions. However, people could

continue producing items that reflected their skillset into adulthood, even if these did not match their gender norms. For instance, a man could continue with basketry, although this was generally a skill practiced by women. During marriages, people often exchanged items that reflected their own skill sets. This exchange strengthened family ties and indicated that the woman's earning power and agency equaled the man's. When marriages took place, both parties agreed to the terms, and celebrations often took place between their families for years (Aguilar, 2005).

Western Patriarchy brought by trade and expansion impacted native women considerably. Early trade painted a picture about the accessibility of Native women, because fur traders and explorers had relationships with native women. Often traders were men and marriage provided an avenue for trade. The fort changed the societies that people lived in. More women moved to forts following disease outbreaks because villages experienced major decreases in available partners. When their husbands left the for resource exploitation activities, women returned to villages, often with their children (Boyd, 1996). Traditionally, marriages helped facilitate trade and relationships with newcomers created trade ties that accelerated the breakdown of historical trade relationships (Beckham, 1977). Impacts due to diseases, the presence of the fort, and decreased security all contributed to changes in village social structures and trade networks.

One of the ways that people were able to acquire money or make other purchases included selling their berries on the roadside. Noted Oregon suffrage feminist Abigail Scott mentioned selling hats to Native women in order to fund her activism. Native women acquired hats, which native men find alluring to this day (Duniway, 1852).

Throughout the settling of America, there are examples of native women who influenced or empowered the feminist movement. According to Sally Wagner, Alice Fletcher, a noted 19th century feminist quoted a Seneca Chief in his criticism of Western Patriarchy. He did not like how white men did not respect the agency of women and chose to dominate them. The Iroquois Confederacy of the six civilized tribes influenced democracy and the first western feminist rights gatherings in America. Feminists noted women ruled their homes, communities, and lived without fear of violence within their communities. In contrast, white women had no legal rights following marriage. Witnessing the lives of native women inspired the visions western women had for themselves in light of Western Patriarchy. Alice Fletcher noted native women resisted American citizenship because they had no rights under American law (Wagner, 1996).

A Brief Post-Contact History

The United States was able to retain its independence from Britain partly due to trading off the West Coast. Fur traders set up forts, making note of the timber richness and other exploitable features of the lands. The Chinook people, including those now generalized as the Wasco, were among the most impacted by the ensuing diseases. In some villages, 90 percent of the population died. However, these communities continued to thrive via an influx of marriages and slaves acquired by trade. Slaves served the heads of their households, with the slaves' children gaining the possibility of integration into society (Boyd, 1999).

Linda Tuhiwai-Smith describes the mechanism for altering indigenous landscapes where, “colonialism became imperialism’s outpost” (pg. 24). Originally, access to raw materials served as the initial goal for western contact, including the transfer of commodities to the imperial centers. Forts were considered outposts of western civilization, and they brought western culture. The wealth and power of settler interests dominated politics. The imagined identity of the settlers’ colonial states includes cues from their histories and the image of a future nation (Tuhiwai-Smith, 1999). Forts facilitated early settlement through commerce spread of disease, which resulted in changes to ecosystems (Ortiz-Dunbar, 2014).

Early Settlement

Early settlement took place according to patterns established during the colonial period. For instance, the “Doctrine of Discovery” held that Spain had the right to colonize indigenous people because they were “not human” and therefore could not own land (Deloria, 1969). Under United States law, the apple did not fall too far from the colonial tree. On one hand, the Marshall Decision (1831) of the Supreme Court acknowledged the right of native populations to occupy their lands. On the other hand, the Marshall Decision determined that native people were wards of the United States, which is now described as a trust responsibility. Furthermore, the tribes were defined as “domestic dependent nations,” with a level of local sovereignty similar to that of the states (Goschke, 2009). While paternalistic in origin, it connects tribal issues to a global-scale because their futures are tied to the US (Whyte, 2013). This legal framework stems

from a colonial legacy designed to: disenfranchise local populations, making way for exploitation, and settlement.

Food systems were impacted by western expansion. According to Winthrop impacts to the Columbia River areas included:

> Even in the southern Columbia plateau of northern Oregon and southern Washington, where treaties recognized tribal rights to off-reservation hunting, gathering, and fishing, the economic effects of white conquest were profound. Available stocks of game declined, both because of direct competition by Anglo trappers and settlers, and because the introduction of firearms made hunting more efficient. Native vegetable foods decreased because they often grew in areas where settlers farmed, logged, or pastured their animals (Lane & Lane Associates and Nash, 1981: 68–71). By the mid- 20th century the Columbia River fisheries, which had been a staple of the region's native economies, had been badly damaged by the construction of hydroelectric dams, commercial overfishing, Euro-American logging and grazing practices, diversion of stream flow for irrigation, urban wastewater discharge, agricultural runoff, and industrial pollution (pg. 169, 2014)

For a period, Indian removal was at work in the United States. Vulnerable populations were impacted by armed combatants or forced migration. Furthermore, areas that were rich in natural resources were particular targets of such tactics, and hunger for land motivated many recent arrivals to support them. Companies and settlers used the auspices of "establishing" to dispossess and annihilate indigenous communities. Settlers

often did not have the means to support themselves and relied on taking over existing townships to meet their needs. This kind of system stemmed from Europe, with some of the killers having practiced similar tactics in Ireland and Scotland (Ortiz-Dunbar, 2014). The settler myth about frontiers continues throughout science, capitalism, and how people relate to each other within the U.S. origin myth, with popular culture reinforcing the lies.

Breakdown of the Socio-Cultural Interface

The process of removal had already been well established by the time it arrived in America through the targeting of ecological systems (Ortiz-Dunbar, 2014). The use of military to extend U.S. interests resulted in large ecosystem changes. Previously, plains people managed native grasslands and bison herds. Their food systems were targeted to help fund the civil war and escort business interests through the plains. Plains people were too mobile for the Calvary, so their foods were targeted. The environmental toll is captured by Luther Standing Bear's description of the arrival of settler colonialism in the plains, in addition to making commentary about their scientific belief system:

> Now we began to see white people living in dugouts, just like wild bears, but without the long snout. These people were dirty. They had hair all over their faces, heads, arms, and hands. This was the first time many of us had ever seen white people, and they were very repulsive to us. None of us had ever seen a gorilla, else we might have thought Darwin was right concerning these people, (Seelye et al., 2013, p. 198).

Luther Standing Bear's commentary spins western rhetoric in a way that describes the process of removal. Additionally, he describes environmental injustice that included removing the revered American bison from the lands. The bison pelts helped fund the civil war, while removing a food base for the tribes. This pattern repeated itself, and the cavalry helped escort people through the plains. Machine guns were tested against native people. With the bison gone, people put cattle out on the range and began staking out claims (Ortiz-Dunbar, 2014). The provided example of environmental injustice highlights how the well-established pattern worked its way across the country.

The pattern of war, pursuit of wealth, and expansion extends to the first governance of the territory. According to Historian Francis Fuller Victor, the first governor of the territory arrived with the first Calvary in the mid-1800s. By the time they arrived in the Dalles, Oregon, their horses were too weak to carry them. Because they were unfamiliar with the ecosystem, their foods were packed on wagons. Many were veterans of the Mexican war. Some joined the party travelling from Fort Leaven worth looking for gold (Victor, 1902).

Imperialism's portrayal of indigenous or colonized population includes dehumanizing language embedded in the language, economy, social relations, and cultural life of colonial societies. The ideologies of humanism and liberalism, in addition to moral claims used to justify poor treatment of indigenous peoples, circle back to concepts associated with 'civilized' man (Smith- Tuhiwai, 1999, p.27).

Expansion included tactics that harmed vulnerable populations. The Westerner employed extreme force, rather than resolving s with minimal damages. Settlers wanted

more lands; volunteers and the military regularly killed women, children, and the elderly, stealing food or destroying crops as a way of opening lands for ownership. This pattern worked its way west (Ortiz-Dunbar, 2014). Both "wars" and acquiring lands were acquired through the lens that native people were less than human. At the turn of the twentieth century, historian Francis Fuller Victor described the common practice of shooting natives by incoming populations, as "…animated by fear, killed the wild man on sight with little compunction of conscious as they would have felt killing any wild animal," (1902, pg. 128). The Christian ideals regarding taming wilderness remained a moral compass and guiding light for settlement.

Missionaries taught that farming made people into landowners, connecting righteousness with work making them civil. People living along the Columbia River were encouraged to develop gardens, although that made their lands more attractive to the hungry people arriving by wagon train. Many of these settlers came supported by funds leveraged in order to convert the "savages" to Christianity (Aguilar, 2005).

Native American history is often described in relation to the power dynamics between natives and newcomers. Treaty-making did secure the right to tribal lands for the indigenous people of the United States. France, Spain, and England ultimately colonized other nearby locations, such as Canada and Mexico, refraining from gaining aboriginal title (Goschke, 2009). Canada's version of colonialism is more visible because they appropriated lands without title. The United States Supreme Court maintains a similar sentiment regarding the terms of the treaties as 'not as a granting of rights to the Indians, but rather a granting of rights from them' (Goschke, 2009). Based on this relationship, the people of the United States gained their own freedom, in addition to ideas about

governance that stemmed from the Iroquois Confederacy (Wallace, 1994). While dominance played a role, interactions were often more complex and intertwined than is represented in history.

During the Yakama Indian Wars, some of the settlers opposed the wars, especially because some of the Indians killed had been integral parts of these early settlers' economy and had been living peacefully as neighbors. However, some settlers voluntarily became participants in the genocide of the native Californian populations, and they continued with that mentality in the Pacific Northwest after they failed to make it as gold miners (Fisher, 1981).

After Indian Jack warned the people at Cascade Locks of the approaching party of Nisqually and Yakama, a group of the Watlalla (Cascade Indians) was murdered on Memaloose Island. They gathered on the island after being told that they would receive gifts from the military. A family that had been known for their good relationships with community members tried to make it to the Dalles, but they were murdered, and their children were raped prior to being murdered (J. Jackson, personal communication, May 17, 2012).

Similar tactics and incidents were seen across the country during the removal period. Resource exploitation, such as gold rushes, was often accompanied by violence. Towns and cities sprang up, often populated by volunteers who were drawn there by the promise of free land, rather than by get-rich-quick schemes (Fisher, 1981). Incompatible worldviews led to safety issues that still remain in today's climate, despite the supposedly legal basis for removal actions.

Following the removals, assimilation became the chosen mode for solving the "Indian Problem." In 1878, boarding schools were initiated as a mechanism for breaking intergenerational ties and remaking the Indians into the likeness of the white men (Goschke, 2009). Boarding schools combined military tactics with Christianity (Wilkinson, 2005). Additionally, the Dawes Allotment Act of 1887 allotted lands to individuals, rather than their being held collectively, thereby opening up the potential for economic development. Allotting lands to individuals resulted in a change in land status from trust to taxable. Many land transfers took place through fraud or coercive transactions until 1934 (Deloria, 1969; Goschke, 2009). For example Christian 'progressives' acted on behalf of the Nez Perce tribes to transfer away surplus land (Wilkinson, 2005). The policy resulted in the loss of about 90 million acres of lands previously held by native communities to individuals or other forms of business (Deloria, 1969; Goschke, 2009; Trosper, 2012). The Warm Springs Indian Agent recommended abandoning the agency, the installation tasked with warding over Indians, and opening their marginal lands to settlers. The Agent described this as a way for the Indians to move forward (United States, 1893). The Indian agent's remarks are likely attributable to marginal lands for supporting agriculture. His remarks capture the western value that assimilation sought to anchor natives in private property rights through agriculture, rather than living within seasonal rounds. In contrast, few natives wanted to farm, preferring to hunt, fish, and gather (Wilkinson, 2005).

U.S. policies emphasized western ways as the goal for addressing the presence of Indian people. The rationale behind moving white settlers onto reservation land included the notion of setting a good example for natives. Natives were also supposed to

materially benefit due to increased property values. The results included many reservations falling under multiple jurisdictions due to a variety of ownership claims, which was termed "checker boarding" (Biolsi, 2005, p. 242). The B.I.A. agent described Dawes Allotment Impacts upon natives as, "It gives the Indians a chance to be a man among men (Wilkinson, 2005, p. 49).

Continued Dispossession in the Name of Progress

The development of the United States hinged upon the dispossession, exploitation, and settlement of areas held by native peoples. People from along the Columbia River continued living within their seasonal rounds, in spite of the reservation era. Young people were taken to boarding schools, and images of assimilated Indians were ubiquitous regionally at venues such as the World's Fair, in addition to live shows (Aguilar, 2005).

Boarding schools were so underfunded that the native students grew all their own food and performed at local events. Social events often included plays or bands from Chemawa, the longest continually run boarding school in the country (Aguilar, 2005). Lessons taught at boarding school came close to home with young people internalizing some of the colonial lessons that Indians were a thing of the past. Assimilation practices promoted farming cattle, and they impact areas where some traditional foods, such as roots, are propagated (Turner et al., 2008). In addition to personal, family, and community impacts, conflicting ideologies became spatially explicit within land tenure.

The political economic theory encompassing the supposed advancement of societies through free enterprise is termed neoliberalism. Following the large

mobilization for World War II, threats were considered domestic. Framed as threats to the accumulation of wealth, the state took on roles to protect business friendly environments. Additionally, the state saw their role as protecting the dominant class from the subordinate class through institutions and law making. Neoliberal thinking is pervasive from academia to international law. During the Reagan administration many neoliberal ideals began to shift wealth from the public to private interests (Harvey, 2007).

Capitalism reinforced the shifting power structures by capitalizing on traditional resources to mobilize for war and maximize profit margins. Conservation era capitalism assumed that the use of nature should be maximized in order to fully benefit from it (Winthrop, 2014). Damming in the 1930s and 1950s caused tribal communities to crowd into fishing areas, subsequently reducing their middle-class status (Dupris, 2006). The transfer of wealth cut both ways making it so more people turned to western models of business or fighting with each other.

Indigenous cultures were labeled primitive, closer to animal than human. The western view of primitive people included the belief that primitive people do not use their minds and that they did not produce anything of value or know how to use land or other resources. Indigenous people were viewed as the opposite of civilization, lacking pious, logical modes of operating. Imperialism defined people in terms of race and types of societies (Tuhiwai-Smith, 1999). The justification for taking over assets belonging to natives included the fact that the natives' use of the land did not necessarily translate directly into a dollar value.

These types of principles are anchored in imperialism. The language of domination is associated with trade, western science, acquiring sovereignty, and law, and all these discourses share underlying principles that make it easier to create bias against dispossessed populations. For instance, freedom is derived from an association with a kingdom. The linear trajectory assumes a common where order is carried out, using a common language associated with imperial principles (Smith-Tuhiwai, 1999). For example, 'progress' was considered moving forward, while the term 'backward' described native traditions, as if they had no contributions. Relearning how to respect diversity, communicate cross-culturally, and recognize one's own agency is all necessary for building relationships (Whyte, 2013).

Shifting Social Systems

New Governance

The Indian Reorganization Act, or IRA (1934), represented a shift away from assimilation and back towards self-governance. Reorganization helped tribes take back control over their own affairs from the Bureau of Indian Affairs (B.I.A). Tribes organized in order to better protect themselves. CTWS passed a constitution and bylaws in 1938 (CTWS, 1938). They were required to have a lawyer aid them in incorporating their self-government. This document was a good starting place, but the ensuing government structure came out of pressure. The IRA governments included a tribal council, however the presence of previous paternalistic power structures remained integral.

After forming the IRA government the Confederated Tribes of Warm Springs reaffirmed their commitment to sovereignty through a declaration of sovereignty as follows:

> "We declare the existence of this inherent sovereign authority — the absolute right to govern, to determine our destiny, and to control all persons, land, water, resources and activities, free of all outside interference — throughout our homeland," (Bilosi, 2005, pg. 239).

The tribal council is representative of the power held by the people. The governance constitution and by-laws are meant to make sure decisions reflect the best interests of the people. According to the constitution and bylaws council members are sworn to protect the United States and look out for the best interests of its people. They are to remain as impartial in their decisions as possible (CTWS, 1938).

In addition, the Constitution and its by-laws reflect the treaty trust-responsibility relationship with the United States. The document reflects the power of the tribal government to make improvements in education and healthcare. Furthermore, the document notes the need to prevent overgrazing and the depletion of natural resources through the use of ordinances. Protecting tribal property, Indian arts, and wildlife are all noted, in addition to health and welfare. In addition to reinforcing the tribe's domestic sovereign status, the document's use of pronouns assumes men are in charge, reflecting the power differential imposed upon the community (CTWS, 1938).

Self-Determination

Self-determination ushered in greater control of tribal affairs by Indian people. Native people informed popular environmental movements. Their long-term relationships with spaces contrasted with the exploitative practices of capitalism (Wildcat, 2005). They helped shape the environmental movement, but with small numbers and marginalization remained less visible in the field (Cole & Foster, 1962).

During the 1970s, much of the groundwork was laid through the Self-Determination Act to escalate greater control over self-governance and government-to-government relationships. The act secured the autonomous nature of tribal rights and governance (Goschke, 2009). During the self-determination era, tribes developed the Intertribal Timber Council (ITC), which is an annual symposium that documents the changing forestry practices of the tribes (Ryan et al., 2012). ITC is important for monitoring public policy, although most staff comes from outside of tribal communities.

New Leadership

The overlay of military style leadership, boarding school experiences, and western ideals, including patriarchy resulted in a shift. The policies sought to assimilate people, through breaking up some of their collective structures. People that retained their connections to land bases experienced greater disenfranchisement because they did not fit into the model. Capitalism and the military power of the United States came with a heavy toll on social systems. The newly formed IRA government had one part-time employee, housed in the basement of the B.I.A. building until the first tribal timber sale changed things (Wilkinson, 2005).

The B.I.A. helped to solidify command and control type structures that went against tribal social structures. Additionally, other organizations that serve tribal interests or rights contain elements of colonial assimilation or internalized colonization due to the myriad of interruptions to native social and economic structures. There are many organizations that serve American Indian interests; however they do not reflect the values or approaches developed by natives (Wildcat, 2005). Many people misinterpret these kinds of organizations as resources for native people, when they may actually reflect colonial legacies rather than reflect native ideologies.

Impacts of colonization and assimilation policies are felt both within tribal communities and in dominant discourse. In constructing the settler origin story, the impacts to "other" communities were told as part of a grander narrative. Systems of rule and social structures functioned with gendered and hierarchical relationships that had overt or subtle rules reinforcing the power structure (Tuhiwai-Smith, 1999).

Fragmenting Communities

The order brought by colonial society's fragmented indigenous populations by breaking up indigenous systems of order. The evidence of the systematic destruction of native societies is demonstrated by how disciplines siloed their remains and artwork into private collections or museums. Furthermore, anthropology picked up language and culture (Tuhiwai-Smith, 1999). Additionally, fragmentation lends itself to the concept that native populations are no longer discrete entities with agency. Furthermore, academia tends to view indigenous issues from past perspectives or modern. The dynamic cultural contributions are often absent, because they do not discretely fit into a

historical perspective or modern (Wildcat, 2005). The privilege of cultural dynamism is held exclusively by western culture, as natives are either seen as a thing of the past or no longer relevant because they are not considered authentic by colonialism (Tuhiwai-Smith, 1999).

The binary of the colonized and the non-colonized often ignores the layers of impacts on people impacted by western policies and practices. For instance, people coming from indigenous communities and colonizing communities who engaged in sexual relations belonged to neither group fully. At times, they were considered better or worse, as half-civilized people. Legislation defined what groups people belonged to based upon subtle differences more important to settler colonial interests (Tuhiwai-Smith, 1999). Relinquishing the government's trust responsibility occurred by overlaying western interests with prejudiced ideas stemming from the binary of who is considered native and who is not. In addition, western discourse doing away with indigenous systems is a form of advancement (Wildcat, 2005).

Dividing the tribe by legal means helped to further promote fragmentation among Indian communities. For instance, in the 1950s, the termination experiment took place. Tribes from western Oregon were terminated. The supposed justification was relinquishing the Government's obligations to entire groups of people that it had made deals with. Termination came to the groups as a final assault on their existence as an entity. Western Oregon Indians were previously impacted by diseases brought by fur traders and the "Rogue Wars." The terminated tribes were more vulnerable due to prior circumstances, and economic exploitation and a lack of access to education aided in their destruction (Beckham, 1977).

Eroding borders for resource exploitation

Patterns of dispossession due to western capitalistic interests and dominance were repeated throughout US history into modern times. According to Donald Fixico (2011) one of the terminated tribes, the Klamath, experienced factionalism due to the power dynamics brought on by trade and access to education. "Mixed bloods" and "full bloods" were pitted against each other, with mixed-blood members being utilized to sell tribal resources. Tribal members that were native and white were more assimilated into neighboring white communities, aiding in the transfer of wealth away from the community. Again, colonial assimilation is reaffirmed by the notion that the imperial social order includes moving forward in the name of "progress" or advancement. Ignoring or marginalization led to increased vulnerability to resource exploitation coupled with a lack of access to other spheres of political influence (Fixico, 2011).

Disproportionate trade relations and the desire to access timber served as the impetus for termination. Native people were able to purchase items from western markets. Furthermore, people bought items "on time" like other Americans, making access to money more important. The community members received payments; however, the power dynamics still existed, with the native population being at a disadvantage. This dynamic created an atmosphere in which outsiders dictated the affairs of natives. Some Oregonians were concerned that the dissolution of the Klamath people would result in too much timber being dumped into the market, as well as about the ecological consequences of deforestation (Fixico, 1998).

Ultimately, education served as the path to the termination of the Klamath people. Most people did not understand the termination paper work, and the proposal was described as a way to gain financial freedom. The Klamath students performed poorly in school, and the rhetoric of termination concluded that this was because the students were not fully assimilated into the townships. Termination, therefore, operated in a similar fashion to land-clearing practices, relieving the government of its responsibilities toward tribal people, except for trust responsibilities. According to the records of interactions between the tribes, the Federal Government, and Indian Affairs, the people representing the tribe did not understand what termination meant (Fixico, 1998).

Overall termination policies impacted 1.4 million acres of lands. They were another type of trauma for tribal communities, many of whom had already experienced "scorched earth" war campaigns (Fixico, 1998). "Scorched earth war" campaigns include: attacking villages, food stores, women, children, and the elderly, while the men engage in battle or acquiring food elsewhere (Dunbar-Ortiz, 2014). In the 1980s, the CTWS used their timber revenue to lobby Congress to recognize tribes that had been previously terminated. The termination process collective punished the group rather than exacted on individuals as with the Dawes Allotment Act. The Dawes allotment resulted in loss of trust status of land and reduced the size of reservations. The "surplus" lands were made available to settlers. Most good quality agricultural lands were transferred to nonnative ownership (Wilkinson, 2005; Dunbar-Ortiz, 2014). The results of both policies did work to fragment native communities politically and spatially, which led to cultural losses.

Lateral Oppression

Lateral oppression occurs at the interpersonal level. However, it can also occur at the community level or the governmental level. The legacy of boarding schools includes command and control leadership styles. Critical thinking is often absent, and people who do not conform to the model are persecuted. While many think that boarding schools are a part of remote history, this widespread practice took place until the mid-1950s. Many people lost family members, and the lessons learned continue to ripple through native communities. The distribution of power in native communities reflects the kinds of traumas inflicted upon them through historical traumas related to colonial education, militarization, or other institutionalization, such as prison or insane asylums (Adas, 2009).

Boarding schools were modeled off of prison work camps. People were treated as if they were guilty for being native. The approaches for breaking a person's identity ranged from deprivation of food to many forms of violence (Adas, 2009). One of the coping mechanisms, people learned was to not speak of the experience. By breaking the generational bond, families did not have as many food stores available. People became sad and did not often recognize their children when they came home (Aguilar, 2005). Some of the children were orphans and did not have anyone to protect them. During the 1800s, thirty percent children returning from Chemawa Indian Boarding School died (United States, 1804). The populations were already impacted due to diseases and removal tactics. As the barter market broke down, people turned increasingly to making a living by whatever means possible.

Tribal communities face challenges ranging from basic access to land to economic well-being, healthcare, and education, making it difficult to have the capacity

to address food sovereignty issues. Although fishing, hunting, and gathering are still actively pursued by many households in the Warm Springs, Yakama, and Umatilla areas, foods and other commodities are bought in stores or provided by social services (Winthrop, 2014). Due to the breakdown of communities, knowledge related to harvesting, processing, and uses of foods are lost (Turner et al., 2008) with the passing of elders and decreased intergenerational transfers of knowledge.

Many losses on the part of and contributions made by the indigenous populations go unrecognized, making it difficult to account for historical losses of lands and practices. Thefts occurred both on and off reservations in situations that would presently constitute fraud. Even when attention is paid to a particular condition indigenous populations face, there are still limitations in terms of addressing issues, especially given the poor track record and impacts on tribal governance. Without fully recognizing the impacts of settler colonialism on local communities, it is difficult to frame issues without using assumptions based on justifications for past atrocities (Turner et al., 2008). Characterizing such issues using so many assumptions enables one to avoid questioning the legacy of the impacts on the indigenous populations (Ortiz-Dunbar, 2014). Building capacity to address food sovereignty issues takes incorporating more indigenous knowledge systems. Lateral oppression and systems of exclusion create additional barriers for this important work.

Management Approaches and Considerations

During the reservation period, historical patterns of living and independent trade relationships continued, even though communities and households were regularly

impacted by the continued westward expansion. Today, first foods continue to play an important role in the community, intertwining environmental knowledge with place-based reverence through ceremony and gathering. Additionally, the importance of traditional foods is often expressed through natural resource management priorities and planning, which are described as 'holistic conservation' (Winthrop, 2014). For instance, the Yakama start with water as an environmental priority in order to protect or enhance other traditional foods, which is in line with their teaching that all life comes from and depends on water.

Due to the culmination of such impacts, access to land remains one of the largest issues tribal communities face as they attempt to protect their way of life because this is both given by the Creator and also promised in treaties (Shaw & Jensen, 1998). Much of the traditional and subsistence work occurs at a grassroots level, while the economic phenomena experience by the tribe are interpreted as the cumulative result of decisions made by individuals.

Colonial Discourse and Indigenous Frameworks

The capitalistic system and its emphasis on individualism skew perceptions about social conditions, and under these conditions, judgments are often stem from racism (Wildcat, 2005). Without a critical analysis of the current social structures and norms, people often assume that the disproportionate impacts on communities of color or the lower classes are natural and a given (Cole & Foster, 2001). White is considered to be the ideal race, from which normalcy is derived. Similarly, the poor laws in England made judgments that attributed people's social conditions to their morality (Adas, 2006).

Science and religion both debate absolute truths, which creates a paradigm including and absolute authority that may reaffirm prejudiced judgments. Through framing authority with this regard, it is easy to dismiss indigenous knowledge or contributions (Wildcat, 2005).

Western Management

The values of forest products are defined in terms of neo-classical economics. Neo-classical economics assumes that individuals desire the maximum benefit (Winthrop, 2014). The number of board feet was considered to be the most important value until pressures from outside of forestry shifted the paradigm. Other types of use became objectives, such as ecosystem services, clean water, and foods (Ryan et al., 2012). Cultural and ecological values are often downplayed, especially when exploitative trade dynamics are in place.

Characteristically, conservationists create concepts about appropriate approaches to forest management, creating ever more red tape for partnerships between local tribes and land managers. Despite generations of interaction, European descendants still do not know much about native people. Conservationist principles, such as 'wise use' emphasized products valued by commercial interests, rather than foods, medicines, or other materials that indigenous cultures managed for (Lynne et al., 2013). Approaches to management may dismiss native contributions, while appropriating their knowledge within the settler-colonial framework (Winthorp, 2002).

Classist or racist judgments extend to incoming local populations. For example, herders faced criticism from conservationists due to their use of fire as a tool. Land

managers viewed burning as a waste because they did not expect the herders or native people to have a sophisticated understanding of land management (Stewart, 2014). Sheep herders employed burning until more forest rangers were situated in national forests (Anzinger, 2002). The role of rangers exemplified the implementation of dominance informed by western values including the control of nature by an authority. Traditional agriculturists, ranchers, and natives alike were not seen as having the intellect preventing them from continuing some of their land management practices (Wildcat, 2005).

The figure below depicts some of the issues people face with regard to cultural rights. Knowledge systems are difficult to fully verbalize, which creates many sources of difficulty for practicing and incorporating cultural rights. Defining the appropriate domain is important for supporting the continuance of culture (Winthorp, 2002). The figure depicts key areas where differences of ideologies clash, or potentially build upon one another given the development of a respectful domain for cultural knowledge systems.

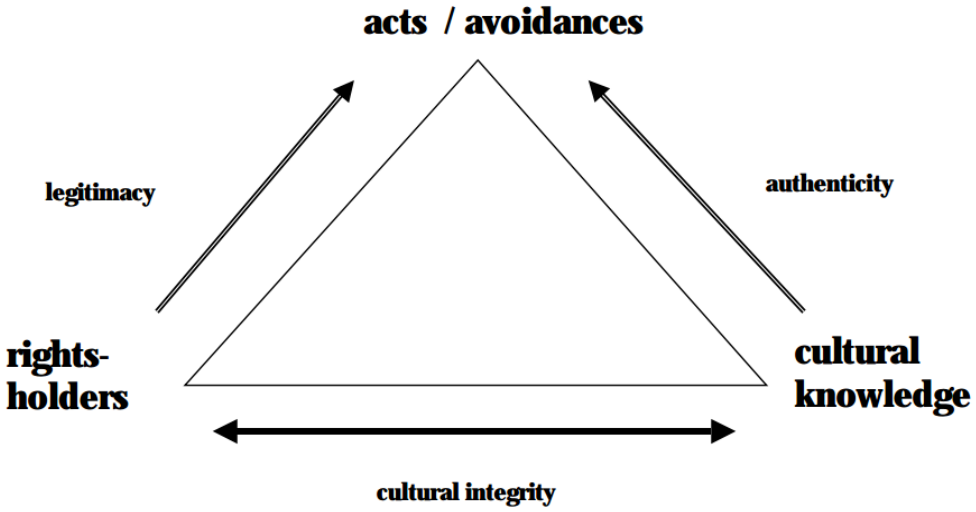

Figure 1. The Triangle of Cultural Rights.

Figure 3. The Triangle of Cultural Rights from Winthorp, (2002, p. 163).

Anthropologists made considerable discounts native people's contributions to ecological management. A few stood in opposition; however groupthink silenced some of their views. Native people are often characterized and critiqued as "backwards" and compared to more "perfect ideals," which western society is held to possess (Tuhiwai-Smith, 1999). The book *Ecological Indian*, by Shepard Krech, uses examples drawn from anthropology that sought to prove native people were less than human. Rather than unpacking these assumptions, the author choses an empirical approach that builds on examples showing that no societies were "perfect" or one-dimensional. For instance, native people's management of the plains for bison hunting was only recognized for its food value, rather than the other benefits conferred to the environment. According to Raymond Hames's critique, Krech does not consider the western destruction of indigenous conservation approaches (2007). Judgments about indigenous contributions to land management appear to reaffirm power differentials, rather than create actual inquiries or conclusions. For academics and land managers, it is easier to work from a frame of reference that maintains their own power. Biolsi elaborates, "as scholars, how could we hope to understand the situation… without asking systematic questions about its linkages to the construction of and the shoring up of white privilege generally?" (2005, p. 254). Not recognizing tribal peoples' contributions to land management result in downplaying their cultural rights, decreased information sharing, and biased management.

Bodie Shaw's work pushes the envelope, juxtaposing "western science" and culture against huckleberry management as a backdrop. His work highlights the cultural

significance and the need for production. With those goals in mind, he views science as a tool that native people will need if they want to continue their culture. One of the issues with the conclusions drawn from this work is that they reinforce the idea that native people are of the past and need "western science" to save them. To more honestly engage with the issue, western science often served as an affront to native peoples, who also have deep knowledge. While it is important for native people to employ science for their interests, retaining their agency is equally as important (Argawal, 1995). Emphasizing exclusively upon economics is a western metric, rather than a holistic look at huckleberry management.

Often, land managers took on jobs that carried trust-responsibility obligations toward native communities but had limited knowledge of the histories, legal status, or cultures of the communities (Ryan et al., 2012). The absence of these kinds of insights, land managers operate with a limited point of reference regarding native peoples, often based on media stereotypes. Treaties are considered the supreme law of the land, but this is still not always reflected in administrative materials created by federal agencies (Ryan et al., 2012).

The US was founded on principles leading to the exploitation of the tribes, and sometimes, management practices continue as if the tribes are non-entities. The land managers and tribes are tasked with building relationships that will improve the trust-responsibility relationship. Indigenous communities tend to differ in how they categorize lands as protected or for use, believing that their objectives will be met through more hands-on management, even in today's forest conditions (Ryan et al., 2012). Official forest service policy includes the maintenance of gathering opportunities; however, they

failed to consult tribes with regard to their Non-Timber Forest Product (NTFP) management plans. The ITC protested the approach because forest consultation is a component of trust responsibility protocol (Goschke, 2009).

Indigenous Knowledge

Scientists' tendency to separate knowledge from religion and ethics is in contrast to indigenous knowledge (Ryan et al., 2012). For example, early in the growth of the science of ecology, folklore was not considered a valid way to inform scientific understanding (Stewart, 2014). Stewart's work validating indigenous contributions to ecosystem management in the mid-1950s was not considered publishable because fire suppression was the policy of the day and because of bias against indigenous land management (Ryan et al., 2012).

The timeframe of TEK is long, as opposed to the short–term investigations carried out in early ecological studies (Ryan et al., 2012). TEK is considered both geographically and temporally significant (Huntington, 2000). The accumulation of TEK is similar to how information accumulates in journals. People learn by experience, observation, and experimentation. That information is accumulated and passed on, however there is a longer time interval. TEK is woven into the fabric of culture, including language, oral history, decision making, and land-use. Often, knowledge is collectively owned and passed on through oral tradition between generations (Ryan et al., 2012).

TEK is often seen as less valuable than scientific information. The use of TEK in forestry management plans was not a consideration until tribes were able to assert

themselves (Ryan et al., 2012). Many forestry practices do not incorporate indigenous knowledge, partly due to the differences in access and understanding and the power differentials that existed in the past (Ryan et al., 2012). Additionally, there is the challenge of taking traditional knowledge and packaging it into western science. Furthermore, using TEK requires taking a sociological approach to gathering biological data. TEK may require cross-cultural communication, which is not necessarily a part of a land manager's skillset. Using TEK also requires a departure from known approaches, which some managers could consider uncomfortable (Huntington, 2000).

Berries

Changes in access to traditional foods have taken place at many levels, with indirect, direct, immediate, and accumulating impacts. One of the challenges is that the loss of the huckleberry fields did not happen instantaneously. There were a series of changes that led to the long-term decline in berry production and access to berry-producing lands. Central to the reduction in huckleberry production are changes in management, such as fire suppression (Turner et al., 2008). Additionally, Huckleberries only sexually reproduce during early-seral phases (Anzinger, 2002), which adds another layer of possible impacts.

Because many huckleberry-gathering rights are off-reservation, managers often look to balance commercial interests with the rights secured by the treaties. Non-timber forest products (NTFPs) were an essential part of the early economy of the region, including foods and also fibers used to create basketry or clothing. The market for NTFPs ranges from the medicines gathered, to floral items, to resins. The industry is

now a multi-billion dollar industry, with the Pacific Northwest accounting for at least $200 million annually (Goschke, 2009). For huckleberries, the demand outweighs supply (Barney, 2003). Of all the states, Oregon's public lands produce the most NTFPs monetarily.

With the increase in population, the impact of past management decisions involving the production of non-timber commercial products, such as berries, have sometimes been limited, despite the growing demand. Surprisingly, very little information about huckleberries exists (Barney, 2004). Research into NTFPs (non-timber forest products) is also limited, making management more difficult (Swanson, Studevant, Campbell, & Donato, 2014; Goschke, 2009). People continue moving to the Pacific Northwest, and the impacts of climate change on food systems may make the issue of access to huckleberries more pressing.

Methods

Oral History

During this thesis project, I utilized oral history research method and incorporated self-reflexive analysis of the data collected. Native people's rich oral tradition, as a method for intergenerational transfer of knowledge lends itself quite well to incorporating oral history as a research method for better understanding issues impacting tribal members. In addition to social location, reflexive analysis makes context visible ranging from interpersonal to institutional. Furthermore, reflexive analysis is a possible avenue for the exploration of theory, epistemology, and pedagogy (Mauthner, 2003).

According to Hay (2010) oral history is recognized as a tool that studies underrepresented histories, place-based experiences and memories of marginalized groups. Employing oral history is an excellent way to bring forward the experiences that would otherwise go ignored or written into the background of dominant discourse. Furthermore, oral history is sensitive to context, including a better understanding of systems (2010).

I conducted interviews with questions about the experiences and histories of berry pickers. Participants with more than five seasons of huckleberry-picking experience were selected. Recruitment occurred through word of mouth, through 'chain referrals' (Huntington, 2000), and through community outreach via flyers in public spaces. Due to the history of trauma and dispossession of native peoples, participants were encouraged to only share what they felt comfortable with. Additional precautions took place with regard to TEK and culture. The interface between tribal existence and the environment includes stories that occur within the spiritual dimension. This kind of knowledge represents a holistic set of responsibilities, which creates the need for extra protocol (Whyte, 2013). Some of these stories are only appropriate to share with students, which are groomed to know when and if it is okay to discuss topic.

The stories guide people in their personal growth and how to reciprocate with their environments. Ties to specific places or animals help define community structure (Whyte, 2013). Stories contain lessons that develop the way students think, making their connection to the sciences developmentally different than the way mainstream science is taught (Bang, 2010). Certain topics are more appropriate for staying within oral tradition.

Interviews are archived in a system that makes the information available to tribal government, management, or community use if the participant desired.

Food sovereignty in relation to huckleberries incorporates treaty obligations, inherent rights, experiences with regard to access, and different points of views by participants. Participants are asked demographic information, including their age and tribal affiliations. Questions centered on food sovereignty including access and condition of berry picking fields. Further questions included information about their huckleberry-picking experiences, including concerns and changes. Follow-up questions were asked so that the participants felt encouraged to elaborate on areas in which they were knowledgeable or felt were important regarding access.

I employed a reflexive analysis in my analysis after coding oral history themes related to food sovereignty. Coding stemmed from key concepts and issues regarding access as related to the literature review or important issues highlighted by interviewees. Some themes are related to one another or provide important contextual cues regarding food sovereignty issues. Participants highlighted societal issues stemming from western expansion including: awareness, safety, and gender bias. With regard to management people discussed tribal, western, and land-use issues with respect to Ecology and Economy. Additional social themes included: cultural, education, and economic. Themes related to the future included increased respectful relationships, the importance of sustainable yields, asserting the Treaty of 1855, and making management responsive to the people and ecological functions of their homelands.

Participants' responses provided additional details regarding forest conditions and community issues. Participants were from three age classes, created according to commonly held tribal classifications. Many participants identified with interconnected collectivist social norms commonly associated with tribal social and governmental systems. My analysis includes an understanding of common themes related to food sovereignty, interconnected worldviews and management directions. Analysis occurred on an individual level and collectively, which is similar to tribal social norms that place a higher precedence on collective cohesion. In addition to reflexive analysis, tribal membership and cultural background better informed the process. Through analysis and my social position, my work is more relatable to community members and respectful of community concerns.

Warm Springs

Ecology of Huckleberries

Pre-forest communities did not contain timber and were thus considered disorganized, preventing ecologists and foresters from seeing their value until recent times. The early-seral stage, or pre-forest community, is defined as the stage between a stand-replacing disturbance and later canopy closure. Huckleberries are important understory species because they "[contribute] to biodiversity and long-term ecosystem productivity" (Swanson, 2012). They are present during all stages of forest succession; however, they are often most productive during earlier seral phases, partly due to increased competition from other shrubs in later stages. Stand clearing events are

important for genetic variation, leading to adaptability to environmental stress (Anzinger, 2002).

There are several species of huckleberries found in the reserved and treaty-ceded areas of the Confederated Tribes of Warm Springs. The most important is the big huckleberry (*Vaccinium membranaceum Douglas*). Due to their size, nutritious content, and cultural importance, they are the focus of most of the harvest and management activities of the tribes. Other species are important to tribes, but the big huckleberries are the most sought after. Berry plants have a symbiotic relationship with mycorrhizae (Barry, 2003).

Historical forest condition included regular disturbances, such as fires set by Native people, and these promoted the early-seral phase (Boyd et al, 1999; Pyne, 2001; Stewart, 2014). It is estimated that fire suppression and management's emphasis on timber production has diminished pre-forest communities by 50% as compared to the nineteenth and early twentieth centuries (Swanson, 2012). Taking into account changes in the complexity of the system, the percentage cover during pre-forest conditions is likely to be even lower (Swanson et al., 2014).

In the Pacific Northwest, forestry management of public forested lands is shifting from emphasizing timber production to recognizing all the seral stages (Swanson, 2012). This shift is partially due to the impact of wildfire suppression, which created conditions in which trees are close together, grow slowly, and are more susceptible to disturbances. The emphasis on earlier stages is also attributable to increasing demand for NTFPs and more complex forests, which promote diverse plant communities and their associated

wildlife (Swanson et al., 2014). Natural disturbances are increasingly different from their historical antecedents due to the changes brought on by forest management and climate change.

Fires promote huckleberries because without fire, the seral stage does not progress, eventually leading to competition from other shrubs and conifers and resulting in closed-canopy forests. Because berries reproduce clonally through rhizomes, they are resistant to fires. Fires differ in how they burn, and forest conditions today make fire a more difficult tool to use (Minore, 1984). Following a prescribed burn, it was found that berries returned to abundant production within five years (Minore, 1984). Historically, a field could be utilized for, on average, between 40 and 70 years prior to the forest reestablishing itself using fire as a tool for maintenance (Anzinger, 2002).

Studies of fire-return intervals from the mid-1800s in Washington's North Cascades show that large huckleberry patches were established following a stand-replacing fire and then maintained for a 20-year interval with low-severity fires (Anzinger, 2002). Similar methods were employed on the north and south side of the Columbia River for the sake of gathering, cultural ties, and shared management.

Recent findings derived within traditional huckleberry picking grounds demonstrate greater production through management practices based on the mechanical removal of over-story foliage. There have been problems with fire and mechanical removal damaging rhizomes. Results were also variable regarding edge effects. A lack of production on the part of a burned site could be partly due to its older-aged trees because the berry field was not maintained for conifer encroachment by fire following

disturbance. The age class of these trees was older than those trees affected by other management practices that the study examined (Anzinger, 2002).

A study by Anzinger recommended the promotion of slow stand development, along with the regular mimicking of disturbance. Stands must remain open long enough for huckleberries to reestablish themselves (Minore, 1984). Due to the central importance of huckleberries to the local tribal communities, further study is required to continuously monitor these findings. The nature of fire disturbance, as well as the highly variable and unknown impacts of repeated mechanical removal, is factors with long-term implications for management decisions. The fire disturbances also took place during the altered fire regime, meaning that follow-up burns may not have promoted complexity or that the soil was damaged to a great extent.

Management emphasizing capitalism led to limitations in studies due to shorter time frames and immediate return emphasis. Forestry practices promoted homogeneity by promoting trees as commodities, all of which were in younger age classes than those in the native-managed forest systems, which included complexity. Additionally, forestry practices promote forest regeneration by skipping past the early-seral phases (Swanson, 2012). Huckleberries do not respond well to complete over-story removal, such as clear cuts (Anzinger, 2002). This conclusion occurred over a short time frame, meaning that this sort of methodology should not be completely discounted.

Community members came together concerned that forest management did not include other important resources. The tribe worked with Oregon State to develop the Integrated Resource Management plan, which was adopted as policy. Concerned about

the amount of lumber, the B.I.A. directed the tribe to cut; they were able to reduce timber harvest to 42 million (Wilkinson, 2005). Unfortunately, due to the economic situation the tribe is cutting far more board feet. Many people are already living in poverty and an economy has not developed despite the amount of resources extracted from the community. The treaty trust responsibility is supposed to protect tribes from global forces (Whyte, 2013). Unfortunately, some aspects of the situation are comparable to exploitation occurring in third world countries, given birthrates, life expectancy, and access to basic services. Some people might even call it a war crime given the lack of access to recourse by tribal community members.

Climate Change and Food Sovereignty

Tribes throughout the United States have oral traditions that mark changes in their environments. The tribes of the Pacific Northwest remember the end of the last ice age with stories about great flooding. Despite their cultural differences, such stories often refer to taking to higher ground and the importance of a canoe (Hines, 1999). Through experiencing and confronting changes in their environment, intergenerational teachings often reiterate the importance of the kinds of learning that addresses long-term impacts. Indigenous people are seen as: observers, victims, mitigators of, and adapters to climate change (Grossman, 2012).

Storytelling occurs mostly during the winter, as a way of sharing history and knowledge. Ecological and place-based experiences are emphasized through oral tradition. For instance, stories provide guidance for taking care of water or adaptability when seasons can get out of order. The trickster character, Spilyay, a coyote, plays a role

that is on the spectrum from good actions to being spilyayay, sneaky. Wiwanu is associated with the coyote, often serving as the voice or reason, knowledge, and humbleness. These teachings are carried on through tribal communities and through a continued relationship with huckleberries (Aguilar, 2005; Hines 1999). The huckleberry sisters remain a strong influence and social force within informal circles. Many women are even tattooed with the huckleberries, marking their Upper Chinook affiliation and the retention of their cultural roots.

According to Daniel Wildcat (2012), Western cultures often derive their information about climate change from the media; including newspapers, cable TV, and the Internet. In contrast, native people's awareness stems from their experiences and observations of seasonal changes. Their economies are continually impacted by disproportionate trade relationships; however, access to traditional foods is a major concern for the general tribal community. Furthermore, while there is considerable effort to assimilate tribal belief systems, many of the images represented in the popular media are in contrast to the experiences of native people. Even if native people buy into the public discourse as a form of internalized colonization, their communities still face the impacts brought on by climate change (Wildcat, 2012).

Because tribal economies are resource-based and their food systems are linked to local conditions, they are among the most impacted by climate change (Wildcat, 2012). The decrease in water and snowpack result in impacts to the tribe's traditional foods and current economies (Grossman, 2012). Extreme weather events and shifting Ecosystems impact foods and where people live (Whyte, 2013). Species ranges are expected to change, along with possible greater isolations, or disruptions to critical life stages. Often

critical life stages developed over thousands of years based upon more predictable climate conditions (Grossman, 2012). Dams and agriculture already impact Warm Spring's most sacred foods, and this has been accelerated by climate change. Extremes in stream flow and temperature changes limit salmon survivorship (Mantua et al., 2010). With the decrease in wild foods and increasing gas prices, food security is a major issue for individuals' and communities' continued existence (Lynn, 2013). Increased heat waves, pests, and diseases are all expected for the Pacific Northwest (Grossman, 2012).

According to Kyle Whyte (2013), the continuance of culture relies upon multi-pronged approaches to addressing food sovereignty and climate change. Communities need to respond to current or future challenges through adaptation. Loss of culture, impacts due to colonization, and disregard to treaty rights are all factors tribes face with regard to their livelihoods. In addition, tribes need to work from a community level, to relationships with their neighbors, all the way to a global scale. For instance, the United Nations holds the value that indigenous sovereignty deserves respect (Whyte, 2013).

Climate justice remains at the forefront of indigenous issues worldwide. An additional challenge is the same institutions tribes are to work with are unaware that they are likely the beneficiaries of injustices against tribes. The system is designed that way. Situating justice within the interface of tribal natural resources departments, tribal governance, and the federal government is important in addressing climate issues. Furthermore, it is important that justice frames work for scientists, professionals, and academics. Whyte suggests a forward-looking approach with the desire to remove political obstructions and address ecological issues. Increasing the level of responsibility for all parties in the direction of justice will ensure that the work is responsive to the

needs of tribal communities (Whyte, 2013) rather than another opportunity to take their resources. Inaction is thought to lead to 'Ecological removal' (pg. 61) because tribe's collective rights, economies, and cultures are tied to the lands (Grossman, 2012).

Sociocultural Factors

Tribal community impacts are the result of lengthy changes brought on by westward expansion. Early policies focused on breaking people's relationship with the land. People became more reliant on the dominant economic system, although the Warm Springs community retains much of its culture today. Breaking up families and village connections brought on a major shift in economies; however, people still carry on many traditional teachings.

Demographic information for CTWS represents extremes that exist within native communities that are similar to oppressed people throughout the world. The Warm Springs Indian Reservations are not very integrated with other local municipalities, because they were able to counter allotment policies that partitioned landscapes. In contrast to other communities 99% with most of their land based governed by the tribes. "Compensation" for the inundation of Celilo Falls helped the tribes buy back lands lost during the Dawes Allotment era (Wilkinson, 2005). This has created a higher degree of autonomy. The reservation experiences a higher than average level of poverty. Poverty hovers at 39%, although it ranges throughout the year due to seasonal work (CTWS, 2008). The age demographic of the populations includes 50% of the people under the age of 25. Furthermore, the average lifespan is 47 years. The leading cause of death is liver problems related to alcohol abuse (CTWS, 2008). There is no specific detox, in-patient

treatment, or transitional housing making it difficult to address issues related to alcohol addiction.

Travel and resources limit academic opportunities. The distance to the nearest two-year campus is 20 miles and four-year institution greater than 50 miles. Tribal colleges are focusing on food sovereignty; however the Warm Springs Reservation does not have a college nor are there any tribal colleges in Oregon (Ebelacker, 2014).

The deliberate targeting of food systems and landscapes brought on a range of economic, social, and ecological systems of the Warm Springs community. While most societies experiences changes in diet gradually, the pace at which indigenous diets have changed is far faster. The impacts are seen in connection to changes in health and wellbeing (Turner et al., 2008). Due to dietary transitions, indigenous populations around the world are linked to greater instances of chronic disease. With lessened access to fishing, hunting, tubers, herding, and berry gathering, diets shift towards westernization. Westernized diets include processed foods, high carbohydrate levels, saturated fats, and high levels of fructose (Damman et al., 2008).

Results and Discussion

The oral histories project proved that listening is a useful way to gain insight into the conditions of berry fields, issues regarding access. Access certainly proves important for food sovereignty, along with other benefits, including cultural continuance. There are considerable efforts to maintain cultural teachings, despite the many challenges. One of the noted challenges included the intersection between political access and availability.

The cultural community is able to overcome obstacles to meet ceremonial needs much of the time. Participants noted challenges to continuing teaching given age demographics, land use changes and coordination at a management level. Table (1) below summarizes commonly heard themes when interviewees discussed their experiences regarding huckleberries.

Table 1: Repeated Themes Related to Food Sovereignty

Societal Barriers
Visibility decreased
Safety Issues
Lack of respect or awareness among land mangers or public
Gender Bias
Management
Objectives often include an Industry focus
Protecting the physical resource necessary for sustainable yields
Important to include traditional direction
Adaptability important for people and ecosystems
Better regulating NTFPs important on and off reservation
More monitoring necessary and engagement with tribal community
Does not seem to be a priority
Social
Taking care of berries is a traditional value
Continuance of culture is important through practice and teaching
Camps are considered happy, educational and respectful places
Community and household needs are important
Not having enough makes those years more difficult
Future
Native people are resilient and adaptable to change
The Treaty of 1855 is important for ensuring sustainable harvest
A real world plan is necessary, using intelligence, and available tools
Long-term is important and regard for incorporating cultural traditions

The food sovereignty issue regarding treaty access to huckleberries proves complex. On a Warm Springs community level there is considerable effort to maintain cultural continuity. Some interviewees strongly believed in the power of the people to organize around the issue of huckleberry management. Additionally, participants felt like natural resources management should prioritize it. Participants' stories reflected multiple generations of experiences. The need to protect berries, incorporate more values into management, and address social or ecological issues were all common themes heard.

Social Structure

Oral histories better defined the function of huckleberry camps represents the importance of family units and cooperation. The action of setting up camps includes opportunities for teaching younger generations. Traditional pickers are groomed from a young age (Shaw & Jensen, 1998). Participants mentioned the short period that we are here and teaching young people is a way to reaffirm, "picking will remain in their whole lives, long after we are gone." According to oral history participants, men helped set up camps prior to the arrival of women and the rest of the family to ensure safety and that everyone is taken care of. This kind of work is taught as a responsibility and a sacred duty. Because huckleberries and deer take care of the community, a reciprocal relationship is created where people feel the responsibility to take care of them. Most participants mentioned a great-grandmother or heard of a great-grandmother that knew how to dry berries. Participants mentioned the role respect played as different families "took care" of different places through setting low-severity fires. The grandmothers set a happy tone for the place.

Political Access and Leadership

With western laws juxtaposed over colonialism the voices of the huckleberry gatherers is drowned out. Issues regarding access result from many generations of removal and assimilation forces that go against native people and their lands. Many interviewees mentioned how men prepared their camp and how their families were able to process and store food year round. Their grandmothers and great-grandmothers stirred the berries with a stick. There is a direct connection between gender balance, interdependent relationships and the community's ability to break the cycle of poverty. Many interviewees felt actionable steps towards greater management emphasis are slower to take hold due to gender bias. Managing for huckleberries is important for passing along the knowledge and honoring the direction coming from the grandmothers.

Interviewees remarked that security is an issue while picking, which seems connected to the settler colonial narrative of an unoccupied landscape. They discussed the challenges about keeping their activities private, as they are inherent rights. According to interviewees, to protect berries in the past, people did not talk about them. Now it is necessary to talk about them and take actions to make sure they are taken care of with respect to traditional values. Thankfully, traditional values include taking care of the resource. The task is still challenging given the need to balance traditional protocol with management practices both on and off the reservation

Figure 4. A river Indian woman drying berries in the Gifford Pinchot Forest. Photo (Fisher, 1997), *The Western Historical Quarterly*

Regardless of the many changes in the day-to-day lives of native people, interviewees reported that huckleberries important culturally, for their health, and economically. Many people indicated the desire to include more traditional activities. Teaching Indian ways is important to people, and they often work hard trying to create space for doing those kinds of activities. Participants supported the idea of sharing

berries with those that do not have access or at community events. A few of them remarked that this is a good way to put the value of taking care of one another into action. According to tribal planning documents increasing the amount of berry fields is an important benchmark. One participant mentioned that it is important to take care of the resource and that it would take care of us. There might not be abundance, but we would be provided for. This viewpoint is in contrast to values capitalism holds and some approaches to management. Studies often looked at yields, rather than the well being of the plant.

Colonization Impacts

This colonial pattern of interacting with native people continues today through maintaining a lack of political access or earning ability. Furthermore, historical colonial divisions divide communities against each other through lateral oppression or internalized colonization. One participant mentioned a woman from a neighboring tribe physically threatening her while she ceremonially gathered. In the case of internalized colonization, land managers identify with the dominant patterns of capitalism, rather than the strengths held within their communities.

The traditional 40-hour workweek, demand for caring for extended families, and an issue regarding competition or exploitation in ceded lands adds additional challenges. Some people are able to arrange their work around the need to go picking. Many interviewees mentioned societies pace is out of sync with the seasons. Interviewees found it difficult to keep up, especially with basketry. They felt it is important to try to

learn basketry, but it takes a lot of time, work, and strength. For many the cost, accesses to a teacher, or time off work are issues to making a basket.

Outside interests or new industries, such as ranching can dictate land management, rather than traditional values or ways of thinking. To further these interests, there is rhetoric about cutting down trees, however salvage logging, especially old growth decreases drought resistance and increases the likelihood of fire. Similarly, cattle impact wildlife, may promote weeds that increase fire danger. While huckleberries are important to the tribes, many speakers mentioned they are not a priority politically or for management. They went on to explain there is not an immediate dollar value attached, and are seen as something from the past.

Decolonization

As I sat with my first interviewee, a gift came back to me. My legs began to swing playfully and my thoughts went back to days that were gone. She and I spoke in the language together as a small child. A huge weight lifted up off of me when I realized she taught me outside of my home. I used to speak the language fluently and communicate with the grandmothers in the longhouse, our one of traditional spaces.

During the interview, I could see a singlewide trailer removed by our emergency management team. Sitting in that chair, with my teacher, I joked that I was better behaved back then. A piece of myself that I thought I would never feel again, returned to me. The process got me thinking about how important it is to create safe spaces for people to live in accordance with lessons passed on to them. Nervously watching that trailer, drug out of our learning space reminded me about how important it is to

decolonize my own thinking. The teachings contained within our community kept us going against all odds, and working towards making the best of our circumstances. On a personal level, I realized how important it is to consider mental models and physical spaces.

Education

Rather than education serving as an avenue for communities to address their own issues, education often reinforces the idea that native people are inferior. Without access to culturally relevant education in public schools, people are sent the messages that are at odds with education. While there are strides in Indian education, changes are slow to materialize. The current state of education has not starkly contrasted messages brought on by boarding school. The amount of settler colonial narratives within people's studies creates a dichotomy where people feel like they have to pick between who they are and the Western world. Additionally, treaty trust responsibility sometimes never comes to fruition with the promise of education. Food sovereignty is a way that communities continue to use to address gaps in governmental services and build common ground with newcomers. For instance, healthcare is limited and increasing the availability of fruits and vegetables is a way to address health issues, such as diabetes. One interviewee mentioned that huckleberries should appear in school curriculum. They remarked, "If it is not talked about, then it is not seen as important." Education is an avenue to create greater awareness and the students may eventually go into the natural resources management field.

Management

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Management off-reservation is touch ago with some small-scale projects taking place. One interview mentioned they sometimes seem secondary to other objectives. The limited regulation of NTFPs makes it difficult for gatherers to harvest unimpeded. They described camps as long-term and that elders referred to people as "boat people," perhaps as a throwback to times when the steamboats were the primary mode of transportation, along the Columbia River. This demonstrates the amount of years where security and increased transportation into usual and accustomed lands is an issue. One interviewee remarked, "Maybe there is too much access." Additionally, other mentioned interactions follow a trajectory that, Sometimes they feel they have just as much right as you do." She went on to explain how people do not realize the status of native people is different than other Americans because we legally retained the right and it is a part of who we are.

Forests managed by native communities are an opportunity to research practices and advance the field. The differences that set them apart from the mainstream are also possibilities for innovation. Forestry is moving in the direction of indigenous forestry practices, in which multiple benefits, including material, ecological, and social benefits, are the desired outcomes (Ryan et al., 2012). In contrast, one interviewee remarked a western land manager told them a gallon of berries is enough, rather than recognizing their management concerns regarding trust responsibility towards treaty access. Interviewees expressed the desire to continue to bridge the social-ecological interface. They felt greater community engagement with management could result in better addressing issues regarding huckleberries.

My personal take on the issue echoes the words of the participants. One person mentioned the need to take berries "off a pedestal and that they are gifts from god to be understood and taken care of". They mentioned, "figure out how it works, Come up with a real world plan use the intelligence god gave you, to help the land become productive again, continue the productivity. We do not have to become a John Q American. We can be backwards Indians." I believe the protection of berries, mostly in the cultural sphere is because the culture comes under fire in so many places, including the limited focus by management on the resource.

Conclusion

Similar to the fish wars of the 1970s, in which tribal fisherman won the Boldt Decision in federal court, which required states to honor their right to fish, manage fisheries, and manage natural resources, access to huckleberry picking is important for the continuance of culture and community well-being. As an area of forestry that has been largely ignored, management must be responsive enough to promote long-term harvest needs and the ecological function of forests.

Repositioning the discussion to support the work that is taking place and increasing opportunities for community members kept coming to mind. Many people travel on foot, although there is occasional mass transit. Both indigenized education and access to western education are avenues to help support the challenges the community faces. There is a need to better acknowledge the strengths and accomplishments across generations.

My own challenges returning home represent a gap in intergenerational transfer of knowledge. For years, people held me in prayer; waiting for the day I would return. With earlier losses of community members, a big part of me felt like I did not make it in time, but my teachers tell me that I am never too far from those that came before. Several participants noted the loss of elders at an earlier age. Both cultural continuance and the loss of information to better inform management are at a critical juncture.

The distance to travel to academic institutions, lack of support or visibility within the materials is analogous to times when young people were removed to boarding school, jails, or foster care. The urban rural gradient proves challenging for people due to lack of transportation and different norms. Creating greater mobilization behind the efforts of community members is a great way to address some of the issues the tribes face. Representation in academia is important because research needs held by the community, are enclosed within the social structure. People noted that an investigator from within the community could better understand and serve the community than people passing through.

The issues associated with huckleberries help to represent the complexity of forests, humans, and differing value systems. Anzinger (2002) suggests that huckleberries may rely on large fires every few hundred years to open up the canopy and provide opportunities for sexual reproduction and that rhizomes could actually be centuries old. The short durations of scientific studies are far from the scale that nature and people are actually operating on with respect to management decisions, although there are efforts to make more far-sighted decisions that attempt to maintain a disturbance regime that

promotes berry production. Several elders cited picking within areas managed in this way.

Standing upon a racist caricature that native people are backward continues pushing exploitation of resources, rather than integrated management, which the tribes are known for. With the underdeveloped economy, there is a push to manage for a single objective short-term. Similar to native stories, the exploitative business models serve as monster that needs feeding. People do not want to feed the monster, but other paths are less clear to them. This model includes an already low set price for timber where most of the money is made beyond our borders. It is likely that very few people see the wealthy Japanese people at the other end of the market place.

The broken system does provide seasonal, our version of middle-class jobs, there is no career ladder. In 2003, there were 130 jobs down at the mill with 100 tribal employees (Wilkinson, 2005). The internalized colonial model imposed by the B.I.A. created vested interests that persist even after the tribes take over their own affairs. Under the B.I.A's direction and Regan politics, the tribe cut 105 million board feet in 1985. At the time this paper is written, the mill cannot make payments and forestry management protocols are dismantled to keep this exploitative industry going in an underdeveloped economy. Figure 5, is a logging truck seen heading towards the mill. Some of the trees are likely hundreds of years old, and the benefit to the community will only last a few bill cycles. With the mill not paying into the general fund, there is likely even less of a benefit.

Figure 5. Logs exiting the reservation, May 2014, my photo

TEK is becoming increasingly popular in management. Western expansion often includes disproportionate trade, so it is important that information is gathered with respect to tribal communities. This gathering process is lengthy, and it is possible to analyze information in dynamic ways. TEK is a stream of information that incorporates available expertise (Huntington, 2010), lending itself to managing traditional foods and materials. If oral history were conducted on an annual basis, it is possible that annual analysis could lead to future research questions and adaptive management. Some participants expressed concern about the responses of berry bushes to different climactic conditions or forestry practices. Participants noted the presence of fungus or bugs. Reporting their observation, along with field observations deepens the understanding of each location. One participant mentioned the decrease in dwarf huckleberry (*Gaylussacia dumosa).* The participant thought the loss is due to logging practices, because it is

smaller. Reporting on an annual basis would increase the visibility and voice of pickers, while providing much needed observations to compliment possible monitoring projects.

Rebuilding networks between neighboring tribes or communities with similar experiences would be an avenue for healing. Through building the interdependent networks, the groups increase their capacity to overcome the hardships they face, including contesting the legacy of colonial impacts. Furthering land-use incentives and supporting grassroots initiatives are avenues proposed to help address the ecological impacts faced by tribes.

Creating longer time frames for developing information is important on a regional level, as many neighboring communities include similar traditional foods and materials. Due to the historical bias against native management tools and the recent development of ecology as a field, there are challenges involved in incorporating indigenous perspectives within forestry knowledge or practices (Boyd et al., 1999). Other tribal communities discussed how promoting berry management increased competition for the resource. They mentioned having an outsider as the principle researcher created challenges, because the outcomes of their work did not give voice to the treaty right holders.

The ramifications for the layers of federal policies, colonial posturing, and establishment of the settler state created an atmosphere where tribes are tasked with tackling a variety of issues. Incubating a broader dialogue and respecting a tribe's right to self-rule are the hallmark of many discussions. The injustices that took place to gain our resources may never hear a judges gravel drop. It's rare that circumstances are dealt with beyond a ledger paper. The B.I.A. signed off on the wholesale destruction of our

forests and it is important to remember they are housed in the Department of Interior. The B.I.A. person in charge of trust assets happens to own a logging company.

The pattern of exploitation reached its height during the 1980s with the neoliberal capitalist push brought on by Reagan. Despite the lack of U.S. branded justice, we still have an opportunity to retain and rebuild our societies. The whole region often benefits from tribes at the frontlines, although much of the work takes place as an inherent responsibility rather than through a system of governance created by the United States.

Currently in its infancy, the Confederated Tribes Climate Change Workgroup seeks to facilitate leadership development, communication, and the CTWS's capacity to address climate change. Their work stems from concerns regarding the current and future situations. Through their discussions, they have created a mission statement that reaffirms the importance of dynamic responses to climate change that are guided by responsibility towards the earth, waterways, and the future. This umbrella is serving as a platform for the community to come together, as we often do during the good and bad to create solutions and actions that work for us.

Policy Implications for CTWS

The tribes are working towards continuing to put Treaty Rights at the front line of their interactions and activities. The Boldt Decision reaffirmed rights, rather than granting any additional rights. Internally, the tribe could create additional time off for cultural leave, create more opportunities for meaningful workgroups, and offer support for career trajectories, aligned with people's dreams. Often times, these opportunities are offered under our names, but we may not benefit.

Some protocols came up with logging activities when a huckleberry picker approached the silver culturist. On a brighter note, this conflict resulted in a marriage and they continue to work together on behalf of taking care of berry fields. These protocols are set aside, similar to the other resources, because the tribe's budget is far from balanced. Not only is developing a sustainable economy important, but policy should better guide management to protect all treaty reserved resources.

Management Implications

Working across siloes is important for moving forward. The tribes have excellent policy documents, with social and natural resources management linked. Climate change adaptation implementation serves as a platform to broaden the discussion and create tangible benefits extending to every member of the community. Increasing the community's representation and involvement in management is important for addressing issues important to the community. Additionally, it is important the community is benefitting from decisions made on a long-term. Previous management emphasized a longer term and it is important to deliberate the impacts of decisions, even if they are made under economic duress. Fully understanding the impacts of decisions on huckleberries is important for ensuring sustainable yields and taking care of the resource.

Community Implications

Tribes exist as a legal entity with the mandate they serve the communities interests. The tribe s are at the forefront of many environmental issues that advance human rights and the well-being of communities. Tribes ability to step up for god's gifts, such as salmon or lamprey are examples where tribal thinking works towards a

better future. Working towards encompassing privileges afforded to the average American citizen is one metric. While many of the issues the community face today are a part of the legacy of expansionist polices, we are still positioned to create the kind of world that we would like to see. The community would benefit from increased services and improved infrastructure. Decolonization is a shift away from blaming ourselves for statistics related to exploitation. Continuing to move in the direction of taking care of community and us is excellent for re-building a sustainable economy tied to the well being of homelands. Many community members bring good thoughts to their work or homes. Creating greater visibility and relationships that are true to the desires of the tribal people are great stepping stones to support all the hard work community members do. Coming together for community including the huckleberry sisters is to protect an established way of living with nature in the Creator's world.

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