A CULTURAL SNAPSHOT:

EXPLORING THE VALUE OF COMMUNITY PHOTOGRAPHY

FOR THE COQUILLE INDIAN TRIBE IN A CLIMATE CHANGE ERA

by

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THESIS ABSTRACT

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Like many American Indian tribes, the Coquille Indian Tribe of Oregon has endured long struggles to preserve its cultural traditions despite the impacts of colonization. Now, advancing climate change poses additional threats to indigenous ways of life. In recent decades, the Coquille have archived historical documents and photographs as a means to protect and assert their tribal sovereignty. There has also been a surge in photography within the Tribe to document contemporary tribal activities. Community photography may be a useful tool for the purpose of asserting tribal culture and self-determination in the face of a changing climate. Photovoice, a type of community photography in which photographs are combined with oral descriptions, may be particularly well suited for tribal purposes. This collaboration explores the value of community photography in general, and photovoice in particular, when used by the Coquille Indian Tribe in the context of climate change.

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CHAPTER I

INTRODUCTION

American Indian tribes have endured long struggles to preserve their cultural traditions despite the ecological, political, and socio-economic impacts of colonization (Anderson 2005, LaDuke 1999, Wilkinson 2005). Tribes have engaged in reciprocal relationships with local landscapes, seascapes, plants, and animals, since time immemorial (Anderson 2005). These reciprocal relationships in which, for example, a tribe's responsibility may be to care for salmon habitat so that healthy and plentiful salmon may continue to feed the tribe, are practices that are vital to tribes' spiritualities, cultures, and subsistence activities (Whyte 2013).

The colonization of North America and the establishment of the United States challenged indigenous relationships with the land in countless ways, including the persecution and genocide of indigenous peoples, the privatization of land, the forced relocation of various tribes, the drastic alteration of ecosystems, and various government-led initiatives aimed at forcing American Indians to assimilate into colonizers' Euro-centric society (Anderson 2005, Deloria and Lytle 1983, Merchant 2007, Smith A 2005, Wilkinson 2005). Despite these seemingly insurmountable challenges, tribes have demonstrated persevering resilience, and many continue to exercise traditional relationships with the land today.

Now, advancing climate change poses an additional threat to indigenous ways of life (Cochran et al. 2013, Cozzetto et al. 2013, Dittmer 2013, Doyle et al. 2013, Gautam et al. 2013, Grah and Beaulieu 2013, Lynn et al. 2011, Lynn et al. 2013, Maldonado et al. 2013, Parrotta and Agnoletti 2012, Reo and Parker 2013, Voggesser et al. 2013, Whyte

2013, Wildcat 2009, Wildcat 2013, Williams and Hardison 2013). Climate change impacts have the potential to intersect with the ongoing impacts of colonization by altering the abundance and distribution of local and regional plant and animal species, and by changing traditional cultural landscapes, thereby further challenging tribes' ability to carry out traditional practices and relationships with these species and places (Voggesser et al. 2013, Whyte 2013). In compromising indigenous peoples' traditional practices and relationships, climate change impacts may also compromise indigenous knowledge that is developed and transferred while interacting closely with local and regional places, plants, and animals (Voggesser et al. 2013).

The Coquille[1] Indian Tribe of Southwestern Oregon is proactively preparing for climate change impacts that may affect their tribal region in the coming years. Having overcome culturally devastating periods of colonization, displacement, assimilation, and termination, today the Tribe is federally recognized, and has been actively restoring cultural traditions and tribal knowledge (Hall 1984, Younker 2002, 2003). As climate change advances, the Tribe wants to be well prepared to protect their access to, and relationships with, the species and landscapes that are vital to these cultural practices and ways of knowing.

In recent decades, the Coquille have used documentation of tribal meetings and activities, and archiving of historical documents and photography as a means to protect and assert tribal sovereignty (Younker 2005). There has also been a surge in photography within the Tribe to document contemporary tribal activities. Jon Ivy, a Coquille Indian and member of Coquille tribal staff, is an avid photographer who

[1] When referring to the City of Coquille, OR, or the Coquille River in Oregon, Coquille is pronounced "ko-keel." However, when referring to the Coquille Indian Tribe, Coquille is pronounced "ko-kwel."

photodocuments tribal gatherings and activities.

Photography may be a useful tool for the purpose of asserting tribal culture and self-determination in a climate change context. Community photography, in which community members use cameras to document their experiences, is a form of collective action that could enhance tribal resilience as climate change affects the species and places that are critical to tribal culture. Photovoice, a research tool first developed by sociologists Caroline Wang and Mary Ann Burris in 1997, involves a community photography process in which photographs are combined with oral descriptions and storytelling. As a tribe that places emphasis on documentation, including photography, and as a culture that values the power of oral communication, the Coquille Indian Tribe possesses inherent qualities well suited to photovoice. This collaboration explores the value of community photography in general, and photovoice in particular, when used by the Coquille Indian Tribe in the face of climate change.

The Coquille Indian Tribe

Coquille History

The ancestors of today's Coquille Indian Tribe were Hanis-, Miluk- and Athapaskan-speaking coastal peoples living in territories totaling nearly one million acres in what is now the Coquille River watershed and surrounding coastal areas. Hall (1984), Tveskov (2000), and Younker (2003) describe the ways of life of Coquille ancestors. The environment in which they lived, where ocean, river, and land converge, brought forth a bounty of natural riches that nourished the indigenous peoples of the area and formed a vital part of their culture. Salmon, steelhead, and eels were caught and often dried for winter consumption. Open grassy areas along the coast were used to trap elk, another

important food source. Seaweed was prized, as was wild camas, which was the major starch for the region's indigenous people. Berries, including strawberries, salal and salmon berries, native blackberry, and huckleberry, also formed an important part of their diet both fresh and dried. Shellfish, too, was harvested and consumed in great quantities. Most of these foods are still vital to Coquille people today.

Like many indigenous peoples along the Oregon coast, the Coquille's ancestors were skilled basket weavers. Bead working was also prevalent. These skills have been experiencing a revival within some coastal tribes and communities, including the Coquille Indian Tribe (Hall 1984). Canoe-making was another major form of craftsmanship, as canoes were the most common form of transportation other than walking (Hall 1984, Younker 2003). The Coquille's ancestors often built and resided in houses made of cedar planks buried partially into the ground. A fire pit was often found in the middle. Less permanent housing was sometimes made of willows and grasses. (Hall 1984, Tveskov 2000, Younker 2003)

In the early to mid 1800s, European expeditions scouting land for settlement wreaked havoc on the coastal peoples of Southern Oregon by introducing new diseases, by rapidly displacing indigenous communities, and by outright genocide (Tveskov 2000, Younker 2002, 2003). As whites settled the area and quickly became the majority, the lives of indigenous peoples became progressively threatened. Passing on cultural traditions and practices became increasingly difficult, as it imperiled indigenous peoples and their children (Hall 1984, Younker 2002). Additionally, the landscapes that have been critical to indigenous cultural and subsistence activities were greatly impacted by mining activities that cared little for the health of land and water (Younker 2003).

By the 1850s, the ancestors of today's Coquille were forcibly removed to the

Coast Reservation after having been convinced to sign treaties with the federal government in which they ceded approximately 700,000 acres of tribal territory (Tveskov 2000, Younker 2003). The Coast Reservation was a tract of land along the northern Oregon Coast, the reservation remnants of which are now the Siletz and Grand Ronde Reservations (Tveskov 2000). The treaties signed by the Coquille were never ratified, leaving the Tribe particularly vulnerable and without much legal recourse (Younker 2002, 2003). Some Coquille ancestors endured the relocation to the reservation and established new roots. Others died either en route to the reservation, or as a result of malnutrition and other health problems on the reservation. Some managed to return home to the southern Oregon Coast by escaping reservation life (Hall 1984). Yet others, mostly women, managed to stay in their ancestral territory by marrying European men and avoiding relocation and confinement (Hall 1984, Tveskov 2000). Roberta Hall (1984, p.153) states, "Much of the credit for preserving Coquille culture belongs to these women and their descendants." Nevertheless, between the 1850s and late 1900s, little traditional knowledge was openly passed on to the younger generations (Hall 1984, Younker 2002).

While Coquille peoples were still physically and culturally present, in 1954, the Tribe was terminated along with 109 other Indian tribes nationwide as a result of the Indian Termination Act (Churchill and Morris 1992 as cited in Younker 2002). The Coquille then embarked on a thirty-three year long effort to restore their federal recognition, an effort which paid off on June 28th, 1989, when President George H. Bush restored the Tribe's official status (Younker 2002).

The Tribe Today

Today, the Coquille Indian Tribe is headquartered in North Bend, OR, a coastal

city found within the Tribe's ancestral territory. The Tribe services five counties in Southwestern Oregon: Coos, Curry, Douglas, Jackson, and Lane. Presently, the Tribe has over 960 enrolled tribal members, approximately 506 of who live within the Tribe's five county service area with their families (Coquille 2013). The Tribe has been proactive in protecting and restoring traditional cultural activities while simultaneously pursuing economic endeavors that strengthen tribal self-determination. Presently, the Tribe owns approximately 7043 acres that they acquired via private purchase and federal trust. Of the 7043 acres, approximately 5500 acres are made up by the Coquille Forest, which the Tribe manages for economic and cultural purposes. The rest of the acreage is mainly made up of cranberry production for tribal economic development, and a tribal residential development that includes a tribal health facility and a community plank house. The Tribe also owns The Mill Casino and Hotel, the proceeds from which help fund tribal initiatives and community services (Younker 2003).

In an effort to recover some of what was lost during the early colonization process, the Tribe has embarked on various cultural restoration initiatives (Ivy et al. 2002, Younker et al. 2001, Younker 2002). These have ranged from interviews with tribal elders, to partnerships with anthropologists and archaeologists. Tribal members such as George Wasson (1999, 2002) and Jason Younker (2002, 2003, 2005) have devoted their academic research to the documentation of Coquille history and culture. Perhaps the most vigorous effort the Tribe has undertaken to recover historical and cultural information is the Southwest Oregon Research Project (SWORP):

> The Southwest Oregon Research Project (SWORP) is an ongoing, Coquille-driven archival research effort inspired by Coquille tribal elder, George B. Wasson Jr. Wasson led a research team made up of Coquille scholars and research assistants from the University of Oregon. The SWORP endeavors—two separate projects in 1995 and 1998— helped recover nearly 110,000 pages

> of archival collections documenting the history and culture of Northwest Indian Tribes. Although this research was initially conducted in an effort to simply find recorded information about the Coquille's history and culture, the result of this research turned out to create a significant archive important to all tribes in Oregon (Younker 2002, p.45).

The SWORP has demonstrated the Tribe's clear and unwavering commitment to facilitating cultural recovery and self-determination for themselves and other regional tribes.

These tribal initiatives combined with the resilience of tribal elders who, against many odds, carried with them tribal traditions and knowledge, have made it possible for traditional cultural practices to be the vital glue that unites the Coquille today. Many of the Tribe's traditional foods, such as salmon, clams, lamprey, camas, and berries of various kinds, are still traditionally harvested, prepared, and eaten throughout the year. Traditional stories are still passed on intergenerationally, and traditional ceremonies and celebrations are vital to community life. Tribal women continue to harvest basketry materials, such as cedar and bear grass, and weave them into traditional baskets. The Coquille Youth Corp embarks on projects that apply traditional construction techniques, having built a traditional Coquille dwelling to sit beside the community plank house. The Coquille Forest, managed using a combination of traditional ecological knowledge and Western science principles, prioritizes tree species that hold cultural significance, and ensures the provision of critical wildlife habitat (Wells 2011). The Tribe's potlatch tradition, one characterized by gift-giving and collaboration, was revived in 1997 after 150 years, when the Coquille held an inter-tribal gathering to gift Oregon and Northern California tribes with free copies of the archives collected for SWORP (Younker 2003, 2005).

Tribal Vulnerability and Resilience in a Climate Change Context

Tribal traditions and knowledge that are vital to Coquille identity and culture involve an interconnected web of traditional places, plants, and animals with which the Tribe holds a long and rich history. Places, plants, and animals holding strong cultural significance are sometimes referred to as "traditional cultural resources." The Tribe's access to, and relationship with, these places and species was already severely compromised during the early colonization process (Hall 1984, Younker 2003). Today, many of the Tribe's traditional places, harvest sites, and hunting and fishing grounds are legally under the control of federal agencies or private landowners. Climate change threatens to affect local ecosystems in various ways, a prospect that may further compromise tribal access to traditional sites and species. If the Tribe can't properly access or care for the places, plants, and animals that are vital to the continuance and revitalization of traditional practices and knowledge, or similarly, if the Tribe must depend entirely on non-tribal landowners to access these places and species, tribal culture and self-determination are compromised.

In light of this, it is in the Tribe's benefit to devise strategies to document and convey tribal concerns as they relate to climate change impacts on traditional cultural resources. Tribal members who frequently interact with these places and species often know better and sooner than anyone what changes may lay ahead. They also know better than anyone the potential cultural repercussions of these changes. Given that many traditional places, harvest sites, and hunting and fishing grounds are controlled by non-tribal entities, the Tribe may find it necessary to convey tribal findings, concerns, and needs to outsiders who often struggle to understand tribal values, knowledge, and ways of life. Federal agencies such as the Bureau of Land Management own land adjacent

to tribal property, and have a trust responsibility to ensure that their management decisions take tribal interests and cultural needs into strong account. And yet federal agencies and even some environmental advocacy groups, guided mostly by Western science, often fail to foresee or understand the implications that their management decisions may have for tribes seeking to care for and interact with places and species in traditional ways (Huntington and Watson 2012, Mason et al. 2012).

The Coquille Indian Tribe possesses inherent strengths that can serve them in the effort to document and convey tribal findings, concerns, and needs pertaining to traditional cultural resources in a climate change context. The Tribe's continued efforts to restore traditional cultural practices and knowledge are making it progressively easier for the Tribe to assert its cultural resilience, as well as understand it cultural vulnerabilities. Their prolific SWORP archive makes important historical documents and images readily available to the Tribe for tribal initiatives. The Coquille have had a history marked by prolific collaboration with other tribes, universities, organizations, and consultants. Additionally, the Tribe frequently applies the use of contemporary technologies to further cultural preservation efforts. Of particular relevance to this research collaboration is the fact that the Coquille have a tribal photographer, Jon Ivy, a tribal member who is employed by tribal government and has been documenting tribal activities, events, and traditions through photography.

The Purpose of this Collaborative Study

This collaboration arose as part of the Coquille Indian Tribe's efforts to prepare for climate change impacts that might affect tribal lands and resources. As a graduate

research fellow for the Tribal Climate Change Project, I was working with Coquille staff to develop climate change considerations for the Tribe's Strategic Plan update. At that time, I proposed a collaboration in which the Tribe and I could explore the use of community photography as a tool for tribal climate change initiatives. The Tribal Council immediately identified ways in which tribal experiences, initiatives, and cultural strengths were well suited to the project. The Tribal Council also identified ways in which the community photography process and resulting photos could benefit the Tribe by contributing to ongoing tribal initiatives and goals, such as the promotion of inter-generational collaboration among tribal members, and archiving materials (in this case photographs) that can serve to protect tribal sovereignty and self-determination in the future. In light of all this, the Coquille Tribal Council enthusiastically agreed to embark on this collaborative journey.

Tribal staff and I worked together to define the nature and ultimate objectives of this study. The purpose of this collaboration was to explore the ways in which community photography in general, and photovoice in particular, might serve the Coquille Indian Tribe when documenting and communicating tribal findings, concerns, and needs pertaining to the impacts of climate change on traditional cultural resources. We accomplished this by designing and carrying out a tribal photovoice process, and then subsequently carrying out a case study in which I interviewed photovoice participants about their experiences participating in the process. The following guiding question and subquestions drove our study:

> How can community photography initiatives serve the Coquille Indian Tribe in addressing the impacts of climate change on tribal self-determination and culture?

- Can community photography facilitate the documentation of tribal findings, concerns, and needs in a climate change context?
- Can photovoice foster internal dialogue about climate change impacts on traditional cultural resources?
- Can photovoice facilitate cross-cultural communication of tribal findings, concerns, and needs related to climate change impacts on traditional cultural resources to non-tribal landowners and land managers?
- How else might the Tribe use community photography in tribal initiatives aimed at protecting tribal culture and enhancing tribal self-determination?

The Decolonized Aspirations of this Collaboration

Given that this study entailed collaboration between a non-indigenous researcher and an American Indian tribe, it was important that this study be carried with decolonized research principles in mind. Indigenous peoples have been among the most researched human populations on the globe. Unfortunately, this research, has often been intrusive, damaging, and has perpetuated colonial power structures (Bishop 2005, Jacklin and Kinoshameg 2008, Simpson 2004, Smith L 2005). Non-indigenous researchers carrying out research within indigenous communities have the responsibility to reverse this trend by engaging in research that is respectful, culturally appropriate, and beneficial to the indigenous community whenever possible. Methodologies and approaches must be customized to ensure they accommodate unique cultural values, needs, strengths, and preferences (Bishop 2005, Smith L 2005).

In line with decolonized research principles (Bishop 2005, Jacklin and Kinoshameg 2008, Simpson 2004, Smith L 2005), this study sought to maximize tribal benefits, as well as tribal control over the research process and outcomes. Additionally, within this document I sought to maximize the representation of indigenous perspectives, as they are best suited to inform a study within an indigenous community. For this reason, the perspectives of indigenous scholars and thinkers have been included whenever possible in the literature review, often times in the form of direct quotes.

Decolonized research methods are among the topics reviewed in Chapter II: Literature Review. The general decolonized research principles guiding this study, as well as a list of specific research decisions that resulted from the application of those principles, are outlined in Chapter III: Methodologies.

Research Significance

Given that this collaboration aspired to apply decolonized research principles, the key objective of this research was to be of present and/or future use to the Coquille Indian Tribe. Therefore, this research has the potential to be significant in that it may assist the Coquille Indian Tribe in advancing its objectives, be they related to climate change initiatives, cultural preservation and restoration, or other topics of tribal interest.

Academically, this thesis may contribute to literature assessing the use of participatory research methods within a specific indigenous community. It may also contribute to literature documenting the use of community photography in the context of climate change. Additionally, this thesis may serve to highlight the pursuit of visual

sovereignty within a specific indigenous community. Finally, this research can serve as an example of a process that aims to be decolonized and customized to meet the unique cultural needs of the Tribe.

It is important to note that each indigenous community has unique history, culture, geographic ties, objectives, values, and socio-economic conditions. This research has been customized to meet the needs and strengths of the Coquille Indian Tribe. As such, the design and results of this research can't be generalized to make assumptions about how a similar initiative would result in another indigenous community.

That said, this research might be useful to communities or organizations (indigenous or otherwise) considering community photography or other community participatory strategies for the purpose of enhancing community initiatives, particularly initiatives related to climate change, natural resources, and cultural preservation.

CHAPTER II

CONTEXT (LITERATURE REVIEW)

Indigenous Relationships with Land, Water, Plants, and Animals

> There is no Indian word for wilderness because there was no wilderness.
> —Dennis Martinez (Sierra)

In order to grasp the implications of climate change for indigenous communities like the Coquille Indian Tribe, it is imperative to have an understanding of the traditional relationships indigenous peoples had (and often continue to have) with the environment around them (Whyte 2013). Academic literature can only go so far in exploring these relationships; they are tribe-specific, often personal in nature, culturally sensitive, and dependent on intergenerational knowledge and experiences. Nevertheless, indigenous thinkers and their allies have documented some aspects of these relationships that can help frame indigenous concerns pertaining to traditional species and places (Anderson 2005, Cochran et al. 2013, Salmón 2000, Whyte 2013).

Traditional Relationships and Knowledge

Today many indigenous communities and governments have adopted Western terms such as "natural resources," "traditional cultural resources," and "management," yet these terms often fail to convey the profound relationship indigenous peoples traditionally held (and sometimes still hold) with culturally vital lands, waters, plants, and animals (Williams and Hardison 2013). Anderson (2005, p.153) describes:

> Today California Indians often refer to these practices as "caring about" the plant or animal. Traditionally, Indians did not consider their actions management per se; "management" is a Western term implying control. Rather, caring for plants and animals in the California Indian sense meant establishing a deeply experiential and reciprocal relationship with them.

Among many indigenous communities, the plants, animals, landscapes, and waterscapes that are critical to their identity have been traditionally viewed as relatives with spirits and characteristics much like indigenous peoples themselves (Anderson 2005, Deloria and Wildcat 2001, Johansen 2000, Salmón 2000). Enrique Salmón (2000) refers to this way of approaching interactions with the natural world as "kincentric ecology." His people, the Rarámuri of the Sierra Madres of Chihuahua, Mexico, live by kincentric ecology principles, a way of living they refer to as iwígara, in which the Rarámuri and the natural world around them are all interconnected. Salmón (2000, p.1330) describes:

> Rarámuri land management represents a tradition of conservation that relies on a reciprocal relationship with nature in which the idea of iwígara becomes an affirmation of caretaking responsibilities and an assurance of sustainable subsistence and harvesting. It is a realization that the Sierra Madres is a place of nurturing, full of relatives with whom all breath is shared.

For the tribes of the Pacific Northwest, few species are as vital to tribal culture and subsistence as salmon. Traditionally, many tribes have viewed salmon as spirit beings that lead lives similar to humans, dwelling in villages in the ocean, and traveling the long distance to the rivers and bays as "acts of voluntary sacrifice for the benefit of their human friends" (Grinde and Johansen 1995, p.40). These kincentric tendencies are reflected in Jason Younker's description of the yearly return of the salmon among the Coquille Indians:

> The first seasonal return of the salmon was possibly the most significant occasion for ceremony for the Coquilles. The first salmon would be taken and welcomed as a distant relative. The salmon was cooked in an earthen oven and shared with all the guests. The salmon were typically referred to as the Coquilles' "cousin." The bones of their cousin were carefully kept in place and returned to the river with great attention. It was common belief that the spirit of the salmon would return to the ocean to tell their other "cousins" that the Coquilles had held them in great honor and respected the physical sacrifices that the salmon were

> going to make. While the first salmon was ceremoniously honored, other fish would pass and move up the river to spawn (Younker 2003, p.312)

Kyle Powys Whyte (2013) describes indigenous relationships with other species, places, and peoples as an interwoven set of "responsibilities" that foster the "collective continuance" of an indigenous community. Whyte defines these responsibilities as "the reciprocal (though not necessarily equal) attitudes and patterns of behavior that are expected by and of various parties by virtue of the different roles that each may be understood to play in a relationship." He defines collective continuance as "a community's capacity to be adaptive in ways sufficient for the livelihoods of its members to flourish into the future." For example, an indigenous community may have the responsibility of caring for wild rice patches, so that wild rice can in turn fulfill its reciprocal duty of nourishing that indigenous community. By having both the indigenous community and the wild rice fulfill their responsibilities, the collective continuance of both is fostered.

Through millennia of experience, relationships, and upheld responsibilities towards other living beings, landscapes, and waterscapes, indigenous peoples accrued vast amounts of knowledge that historically guided their land-based practices and traditions (Anderson 2005, Deloria and Wildcat 2001, Wildcat 2009). This way of knowing, which is often transmitted from one generation to the next through place-based experiential teachings, has come to be known in Western academia as "traditional ecological knowledge," or "indigenous knowledge." Anderson (2005, p.4) describes:

> The foundation of native peoples' management of plants and animals was a collective storehouse of knowledge about the natural world, acquired over hundreds of years through direct experience and contact with the environment. The rich knowledge of how nature works and how to judiciously harvest and steward its plants and animals without destroying them was hard-earned; it was the product of keen observation, patience, experimentation, and long-term

> relationships with plants and animals. It was knowledge built on a history, gained through many generations of learning passed down by elders about practical as well as spiritual practices. This knowledge today is commonly called "traditional ecological knowledge.

The Impacts of Colonization on Traditional Relationships and Knowledge

The ability of indigenous communities to uphold traditional relationships and responsibilities, and exercise and transmit indigenous knowledge, was severely (and sometimes completely) compromised by the arrival and settlement of Europeans. Colonizers disrupted indigenous lifeways by killing and displacing indigenous peoples, settling indigenous territories, exploiting natural resources, and developing government programs and policies aimed at forcing indigenous peoples to assimilate into a Euro-centric society (Anderson 2005, Grinde and Johansen 1995, LaDuke 1999, Merchant 2007, Simpson 2004, Smith A 2005, Wilkinson 2005). Many of the landscapes that indigenous peoples had tended since time immemorial were radically changed (Anderson 2005, Grinde and Johansen 1995, Merchant 2007). Reo and Parker (2013, p.678) describe some of the environmental impacts of colonization in New England:

> Within a few hundred years of colonization, the exploitation of forests to support Atlantic trade and the expansion of colonial settlements irrevocably altered the New England landscape. New England was transformed from a heterogeneous patchwork of ecosystems supporting diverse food systems into a comparatively depauperate hash of fields and forests susceptible to pest outbreaks and erosion. The cascading effects of the initial human depopulation, biotic invasions, loss of key species and deforestation, driven by a new extractive economy, created political, cultural, and environmental chaos for Native peoples.

Among the indigenous peoples that survived the spread of Old World diseases and persecution by European settlers, many were forced to relocate away from their ancestral territory to reservation lands established during the treaty-making era of 1778-1871. Sometimes these reservations were in or near tribal ancestral lands, while other times they were hundreds of miles away. The Coquille, for example, were sent to

the Coast Reservation along the northern Oregon Coast, the southern boundary of which was over 20 miles away from their original territory and guarded by the United States Army at Fort Umpqua (Tveskov 2000). This profoundly challenged their ability to engage in place-based relationships and responsibilities (Hall 1984, Younker 2003). Even when some Coquille Indians managed to escape back to their ancestral territory, the social environment was so hostile towards indigenous peoples that openly engaging in indigenous traditions and activities posed a threat to Coquille families. Many opted to obscure their indigenous ways of living and knowing in order to avoid persecution by colonizing Europeans (Hall 1984, Younker 2003).

In *Blood Struggle: The Rise of Modern Indian Nations*, Charles Wilkinson (2005) describes the challenging conditions tribes found themselves in by the middle of the 20th century. Wilkinson (2005, pp.xii-xiii) attributes these conditions to four "overbearing and seemingly intractable problems":

1. Tribes were experiencing the worst economic and social conditions out of any group in America.
2. Tribes were subjected to intense political oppression, especially at the hands of Bureau of Indian Affairs, which "controlled reservations with an iron grip."
3. Indigenous peoples were subjected to extremely damaging campaigns run by the BIA and churches, aimed at suppressing tribal culture and religion, and assimilating indigenous children into Western culture and Christianity.
4. In 1953, congress announced the implementation of the termination policy, activating what Wilkinson deems "the most extreme Indian program in history," aimed at initiating the complete assimilation of indigenous peoples into

mainstream society by selling off all tribal lands, and ending all federal trust responsibilities and support towards tribes.

As Wilkinson (2005, p.xiii) asserts, "For Indian tribes, virtually nothing could be more threatening to these place-based peoples than the expropriation of their land."

After termination, many tribes, including the Coquille, embarked on a long fight to restore their status as sovereign nations with unique rights (Wilkinson 2005, Younker 2003). For the Coquille, the fight concluded in 1989 when they officially regained federally recognized status. Today, federally recognized tribes have a government-to-government relationship with the federal government, and the federal government once again holds trust responsibilities towards these tribes. Federal agencies are legally mandated to account for tribal needs and concerns anytime they implement a policy, program, or initiative that involves lands or resources that hold significance to a given tribe. In the Pacific Northwest, different agencies address this responsibility differently, and with varying amounts of success (Harris 2011). Government-to-government consultation, in which a federal agency formally engages a tribe to discuss tribal needs and recommendations, is a strategy that is now mandated under President Clinton's 1994 memorandum entitled "Government-to-Government Relations with Native American Tribal Governments."

Indigenous Communities Today

Today, tribal governments exercise increasing self-determination. The United Nations Declaration on the Rights of Indigenous Peoples (UN General Assembly 2007), refers to self-determination as the right to freely determine one's political status, pursue one's economic, social and cultural development, self-govern in matters related to internal and local affairs, and have access to means to finance autonomous functions.

Daniel Wildcat (Deloria and Wildcat 2001, p.149) encourages indigenous peoples to look beyond the political meaning of self-determination:

> The question of self-determination is one of degree: how engaged, connected, and attentive are we to our community? This will seem contradictory and paradoxical to Western-thinking students and teachers. The more attentive one is to their community, the more self-determining they can be; the less attentive, the more selfish and self-destructing they will be.

The restored status and increasing self-determination of many tribes and Native groups are creating conditions that foster tribes' ability to exercise, celebrate, and account for their traditional knowledge and lifeways. While conditions have in some ways improved, there are still numerous challenges, bureaucratic obstacles, ecological impacts, and lingering psychological trauma that continue to compromise indigenous health and cultural practices (LaDuke 1999, Grinde and Johansen 1995, Hoover 2013). Historic and contemporary barriers to traditional relationships with culturally vital species and places have affected not only indigenous culture, but also the physical and mental health of indigenous peoples (Brave Heart et al. 2012, Cunsolo Willox 2013, Hoover 2013, LaDuke 1999, Norgaard 2004, Smith A 2005).

One way in which physical health has been compromised is by the reduced availability of traditional foods. Traditional foods are those that result from the reciprocal relationships indigenous peoples hold with land, water, plants, and animals. These foods have been the staples of indigenous diets since before European colonization and are critical to maintaining health within indigenous communities (Lynn et al. 2013). When access to these foods is limited, be it because of ecological degradation or bureaucratic barriers, indigenous communities are often forced to replace these nutritious foods with cheap, processed foods that negatively impact the health of community members (Arquette et al. 2002, Norgaard 2004). Norgaard (2004)

documents a case in which the Karuk Tribe's access to salmon has been compromised by various converging forces, including the construction of hydroelectric dams and the implementation of "non-Indian" laws and regulations, forcing the community to replace salmon with processed foods that have led to skyrocketing rates of diabetes and cardiovascular disease.

The historic and contemporary impacts of colonization have also affected indigenous mental health. The stress, loss, and cultural changes associated with colonization, combined with the introduction of alcohol, have led to unusually high rates of substance abuse, suicide, and violence within indigenous communities (Mokuau 2002, Smith A 2005, Rhoades 2003, Strickland et al. 2006, Weaver 2009). As a Coquille Indian, Younker (2003, p.118) describes some of the emotional trauma experienced by Coquille people as a result of colonization:

> For most of my life, I have tried to understand what it meant to be Coquille and struggled with the guild that I did not know enough about my history and tribal ingenuity to justify calling myself Indian. Like many Indian tribes and other indigenous communities impacted by colonialism, the historical traumas of my tribe have been passed on and are often expressed in high rates of depression, alcoholism, suicide, and other afflictions commonly associated with incomprehensible experiences. Coquille descendants were forced to throw overboard all that was no absolutely necessary for the sake of survival.

Brave Heart et al. (2012) document the health consequences of cultural loss and trauma on American Indian men and boys, who suffer disproportionate rates of suicide, substance abuse, and psychiatric disorders. The authors describe how the loss of traditional species and degradation of culturally critical landscapes have compromised traditional activities, roles and responsibilities, contributing to mental health problems and self-destructive behaviors, and delaying indigenous peoples' ability to heal from historical trauma.

Some indigenous peoples continue to carry out their traditional relationships with species and places despite having to do so in highly degraded environments. One such case is documented by Hoover (2013, p.6), in which a Mohawk man describes his reasons for continuing to fish, despite regional fish advisories warning the community of industry-caused toxicity in the water and in the fish:

> We give thanks for that food and we have to use it. . . I mean it doesn't make sense scientifically, but it makes sense spiritually and mentally that you should eat that, you know. You can't just put it aside and say, "well your work is not good enough," or something, you know? They're still given out what their original instructions were, and it's us that are at fault, it's our fault that they're like that, you know (interview 20).

Hoover (2013, p.6) goes on to explain:

> Even though as a Mohawk he is not responsible for the contamination that has affected the fish, as a human being he is implicated in the problem, and therefore it is even more important that he works to maintain this relationship with the fish. Because the job given by the Creator to fish is to offer themselves as food, and the job given to humans is to respectfully harvest these fish, people like Richard who are working to maintain tradition feel obligated to maintain these roles.

This and many other cases illustrate the profound sense of responsibility towards, and connection with, traditional species and places that many indigenous peoples still foster today despite seemingly insurmountable challenges. The fact that many indigenous individuals and communities still engage in traditional relationships with land, water, plants, and animals despite countless instances of cultural and environmental injustice, speaks for the cultural resilience of their peoples. While most indigenous cultures have changed as a result of colonization, indigenous communities such as the Coquille have ingeniously merged their traditional experiences, skills, and knowledge with the Western skills and knowledge of the colonizer, becoming highly adaptive and resilient in the process (Hall 1984).

The Coquille have embarked on various partnerships and initiatives for the purpose of cultural restoration, many of which are highlighted in their Annual Coquille Cultural Preservation Conference proceedings (i.e. Ivy et al. 2002). The success of these preservation and restoration efforts such as these hinge upon the ability of indigenous peoples to carry out their traditional responsibilities toward the land, water, plants, and animals on which their cultures and health depend. In contemporary management, some tribes refer to these culturally vital places and species as "traditional cultural resources." The next section addresses some of the ways in which climate change may intersect with the impacts of colonization to challenge indigenous responsibilities towards, and relationships with, traditional cultural resources.

Climate Change and Indigenous Peoples in the U.S.

> I get angry when I think about global warming, or global burning, as I prefer to designate this world phenomenon...I get angry because I know the history of involuntary removals and relocations indigenous peoples throughout the United States and around the world have endured. So when nearly a decade ago I began hearing the reports of what was beginning to manifest itself on the landscapes and seascapes of the circumpolar arctic and banks of the Yukon River in Alaska, I got angry. Angry because I thought, *Here we go again—another removal of indigenous peoples*.
>
> —Daniel Wildcat 2009, p.1

Climate change literature is beginning to recognize the unique position of indigenous communities in the face of climate change, given their vital cultural connection to, and reliance upon, local species and ecosystems (Cochran et al. 2013, Cozzetto et al. 2013, Dittmer 2013, Doyle et al. 2013, Gautam et al. 2013, Grah and Beaulieu 2013, Lynn et al. 2011, Lynn et al. 2013, Maldonado et al. 2013, Parrotta and Agnoletti 2012, Reo and Parker 2013, Voggesser et al. 2013, Whyte 2013, Wildcat 2009, Wildcat 2013, Williams and Hardison 2013). As was discussed in the previous section,

engaging in reciprocal relationships with regional plants, animals, and ecosystems forms part of an important cultural responsibility among indigenous peoples (Whyte 2013). In the face of climate change, this engagement makes indigenous peoples at once vulnerable and resilient. On the one hand, climate change impacts may intersect with the impacts of colonization to further compromise indigenous peoples' reciprocal relationships, putting indigenous cultures in jeopardy (Whyte 2013). On the other hand, indigenous peoples' knowledge, resilience, and adaptive capacity, time-tested across millennia of ecological and social changes, may serve to strengthen tribal climate change initiatives (Huntington and Watson 2012, Wildcat 2009, Williams and Hardison 2013).

Climate Change Vulnerabilities of Indigenous Communities

Vulnerability, at its most basic, refers to "susceptibility to harm in a system relative to a stimulus or stimuli" (Ford and Smit 2004, p.392). Scholars have taken different approaches when defining vulnerability. A biophysical approach tends to place focus on the hazardous stimulus, determining the vulnerability of a human system based on the strength and frequency of occurrence of the stimulus, and the proximity of the stimulus to the human system. The social approach analyzes the socio-political dynamics that characterize the human system being subjected to the stimulus, and assesses how these socio-political dynamics affect the ability of different social sectors to avoid or recover from the hazardous stimulus (Ford and Smit 2004). In recent years, climate change scholars have combined biophysical and social approaches to develop a more comprehensive analysis of vulnerability. This has led to the emergence of a general conceptual model of vulnerability that is quite consistent throughout climate change literature. Smit and Wandel (2006, p.286) describe this conceptual model of vulnerability as follows:

> ...the vulnerability of any system (at any scale) is reflective of (or a function of) the exposure and sensitivity of that system to hazardous conditions and the ability or capacity or resilience of the system to cope, adapt or recover from the effects of those conditions.

Given the above conceptual model, an indigenous community's vulnerability to climate change depends on the level of exposure and sensitivity to climate change impacts, as well as on the ability of the community to cope, recover, and/or adapt to those impacts.

Different indigenous communities risk being exposed to different types, frequencies, and intensities of climate change impacts, depending on the community's geographic location. Generally speaking, climate-related threats to indigenous ways of life include permafrost melt, sea-level rise, stronger and more frequent storms, longer periods of drought, increased frequency and intensity of wildfires, and increases in invasive species and pests, all of which can compromise the health, abundance, and distribution of traditional cultural resources, as well as the integrity of harvesting sites, sacred sites, and tribal infrastructure (Grossman and Parker 2012, Lynn et al. 2013, Voggesser et al. 2013). Indigenous peoples across the world are already experiencing many of these impacts (Grossman and Parker 2012, IPCC 2007, IPCC 1 2001, IPCC 2 2001).

In the Pacific Northwest, where the Coquille Indian Tribe is located, indigenous and non-indigenous peoples are identifying various climate change impacts. The Oregon Climate Change Research Institute's (OCCRI) 2010 Oregon Climate Assessment Report documents existing and potential climate change impacts affecting Oregon landscapes, seascapes, and human populations. Dennis Martinez (2011, pp.7-8), Chair of the Society for Ecological Restoration's Indigenous People's Restoration Network, lists

some of the climate change impacts that are already underway and that are of particular concern to indigenous communities in the Pacific Northwest. These include:

- Higher average temperatures
- Increasingly frequent and intense wildfires
- Storm-driven tidal surges that are already inundating low-lying areas on the coast
- Loss of cultural plants, animals, birds, and fisheries
- Loss of traditional ecological knowledge and the ability to accurately predict weather
- Increases in invasive plants, animals, and insects, as well as increases in forest diseases and pests
- Soil erosion and subsequent sedimentation of salmon spawning gravels
- Glacial melt, a major driver of water and fisheries loss
- Changes in the quantity, quality, and timing of available water, affecting critical ecosystems, such as wetlands, and critical species, such as salmon
- Ocean acidification and loss of shellfish

While indigenous communities may not necessarily be more exposed to climate change impacts than other sectors of the population, indigenous peoples' culture and socio-economic conditions may make them more sensitive to exposure (Grossman and Parker 2012, Lynn et al. 2011, Lynn et al. 2013, Maldonado et al. 2013, Parrotta and Agnoletti 2012, Voggesser et al. 2013, Whyte 2013, Wildcat 2013, Williams 2012, Williams and Hardison 2013). Indigenous populations are more likely to be living in poverty than the overall U.S. population, and indigenous communities and reservation lands are often found in isolated, rural areas (Lynn et al. 2011). These factors make

indigenous communities more sensitive to climate change impacts, as they may lack the financial capacity and infrastructure to cope with and recover from extreme weather events.

Perhaps more relevant to this thesis is the sensitivity of indigenous communities to climate change impacts as a result of their close relationships with, and dependence on, local and regional plants, animals, and ecosystems (Whyte 2013). Indigenous peoples are expressing concern over how climate change may threaten their relationships with culturally critical species and ecosystems (Grossman and Parker 2012, Parker et al. 2006, Voggesser et al. 2013, Whyte 2013). As was mentioned in the previous section, Kyle Powys Whyte (2013) describes indigenous relationships with other species, places, and peoples as an interwoven set of "responsibilities" that foster the "collective continuance" of an indigenous community. In reference to the impacts of climate change on indigenous responsibilities and collective continuance, Whyte (2013) describes:

> The ecological challenges of climate change threaten collective continuance by changing the contexts in which systems of responsibilities are meaningful. Changes in landscapes may engender less opportunities for elders to teach youth in practical situations. Glacier retreat may affect the survival of salmon or start to affect the range, quality and quantity of berry resources, making it more difficult or even impossible for tribal members to exercise their responsibilities toward those species (Campbell and De Melker 2012; Lynn et al. 2013).

One key climate change concern for many indigenous communities includes the reduced quality and/or abundance of traditional foods. Lynn et al. (2013) highlight many key traditional foods species that are threatened by climate change, including moose, Pacific walrus, corn, wild rice, and salmon, among others. Many of these species have historically been (and continue to be) affected by Western land management practices. Wild rice, for example, a critical cultural resource to Anishnaabeg people, has been impacted by the drainage of watersheds for agricultural purposes (Lynn et al. 2013).

Salmon, vital to most tribes across the Pacific Northwest, has experienced dramatic declines over the past two centuries as a result of overharvest, urbanization, water diversion, development of hydroelectric dams, and other forms of habitat degradation (Dittmer 2013, Hanna 2007, Johnsen 2009). As Lynn et al. (2013) describe in their article, climate change is intersecting with historic stressors to further challenge indigenous relationships with these culturally vital species.

Voggesser et al. (2013) discuss climate change impacts on culturally critical forest resources, stating: "Forest responses to climate change may alter tribal livelihoods and traditions and require unique adaptation strategies to ensure sustained access to tribally valued resources important for tribal economies and traditions." Among the forest impacts discussed are changes to fire regimes and increases in invasive species and pests, both resulting from climate change-induced changes to temperature and moisture regimes. Parker et al. (2006, pp.1-2) refer to climate change as a potential "culture killer," stating:

> Climate change shifts and disrupts plant and animal habitats, and in doing so forces cultures to adapt to these conditions, or die. Species adapt to rising temperatures by shifting their ranges farther north or to higher elevations. Many species driven entirely out of their habitats and feeding areas may face extinction. Other "invasive" species are migrating into new areas, and competing with or displacing native and culturally important species. Shifting conditions may also directly threaten species, such as in the "dead zone" on the U.S. Pacific Northwest coast, where fish and crabs are being starved of oxygen by wild swings in ocean upwellings of phytoplankton. Treaty-guaranteed rights to hunt, fish and gather may be rendered moot by these changes, or may adapt by transferring harvesting rights, for example, from salmon to tuna.

Climate change impacts may become exacerbated by the fact that indigenous communities have limited amounts of reservation lands (if any), and often have limited control over the management of species and ecosystems that are critical to their culture. When indigenous territories were ceded to the U.S. government, many

traditional harvest sites, sacred sites, and critical ecosystems were transferred over to the federal government. Parker et al. (2006, p.3) describe how these circumstances affect indigenous sensitivity to climate change impacts:

> Indigenous nations are in a uniquely vulnerable position in regards to climate change. Their land base provides few opportunities to relocate or expand to cope with changing climate. Treaty rights and reserved rights are fixed to specific parcels of land, so that it is unclear what tribal rights to resources might shift away from their reserved lands. Even if tribal rights can be expanded to include species and other resources that migrate off reserved lands, this will impose extreme hardships and problems of access for Native elders, members, and enterprises.

Given these tendencies, indigenous communities may find themselves depending on federal agencies to protect critical traditional cultural resources from climate change impacts. Federal land managers have a trust responsibility to account for tribal interests when managing federal lands. Among the challenges of this land management dynamic is the fact that tribal needs and objectives are often informed (at least partially) by traditional knowledge and values, while federal management practices are informed mostly by Western science (Vinyeta and Lynn 2013). As such, protection of traditional cultural resources on federal lands may often depend on 1) the commitment of federal agencies to meaningfully and effectively meet their trust responsibilities, and 2) the ability of indigenous communities and federal agencies to communicate cross-culturally across the traditional knowledge/Western science divide (Whyte 2013, Williams and Hardison 2013). This dependence on outside entities to understand and meaningfully carry out indigenous land management objectives limits tribal self-determination.

Indigenous Resilience in the Face of Climate Change

Indigenous peoples have unique strengths, skills, and ways of knowing that make them resilient in the face of environmental change. For millennia, many indigenous

communities have adapted their lifeways to changing environments. Williams and Hardison (2006) (cited in Parker et al. 2006) state:

> Indigenous Peoples are rich in traditional knowledge inherited from the wisdom of their ancestors. This knowledge has guided them through many difficult episodes in the ancient past when the Earth has brought forth numerous natural catastrophes. Indigenous peoples have survived through many cycles of creation and destruction. The pulse of life that has sustained tribal cultures has ebbed and flowed. Indigenous peoples developed extensive networks of alliances and trade that helped them to survive environmental changes and upheavals. Many tribes moved with the changes of the waters and lands.

Indigenous cultures have also endured great socio-cultural and environmental changes brought on by colonization, which altered not just physical landscapes, but the laws and bureaucracies governing those landscapes (LaDuke 1999, Merchant 2007, Norgaard 2004). Indigenous communities around the world are harnessing their traditional knowledge, time-tested resilience, adaptability, and as Daniel Wildcat (2009) calls it, "indigenuity," to detect changes in the landscape and develop appropriate climate change strategies. Parrotta and Agnoletti (2012, p.526) state:

> In recent years, indigenous communities have been among the first to react to the impacts of climate change and measures taken at the international level towards its mitigation. Traditional communities have raised the awareness of the global public and policy-makers by recording and publicizing their observations of changes in climate and its effects on the natural environments in which they live. They are also reacting to climate change mitigation approaches that involve significant changes in land use and forest management regimes affecting their livelihoods and cultures. By doing so they are helping to inform the ecological, socio-economic, legal, and human rights dimensions of climate change and policies being developed to combat and/or adapt to its impacts.

In the United States, numerous indigenous communities are actively engaged in climate change initiatives both internally within their communities, and collaboratively with outside entities such as federal agencies (Wildcat 2013). Traditional responsibilities and knowledge often play a vital role in the development and implementation of indigenous climate change initiatives.

In the Pacific Northwest, the Swinomish Indian Tribal Community of Washington developed a comprehensive climate change initiative that included an impact assessment in 2009, and the development of a climate change adaptation plan in 2010. The plan discusses "the need to have an ethical response that respects and preserves the sensitive nature of traditional knowledge and specifies ongoing work to connect elders with youth for intergenerational sharing of spiritual and other traditional environmental knowledge" (Swinomish 2010, p.24). Elsewhere in the Pacific Northwest, the North Pacific Landscape Conservation Cooperative is supporting tribally led initiatives related to traditional knowledge and climate change, including initiatives led by the Karuk and Yurok Tribes of California (Viles 2013).

It is important to note that while traditional knowledge can make indigenous communities more resilient and adaptive in the face of climate change, rapid climate change may sometimes compromise the formation and continued use of traditional knowledge (Parker et al. 2006, Voggesser et al. 2013). By potentially disrupting traditional relationships and responsibilities, climate change may disrupt the intimate interactions that are at the heart of traditional knowledge. This potential loss is illustrated by Hoover (2013, p.5), who describes the impacts that pollution-related fish advisories have had on Mohawk culture and knowledge transmission:

> A cessation in fishing gradually diminished Mohawk culture in several ways. As Henry Lickers describes, the language and culture around tying knots in nets as well as the social interactions that occurred around the process of creating these nets are lost when there is no longer a use for those nets:
>
> "People forget, in their own culture, what you call the knot that you tie in a net. And so, a whole section of your language and culture is lost because no one is tying those nets anymore. The interrelation between men and women, when they tied nets, the relationship between adults or elders and young people, as they tied nets together, the stories. . . that whole social infrastructure that was around the fabrication of that net disappeared (interview 10)."

While the above example is unrelated to climate change, it serves to illustrate the loss of traditional knowledge and skills that can result when indigenous communities are prevented from engaging in their traditional responsibilities.

A final point that must be highlighted in this section is the concept of "climate justice." Indigenous communities are incredibly resilient, and have unique knowledge and skills that can serve them in the context of climate change, but that does not justify or atone the environmental injustice experienced by many of these communities. Kristin Shrader-Frechette (2002, p.6) describes environmental justice as the pursuit of "both a more equitable distribution of environmental goods and bads and greater public participation in evaluating and apportioning these goods and bads."

Climate justice, a subset of environmental justice, refers to the more equitable distribution of benefits and impacts related to climate change, and greater public participation in evaluating and apportioning these benefits and impacts. Indigenous communities have contributed little to the causes of climate change, and yet they are already bearing disproportionate impacts. Indigenous peoples have historically been subject to many environmental injustices, the most recent of which may be climate injustice. This fact needs to be addressed not just through tribal initiatives, but also through the development of just climate change policies and programs at a federal level (Whyte 2013).

Photography and Indigenous Peoples in the U.S.

> The impact of photography as a tool of colonialism has affected Indigenous communities worldwide. As photographic technologies developed and improved, Indigenous peoples were increasingly imaged as part of governmental surveys, documentation, expansionism, curiosity, and tourism. These images, such as the North American works of Edward S. Curtis, created and continuously contribute to the persistent stereotypes of Indigenous peoples. That is further complicated by the purpose and means by which early images were acquired, often without consent or by lawful force, all of which renders the medium one of the most pervasive and effective weapons of colonialism.
> —Veronica Passalacqua 2006, p.xi

In the United States, indigenous peoples' experiences with cameras, photography, and imagery have often been problematic, even painful. As Veronica Passalacqua (2006) clearly describes above, the camera has historically been yet another tool with which to further exacerbate colonial power dynamics. Initially, photography seemed like an objective medium that presented truthful and unquestionable imagery. In time, however, the subjectivity of this medium has become apparent. In her essay *On Photography*, Susan Sontag (1977, pp.6-7) asserted:

> But despite the presumption of veracity that gives all photographs authority, interest, seductiveness, the work that photographers do is no generic exception to the usually shady commerce between art and truth. Even when photographers are most concerned with mirroring reality, they are still haunted by tacit imperatives of taste and conscience...Although there is a sense in which the camera does indeed capture reality, no just interpret it, photographs are as much an interpretation of the world as paintings and drawings are.

Similarly, Bonilla Martinez and Wyaco (1998, p.77) describe:

> Many factors contribute to the creation of a photographic image: the social concerns and aesthetic perspective of the photographer, the capabilities and limitations of the camera and film, the attitudes or circumstances of the subject (or surroundings of the subject). When photographs depict human beings, the relationship between photographer and subject further influences the photograph's final appearance. After an image is made, its interpretation is ultimately affected by the viewer's particular interests and knowledge.

Visual representations of indigenous peoples and their lands have historically been achieved through the subjective lens of the colonizer (Cummings 2011, Tsinhnahjinnie and Passalacqua 2006, West 1998). These historic representations have negatively impacted indigenous communities, even if that was not the photographer's original intent. The repercussions of early photography of indigenous peoples and lands are still felt today (Cummings 2011, Tsinhnahjinnie and Passalacqua 2006, West 1998).

Early Photography of Indigenous Peoples and Lands

In the mid- to late 19th century, the landscapes and peoples of the American West began to be photographed with increasing frequency. From 1868-1879, the United States Geological Survey (USGS) commissioned 4 major surveys: the King Survey, the Hayden Survey, the Powell Survey, and the Wheeler Survey (Davis et al. 2011). These surveys were tasked with photodocumenting available geological and hydrological resources, the agricultural potential of Western landscapes, and the Euro-American settlement of the Western U.S. (Davis et al. 2011, Jurovics et al. 2010). While the main purpose of this survey photography was not necessarily aesthetic, survey photographers such as Timothy H. O'Sullivan often made photographic decisions so as to maximize the aesthetic appeal and dramatic effect of the resulting image (Davis et al. 2011, Jurovics et al. 2010).

As these images became available to the American public, they filled the Euro-American imagination, feeding off of pre-existing worldviews and values, while simultaneously shaping new American ideals. In portraying the West as a resource-rich, exciting and yet simultaneously safe place for Euro-Americans, these photographs would serve to lure settlers westward (Sandweiss 2002). Davis et al. (2011, p.30) describe the power held by survey director Clarence King in mapping and photodocumenting

landscapes previously unknown to Euro-Americans by stating: "...in making the unknown known, scientists like King assimilated the landscape." Indigenous peoples who held intimate relationships to theses landscapes would be impacted by the assimilating nature of these surveys.

Visual narratives used in early 20th century Euro-centric environmentalism also impacted indigenous relationships to ancestral lands. Dunaway (2005) highlights the photographic work of Herbert Wendell Gleason, whom along with the Sierra Club, sought to use photography to persuade the American public that the protection of the American "wilderness" was critical. Gleason's photographic aesthetic sought to blend the natural with the spiritual, but in a Euro-centric fashion that excluded people from the equation. These representations influenced Euro-American views on wilderness, leading to the widespread belief that protected wilderness excluded human activity, including the activity of indigenous peoples who had shaped the continent's landscapes for millennia before European colonization. Dunaway (2005, p.28) acknowledges the classist undertones of Gleason's photography, stating: "By ignoring the experience of poor and rural Americans, Gleason's photography offered a consumerist vision of nature as a spectacle for the eye." In omitting the land-based experiences of marginalized communities, Gleason contributed to elitist environmental discourse that would lead to the National Park Movement, a movement widely celebrated in the mainstream U.S., while simultaneously representing loss and displacement for many indigenous communities (Dunaway 2005, Merchant 2007).

Early photographers not only influenced American wilderness ideals; they also affected indigenous communities by shaping Euro-American conceptions of indigenous peoples (West 1998, Younker 2003). Survey photographers sometimes photographed

indigenous peoples and communities, and the way these photographs were captured and captioned had a powerful way of influencing the public's perception. Survey supervisor and First Lieutenant George Montague Wheeler, whose survey often conveyed a forceful agenda, was known for changing photographers' rather value-free captions for ones that included highly subjective words such as "savages" to describe indigenous peoples (Sandweiss 2002). Painting a negative picture of indigenous peoples was necessary to justify the inconceivable wrongs done to indigenous communities during colonization (Sturgeon 2009).

After settlement of the West, other stereotypes of indigenous peoples began to appear in visual narratives, harnessing themes such as the "Noble Savage," the "Vanishing Race," or later the "Ecological Indian" (Krech 1999, Sandweiss 2002, Sturgeon 2009). Sturgeon (2009) describes that these stereotypes, which remain prevalent in popular media even today, have often been used to critique white society, particularly around issues of environmental degradation. In portraying America's indigenous peoples and ecosystems as fragile, vanishing entities with little agency, the mainstream environmental movement has used indigenous stereotypes to advance its agenda. While at first glance, the "Ecological Indian" stereotype seems to have positive connotations, Sturgeon (2009, p.78) describes how this stereotype affects indigenous communities today:

> The Ecological Indian stereotype insists that actual indigenous people conform to certain prescribed behaviors and values to be deemed proper environmentalists. Allowing tribes to decide how to use their own natural resources or how to define environmental issues on their own terms is made impossible or invisible by the overlay of the stereotype.

Stereotypes captured through imagery not only affect white perceptions of indigenous peoples; they affect indigenous peoples' perceptions of themselves. Perhaps the most well known early 20th century photographs of indigenous peoples are those by

Edward Curtis compiled in the famed photographic collection *The North American Indian*[2]. While in some ways Edward Curtis' intimate portraits may have humanized indigenous peoples in the eyes of Euro-Americans, in other ways Curtis' photography oversimplified, inaccurately portrayed, romanticized, and stereotyped indigenous peoples and cultures (Lyman 1982).

> The invention of photography in the mid-nineteenth century introduced a new dimension to Native stereotyping. Indians became collaborators, captured for eternity in strange poses that were not always of their own making. Staged poses for the camera resulted in photographs that lacked cultural depth. They were unreal. Photography brought the wild Indian into the safe confines of the home, and in doing so tamed the savage beast. These Indians might have strange costumes and surroundings, but they never appear threatening. Instead, they are enveloped in a romantic stillness and removed in time (Hill 1998, p.141).

The stereotypes perpetuated by these photographs continue to have repercussions for the identity and self-determination of many indigenous communities today (Cummings 2011, Tsinhnahjinnie and Passalacqua 2006, West 1998). W. Richard West (1998, pp.xiii-xiv), former director of the National Museum of the American Indian and member of the Cheyenne and Arapaho Tribes of Oklahoma, describes the following:

> Once, as a child, I was sitting with a much older Indian man, the two of us leafing through a book of photographs by Edward S. Curtis, whose elegant works continue to be so enormously popular. I was as mesmerized as a seven-year-old could be by the handsome, often panoramic photographic visions and their gentle sepia tones. When I remarked how much I liked the pictures, my elderly companion dispatched my youthful and apparently undiscriminating admiration by noting gruffly, "It was nothing like that."
>
> I was puzzled at the time since, for a seven-year-old, a photograph represented visual fact rather than opinion, and was supposed to be objective rather than subjective. In the intervening years, however, I have appreciated the limitations

[2] Examples of photographs from Edward Curtis' *The North American Indian* can be found on the following website: http://curtis.library.northwestern.edu. Examples can also be found at the Library of Congress Prints and Photographs Online Catalog at the following website: http://www.loc.gov/pictures/

> of my childhood perceptions. In a profound way, Curtis imposed his own vision and understanding of reality on the subjects he photographed rather than reflecting what may have been their very different perceptions of that same reality.

Similarly, Younker (2003, p.14) describes how Indian stereotypes have affected the Coquille Indian Tribe's ability to most effectively restore their cultural identity:

> North American Indian identities are often negotiated by outside parties, and in many cases, in unreasonable terms. False stereotypes, historically inaccurate imagery, and homogenized Indian social trends (e.g., "Pan-Indianism") wear down customs, traditional knowledge, and cultural distinctions, changing "Indianess" to a point where even the Indians cannot recognize the final image. The result is an unattainable or undesirable faux image that undermines the confidence Indians might have in ever identifying comfortably with the "redefined" ethnic group. Similar faux imagery and determinations have added to the confusion among some Coquilles as to "what is" and "what is not" Coquille Indian culture.

Not all that is associated with early Euro-American photography of indigenous peoples is negative. In some instances, indigenous communities have used early ethnographic photography to recall certain aspects of their history and restore traditions that were impacted by colonization. For example, women of the Coquille Indian Tribe have used early photographs of their ancestors to revive traditional beadwork patterns. Nevertheless, indigenous communities must contend daily with the impacts of stereotypes and false representations immortalized in early photography. It is in part these frustrations with misappropriated indigenous themes and imagery that have inspired the emergence of a number of indigenous photographers, film, and multi-media producers whose interest lies in the pursuit of accurate indigenous representation and visual sovereignty.

Indigenous Photographers

In *Our People, Our Land, Our Images*[3], a compilation of photography by international indigenous photographers, Hulleah Tsinhnahjinnie describes how she introduced herself at an event that she photographed:

> My name is Hulleah Tsinhnahjinnie, born into the Bear and Raccoon Clan of the Seminole and Muskogee Nations. Born for the Tsinajinnie Clan of the Diné Nation. I originally came to photograph Nellie Two Bulls' family pow-wow and then was told to go to Bear Butte, that images could be utilized by the encampment. I have been photographing for thirty-five years, but the photographs I take are not for White people to look at Native people. I take photographs so that Native people can look at Native people. I make photographs for Native people (Tsinhnahjinnie and Passalacqua 2006, p.ix)

By introducing herself in this way, Tsinhnahjinnie makes clear that she is an indigenous photographer taking photographs of indigenous communities for indigenous communities. In doing so, she distinguishes herself from Euro-American photographers that have photographed indigenous communities for Euro-American visual consumption.

Visual sovereignty, the ability to control how one's culture is represented through imagery, is being fostered by various photographers, filmmakers, and artists like Tsinhnahjinnie. Raheja (2007, p.1161) states:

> The visual, particularly film, video, and new media is a germinal and exciting site for exploring how sovereignty is a creative act of self-representation that has the potential to both undermine stereotypes of indigenous peoples and to strengthen what Robert Warrior has called the "intellectual health" of communities in the wake of genocide and colonialism.

In analyzing photographer and film producer Victor Masayesva's visual storytelling, Romero (2010) describes the various strategies used by Masayesva to

[3] A traveling exhibit by the same name (*Our People, Our Land, Our Images*) is in effect in the United States until 2016. To see examples of some of the photographs and images produced by indigenous photographers and artists that form part of this exhibit, please visit the following website: http://www.eusa.org/exhibit/OurPeopleOurLand/description. Comparing these images to Euro-American representations of indigenous peoples such as the works of Edward Curtis begin to illustrate the difference between Euro-American and indigenous visual representations of indigenous peoples.

decolonize Hopi imagery, including placing the camera at eye-level, including close-ups that reveal emotion, making a rightful place for indigenous languages and oral traditions, protecting sensitive community information and knowledge from white audiences, and appropriating stereotyping archival photographs to give them new meaning. It is important to note, however, that Masayesva still feels a level of ambivalence toward the camera, a fact that he does not hide in his writings or his visual productions. Masayesva's decision to become a photographer and filmmaker reflects this desire for self-representation as well as suspicion of it. In Hopi Photographers/Hopi Images Masayesva writes, "As Hopi photographers we are indeed in a dangerous time. The camera which is available to us is a weapon that will violate the silences and secrets so essential to our group survival." However, Masayesva argues, if the camera is used within Hopi traditions and "cultural conscience," it can also be "something that sustains, enriches, and adds to our spiritual well-being" (As cited in Romero 2010, p.55)

Western technologies such as the camera have been appropriated by indigenous communities and used to broaden the indigenous aesthetic and assert indigenous self-determination and sovereignty in this visual age. Despite this, there are critics that argue that the camera and photography are not inherently indigenous tools, and that in using them indigenous peoples are further assimilating into the dominant culture. In regards to this notion, Veronica Passalacqua (Tsinhnahjinnie and Passalacqua 2006, p.xx) states:

> To consider that Indigenous peoples would not utilize new technologies is, at best, naïve. Some argue that as a Western apparatus, the camera somehow diminishes the authenticity of the artwork as being Indigenous or Native North American. When a carver utilizes a chainsaw instead of an adze is it somehow less traditional? What about acrylic paints and commercial canvas? I would argue that the image and the subject matter are so deeply embedded in Native cultural capital and intellectual property that any such marginalization is baseless. With the rise of digital technologies, these loathsome arguments have resurfaced in discussions about photography and Native American art. But as Hulleah J

> Tsinhnahjinnie once said, "It has always been traditional to be innovative and try new things."

In *Visualities: Perspectives on Contemporary American Indian Film and Art,* Cummings (2011, p.xiii) explores "the concept that individual and collective identities are constituted through systems of knowledge production embodied in visual forms." The artists and filmmakers highlighted in the book's essays use visual media to reconstruct, decolonize, and assert indigenous identities. These artists and filmmakers demonstrate that engaging in the process of creating visual media can be a useful, innovative, and cathartic process for indigenous individuals and communities who are open to using visual media technologies.

Community Photography, Photovoice and Indigenous Communities

Photography has gained momentum in recent decades as a tool for communities to advance their objectives, particularly as it relates to issues of social justice. It can be an easy-to-use, accessible, and powerful tool for documentation, representation, creative expression, and communication within and across cultures. As has been described above, it can also be a tool used to perpetuate stereotypes, appropriate culture, and advance oppressive agendas. Community photography projects can harness the strengths of photography as a medium while simultaneously mitigating or reversing some of the negative historic impacts caused by one-dimensional photography.

Community photography, simply put, is a process in which a community asserts its photographic agency in order to achieve a common purpose or capture and share community perspectives. Photovoice, a research tool first developed by sociologists Caroline Wang and Mary Ann Burris in 1997, is a community-based participatory research process that engages community members as active research participants and

contributors through the use of community photography. Wang and Burris (1997) describe their conceptual development of photovoice as the convergence of three main sources:

1. The theoretical literature on education for critical consciousness, feminist theory, and documentary photography;
2. The efforts of community photographers and participatory educators to challenge assumptions about representation and documentary authorship;
3. Wang and Burris' experience articulating and applying the process in the Ford Foundation-supported Yunnan Women's Reproductive Health and Development Program.

While each photovoice process varies in its design, the general framework outlined by Wang and Burris involves the identification of a photographic topic of interest, the recruitment or convening of relevant community participants, the training of community participants, a photography period in which participants photodocument the topic of interest, and convening of participants to share and discuss the photography and decide how best to use it to shape the community's future. Hergenrather et al. (2009, p.687) state:

> Photovoice as a research methodology provides participants an opportunity to take photographs that address a salient community concern and present them in group discussion that empowers them to reflect on personal and community strengths, create critical dialogue, share knowledge about personal and community issues, and develop and host a forum for the presentation of their lived experiences and priorities through self-identified images, language, and context.

The strengths of photovoice as a research and/or community tool include its ability to "affirm the ingenuity and perspective of society's most vulnerable populations",

its potential for bringing "tangible and immediate benefits to people and their networks," and its use of the visual image as a robust communication medium that can illustrate complex ideas in ways words cannot (Wang and Burris 1997).

Photovoice also has disadvantages and potential downfalls, some of which Wang and Burris (1997) discuss themselves. They warn that the act of photographing community issues can quickly become political, potentially instigating community controversy and putting photovoice participants at risk. They also recognize that despite its attempt to mitigate power inequalities in research and in communities, there are ways in which photovoice processes can perpetuate those inequalities. The authors state: "...the process entrusts cameras to the hands of ordinary people, but in whose hands does money, support, and editorial control remain?" (Wang and Burris 1997, p.374).

Prins (2010, p.427) questions the invasiveness of photovoice as a research tool, stating that photography has a "dual potential for social control and surveillance, and for collective learning and action." She cautions researchers and communities to not just accept the "somewhat romanticized view of participatory photography's transformative results" at face value, and to question how a process like photovoice "shapes and is shaped by distinctive sociocultural settings." She urges researchers to pay closer attention to ethical issues and sociocultural contexts in order to avoid negative impacts to photovoice participants and their communities. Of particular relevance to our research is her assertion that "...in communities with a history of surveillance and betrayal by the state or citizens, people may perceive cameras and photography as instruments of surveillance and social control" (Prins 2010, p.430).

Castleden et al. (2008) discuss some of the modifications that can make photovoice better suited for indigenous communities. The authors used a PhD student-led photovoice project with the Huu-ay-aht of Canada as a reference point. Castleden et al. (2008, p.1396) state that confidentiality and anonymity were achieved in this project via the following four strategies:

1. Training sessions were conducted with participants at the start of the process concerning the ethics and mechanics of photography to ensure that they understood the implications of doing photographic research.
2. Signed informed consent forms were required from any individuals who were photographed in order to ensure that they understood why the images were being collected and what would be done with them.
3. Member-checking and transcription verification permitted participants to read through interview texts and delete any potentially harmful information as well as ensure that the power to define what was included or excluded remained with the participants themselves.
4. Photograph release consent forms ensured that participants understood what their photos would be used for and where their photographs would be published.

The authors attribute the success of the highlighted project in part to "the method's success at balancing power, creating a sense of ownership in the research, fostering trust, building capacity, and implementing a culturally appropriate research project in the community" (p.1398). They recommend modifications to Wang and Burris' original photovoice method to best accommodate indigenous communities. Some of the modifications suggested include extending the photography period to build

trust, respecting elders limited mobility, and having interviews with participants shortly after they complete their photographs to get their photo descriptions while they are still fresh in their minds (given the extended photography period).

Photovoice has already been used within indigenous communities to document topics related to climate change. Healey et al. (2011) highlights a photovoice process that was used to gather Inuit perspectives on climate change impacts to their communities. The process engaged six Inuit community volunteers in Nunavut, Canada, to photodocument the ways in which climate change is affecting the health of Northern peoples. The authors describe how they honored participatory principles, granting participants full ownership over the data, as well as full participation in the data analysis process. Culture-specific principles were also applied to the process, including an agreement by participants to "adhere to the Inuit principle of Inuuqatigiittiarniq, working in an environment of respect and appreciation for one another."

One finding of particular interest was the fact that participants saw "the capacity to reflect on the past and preserve Inuit Qaujimajatuqangit (Inuit knowledge) as essential to coping with the effects of climate change on health" (p.91). Another finding highlighted in the photovoice process was the sense of loss felt by Inuit communities as a result of climate change. "For many, the transition from colder to warmer environments means a loss of livelihood, a loss of tradition, and a loss of preferred activities, such as snowmobiling, hunting, and camping" (p.92). Participants also reflected upon their individual contributions to climate change causes, photodocumenting the challenges of living sustainably in the North, where the geographic and environmental conditions require resource- and energy- intensive practices. Bringing more sustainable

alternatives to their region was one of their calls to action. They also saw transition and adaptation as a necessary response to climate change.

This participatory process engaged voices that are often absent from the literature (Inuit community members) to address a topic that is also under-researched in academia (climate change impacts on health in Northern communities). In the conclusion, Healey et al. (2011, p.95) state:

> The destruction of the age-old hunting economy presages destruction of the very culture of Inuit. The seriousness of the issue means that Inuit have to use every available avenue to bring their perspectives to the attention of decision makers who have the power to affect change (Watt-Cloutier, 2004; Kovats and Haines, 2005). This study further highlights the importance of participatory research and the merits of the photovoice technique in eliciting community perspectives and promoting social action from the individual to national level. Building social capacity, thereby empowering communities to gain a sense of control, is essential to managing the health effects of climate change (Costello et al. 2009). Our findings support this notion and suggest that an investment in community is an essential strategy for mitigating the ill effects of climate change on health.

As Healey et al. (2011) imply above, processes such as photovoice can bring indigenous communities together, harness community perspectives and knowledge, and create a platform for collective action in the face of climate change.

Decolonizing the Research Process

> Research, like schooling, once a tool of colonization and oppression, is very gradually coming to be seen as a potential means to reclaim languages, histories, and knowledge, to find solutions to the negative impacts of colonialism and to give voice to an alternative way of knowing and of being.
> —Linda Tuhiwai Smith 2005, p.91

Indigenous communities have been some of the most researched on the planet (Jacklin and Kinoshameg 2008, Smith L 2005). Unfortunately, this research has often been intrusive, damaging, and exploiting, and has perpetuated colonial power structures

(Bishop 2005, Jacklin and Kinoshameg 2008, Smith L 2005). Mainstream academic research is deeply rooted in Western principles and values. From the forms of knowledge that are considered acceptable and valuable, to the research methodologies used, every aspect of academia is shaped by Western ideals (Bishop 2005). This tendency disregards indigenous ways of knowing, being, and learning, and affects the well being and self-determination of indigenous communities in which Western research is taking place (Bishop 2005, Deloria and Wildcat 2001, Jacklin and Kinoshameg 2008). As Linda Tuhiwai Smith (2005, p.87) states, "The history of research from many indigenous perspectives is so deeply embedded in colonization that it has been regarded as a tool only of colonization and not as a potential tool for self-determination and development."

In response to these academic tendencies, indigenous communities, organizations, and scholars, are developing decolonized research principles and frameworks that aim to balance power between researchers and researched communities, more equitably distribute research benefits, respect indigenous culture, and value traditional knowledge (Alaska Native Science Commission 2011, Bishop 2005, Jacklin and Kinoshameg 2008, Smith L 2005). On their website, the Alaska Native Science Commission (2011) lists the Alaska Federation of Natives Board's policy guidelines for research in Alaska Native communities. These guidelines, which are meant to inform outside researchers when initiating research in Alaska Native communities, include:

- Advise those Native people who will be affected by the study of the purpose, goals and time frame of the research, the data-gathering techniques, the positive and negative implications and the impacts of the research.

- Obtain informed consent of the appropriate governing body.
- Fund the support of a Native research committee appointed by the local community to assess and monitor the project and ensure compliance with the expressed wishes of Native people.
- Protect the sacred knowledge and cultural/intellectual property of Native people.
- Hire and train Native people to assist in the study.
- Use Native languages whenever English is the second language.
- Include Native viewpoints in the final study.
- Acknowledge the contributions of Native people.
- Inform the Native research committee in a summary report, in nontechnical language, of the major findings of the study.
- Provide copies of the study to the local people

The Māori of New Zealand have also developed a decolonized research strategy using "Kaupapa Māori" approaches (Bishop 2005). According to Bishop (2005), this research strategy differs from conventional research in the following ways:

1. It promotes self-determination
2. It is collectivistic and promotes benefits to all research participants
3. It allows cultural aspirations, values and needs to drive research decisions.

Bishop (2005) also describes the way in which this research strategy seek to "reject empowerment;" in other words, to debunk the notion that Western institutions and peoples are the ones to grant indigenous communities power. As Bishop and others assert, indigenous communities have inherent power and self-determination. Bishop also discusses how the pursuit of neutrality, objectivity, and distance that characterizes much

of Western research often leads to research that is not culturally appropriate for indigenous communities.

Special considerations must be taken when research involves collecting, documenting and/or sharing traditional, or indigenous knowledge. Simpson (2004) provides the context, as well as strategies, for anticolonial strategies for the recovery and preservation of indigenous knowledge. She describes the recent interest that academia has revealed in incorporating indigenous knowledge into research, policies, and resource management. Initially, many indigenous communities were hopeful about this new interest, hoping that it would lead to more indigenous knowledge being incorporated in decisions and policies that affect indigenous communities. Unfortunately, Simpson explains that in many cases non-indigenous academics have exploited indigenous knowledge for the benefit of the dominant culture, perpetuating colonial oppression and inequity in the process.

Simpson goes on to describe how indigenous knowledge holders and indigenous leaders get asked to share their knowledge with governments, the same governments that later partake or allow the destruction of the environment that fosters the development and transmission of indigenous knowledge. The author states the importance of land preservation and indigenous self-determination when developing anticolonial strategies to knowledge preservation.

Particularly relevant to this thesis are Simpson's discussions of converting oral knowledge to text and of digitizing indigenous knowledge. The author points out that when knowledge gets turned into text, it is translated into the language of the colonizers, perpetuating the current power structure. In text form, the knowledge loses

its fluidity and its spatial and cultural context. In regards to digitizing indigenous knowledge, Simpson (2004, p.380) warns:

> Documenting or digitizing Indigenous Knowledge is a seemingly benign way of appearing to recover Traditional Indigenous Knowledge while at the same time increasing access to the knowledge and vastly increasing the potential for its exploitation.

Williams and Hardison (2013) discuss some of the challenges associated with the incorporation of traditional knowledge into climate change initiatives. In recent years, there has been mounting interest among government agencies and climate change researchers in using traditional knowledge to inform climate change assessments and adaptation strategies. Indigenous communities often find themselves in a difficult position, as they wish to have their knowledge inform larger climate change initiatives, but they are also weary of the exploitative and appropriative nature of historic knowledge exchanges with Western researchers. Williams and Hardison (2013) suggest applying protective measures to ensure that traditional knowledge is not exploited during knowledge exchanges. They suggest basing knowledge exchanges on free, prior and informed consent as a protective measure. They also urge research communities to acknowledge that traditional knowledge is governed by tribal sovereignty and is therefore subject to rules and laws determined by the knowledge-holding sovereign.

While Jacklin and Kinoshameg (2008) don't use the term "decolonized" to describe the research process documented in their article, the research strategies and experiences described within are decolonizing in nature and serve as an informative precedent. The authors describe "the evolution of a research partnership between Jacklin, conducting her dissertation research, and the Wikwemikong Unceded Indian Reserve" (p.54). In the theoretical foundations, the authors warn that the act of initiating

participatory research within an indigenous community does not prevent outsiders from adopting colonial attitudes. They also assert that there have been very few instances where truly participatory research has been applied or reported on in Aboriginal communities.

In their article, Jacklin and Kinoshameg (2008, p.60) list eight principles of appropriate community-based participatory research:

1. Partnership— Local involvement and participation in planning and implementation
2. Empowerment— Research as a process that enhances community empowerment and moves towards self-determination
3. Community Control— Community maintains ownerships and control of research process and outcomes
4. Mutual Benefit— Working in partnership with and for the community for a beneficial outcome
5. Wholism— Use and production of wholistic knowledge
6. Action— Knowledge produced is used for action
7. Communication— Commitment to communication, dissemination and knowledge translation of research and results
8. Respect— Respect for local research philosophy and culture

While the principle of "empowerment" above conflicts with the Kaupapa Māori's rejection of empowerment highlighted in Bishop (2005), many of these principles can serve to inform the decolonized research collaboration highlighted in this thesis.

Jacklin and Kinoshameg (2008, pp.63-64) also make the following important assertions in regards to embarking on a participatory process with an indigenous community:

> ...the researcher must unlearn the expert role they have been entrenched in throughout their university and professional careers and be prepared to take the time to listen, learn and take direction from the community. The researcher also must be prepared to vigorously advocate for the legitimacy of knowledge produced from participatory action research and community-based research under the scrutiny of academic colleagues.

The Coquille Indian Tribe's own Southwest Oregon Research Project (SWORP), discussed in this document's introduction, is one that has sought to decolonize tribal knowledge, research, and information-sharing, and customize research processes to meet the cultural needs of indigenous communities. Younker (2005, p.6) describes the origin of the SWORP initiative:

> Having learned the lessons of the treaty period, land claims, termination, and restoration, the Coquilles are actively engaged in a regimen of scholarly and archival research to lessen the chances of future challenges to their sovereignty.

Younker (2005, p.7) also states: "The Coquilles have learned a lesson on two occasions when their words were of little value while the words of nontribal scholars carried credibility." With this in mind, the Tribe developed the ambitious SWORP initiative to "repatriate knowledge" and assert control over archival documents and materials about regional indigenous history and culture that were once out of their reach (Younker 2005). In doing so, the Tribe is able to use these documents in ways that can benefit their community and protect their sovereign identity. By organizing traditional potlatches to distribute a copy of this archival research to other tribes in the region, the Coquille also decolonized the process of knowledge sharing (Younker 2005).

CHAPTER III

RESEARCH METHODS

Decolonizing Research Principles

In light of the decolonized research concepts highlighted in the previous section, and taking into consideration the unique cultural needs of the Coquille Indian Tribe, I strove to decolonize this research collaboration by applying the following decolonized research principles:

- The Tribe has control over the research process and outcomes
- Cultural differences are acknowledged and respected
- The research strives to result in benefits to the Tribe

More specifically, applying these broad principles to our collaboration led to the following decisions and measures:

- Tribal staff designed a photovoice process that would meet their cultural needs, accommodate the seasonality of traditional activities, and produce photography that may serve future tribal purposes.
- The Tribe has sole ownership over all photography resulting from this project.
- I acknowledged my limitations as a non-tribal outsider, and encouraged tribal staff, leadership, and photovoice participants to correct me should I make culturally inappropriate assumptions and/or statements.
- Tribal participants and leadership reviewed the thesis document prior to official submittal to ensure that the Tribe, the research process, and the outcomes had been accurately portrayed, as well as to ensure that none of the information

reported was sensitive tribal information. Any revisions requested by the tribal participants and leadership were subsequently made to this document.

Photovoice Process

Theoretical Framework

Using the photovoice literature highlighted in the literature review, I developed a basic theoretical framework for the photovoice process that tribal staff and leadership could then customize to meet the Tribe's cultural and organizational needs. The framework used Wang and Burris' (1997) *Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment* as a starting point. To better meet the needs of the community, and to avoid the pitfalls of previous photovoice processes, I modified this basic framework using Prins' (2010) critique of photovoice as a potentially intrusive methodology, literature that described photovoice and other participatory research processes within indigenous communities (Castleden et al. 2008, Healey et al. 2011, Jacklin and Kinoshameg 2008), and decolonized research literature (Bishop 2005, Simpson 2004, Smith L 2005).

The photovoice framework I provided suggested the following steps and components:

1. *Selection of the photographic theme* that tribal staff and/or participants felt would be most useful to examine in a climate change context.
2. *Recruitment of tribal participants* through a voluntary process.
3. *Assembly of participants into multi-generational teams.*

4. *Training session* to introduce project objectives and timeline, have participants fill out anonymity preferences and sign consent forms, and introduce participants to project technology.
5. *Photographic period* of 1-3 months in which participants would photodocument the selected topic of photographic focus, with the possibility for a meeting midway through this period to troubleshoot and share concerns/ successes/ other information.
6. *Internal photovoice session* in which all participants would convene, and share and discuss their photography with the group, identify important themes and decide what is the best use for the resulting photography.
7. *Optional photovoice session/s* presenting a selection of project photographs to outside entities to raise awareness of tribal concerns/issues related to climate change.

Photovoice Design

Interested tribal staff and volunteer participants met with me on September 17, 2012, and again on April 12, 2013 to customize/modify the above framework to best meet tribal needs. Other modifications occurred along the way as tribal needs shifted. Below are the modifications that were made to the basic photovoice framework described above:

1. Photographic theme: In initial planning discussions, tribal staff had considered photodocumenting climate change concerns and findings pertaining to bear grass, a cultural resource that is vital for Coquille basketry. After some discussion, tribal staff opted to expand the photographic theme to climate change concerns and findings pertaining to Coquille traditional cultural resources in general. This

would allow for a wider variety of tribal participants' expertise and involvement, and would allow for more photographic versatility.

2. Participant Recruitment: In attempting to recruit volunteers to participate, and in line with a suggestion from tribal staff, I developed an ad to be inserted in a tribal newspaper. The ad produced few results, a fact that was resolved when four members of the tribal staff, as well as an elder with whom they were well acquainted, stepped forward as willing participants. This was positive in that many of the people who had partaken in meetings to plan the specifics of the photovoice process were now going to be active participants.
3. Grouping of participants into multi-generational teams: The volunteer participants who initially stepped forward ended up forming multi-generational family teams in which parents, children, and grandparents would embark on photo documentation together. This resulted in 4 teams, and a total of 11 participants with ages ranging from 10 to 70+.
4. Training session: Tribal staff and participants were satisfied with the training session structure suggested in the basic framework. They chose the date, time, and place that would be most convenient for participants. The training session took place on April 20, 2013.
5. Photographic period: Tribal staff and participants stated that some of the most active seasons when it comes to traditional cultural resources are the summer months, and also stated that a longer photography period would allow participants to capture more cultural events such as traditional harvests. At the training session, tribal participants and I decided to leave the internal photovoice session unscheduled, allowing some flexibility for participants to decide when

they were ready to convene and present the photography. Tribal participants also opted against a meeting midway through the process, as it would be difficult to find a good time for everyone during the busy summer months. They instead decided that they would consult with Jon Ivy, the tribal photographer and photovoice point person, if they had questions or trouble with the cameras. The internal photovoice session ended up taking place on August 27, 2013. The photographic period ended up encompassing part of spring and most of summer and lasted just over four months.

6. Internal photovoice session: Tribal participants were intent on convening during the internal photovoice session. All four team leaders were present during the internal photovoice session, but scheduling conflicts and family emergencies prevented four of the eleven participants from attending the internal photovoice session. In total, seven participants attended the internal photovoice session.
7. Optional photovoice session: Tribal staff and participants opted to keep the photovoice process internal for now, choosing to share the photography within the Tribe but not with outside entities.

Photovoice Utility Case Study

Theoretical Framework

While the tribal staff and participants' key role was to design and carry out the photovoice process, the key role for me as the researcher was to carry out a qualitative study analyzing the effectiveness and utility of photovoice as a communication and documentation tool for the Coquille Indian Tribe, based on participant experiences and observations during the photovoice process. The research question and subquestions

driving this study were:

> How can community photography initiatives serve the Coquille Indian Tribe in addressing the impacts of climate change on tribal self-determination and culture?
>
> - Can community photography facilitate the documentation of tribal findings, concerns, and needs in a climate change context?
> - Can photovoice foster internal dialogue about climate change impacts on traditional cultural resources?
> - Can photovoice facilitate cross-cultural communication of tribal findings, concerns, and needs related to climate change impacts on traditional cultural resources to non-tribal landowners and land managers?
> - How else might the Tribe use community photography in tribal initiatives aimed at protecting tribal culture and enhancing tribal self-determination?

I chose a case study as the most appropriate research strategy based on Creswell (2007) and Denscombe (2003). Creswell (2007, p.73) states:

> Case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, and documents and reports), and reports a case description and case-based themes.

The Coquille's photovoice process represents a clear bounded system, as it is a new initiative with a clear start date and end date, occurring in a specific community. This made it suitable for a case study. Decolonized and participatory research methods highlighted in the literature review also informed some of the decisions made during this case study.

Photovoice Utility Case Study Design

In line with the multiple data types that often characterize case studies (Creswell 2007, Denscombe 2003), I collected various types of primary data using the following data collection strategies:

- Observations of the photovoice process
- Documentation of the central photographic themes and discussions
- Anonymous surveys
- Interviews with photovoice team leaders

Most of the data was collected over a 3 hour span on August 27, 2013. A total of 7 photovoice participants (5 adults and 2 youth) were present during the photovoice session[4]. I interviewed a total of 5 adult participants (at least one from each family team)[5]. A total of 9 participants filled out the anonymous survey[6].

All participants gave me permission to audio-record the photovoice session and interviews in order to best document their perspectives without paraphrasing or misquoting. They also agreed to provide digital copies of their photovoice photography for the purpose of including some examples in this thesis document.

In my analysis, I coded data from observations, surveys, and interviews in search of prevalent themes and noteworthy information. In line with decolonized research principles, I made an effort to support my findings with numerous direct quotes from participants in order to provide relatively unfiltered descriptions and opinions.

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[4] Four of eleven photovoice participants were unable to attend the photovoice sharing session because of a family hospitalization, and scheduling conflicts.

[5] Three of the participants were interviewed together in a group, while the other two participants had to leave early and were interviewed later individually over the phone.

[6] Two of nine surveys were only partially filled out.

Delimitations and Limitations

Project participants were selected on a volunteer basis. Four project team leaders stepped forward and chose to form teams with intergenerational members of their families. This strategy aligned with the Tribe's needs, values, and inherent strengths. It also ensured that participants would remain accountable to their teams and committed to the project, which required a significant time commitment. The results reflect the experiences of a small number of Coquille tribal members that actively chose to participate in this project, and don't necessarily speak for the Coquille Indian Tribe as a whole, let alone for other indigenous peoples and communities.

It is also important to note that as a white researcher, I am limited in my cultural understanding and interpretation of indigenous experiences. In an effort to compensate for this limitation, and in light of decolonized research strategies, I requested that tribal participants and tribal leadership review this document to ensure that I was accurately representing the Tribe, as well as tribal participants' views and opinions. Only a handful of minor corrections were requested and made.

It is also worth noting that the short-term nature of this study limits our ability to assess the value that community photography might have for the Tribe over the long-term. Our results reveal the value that this single photovoice process had for tribal participants. Our results also reveal participants' opinions on what the value of community photography might be for tribal initiatives seeking to exercise and protect tribal culture and self-determination in the context of climate change. However, the actual long-term value (if any) of community photography can't be known until the Tribe uses community photography to advance a given initiative and a clear outcome resulting from that initiative is evident. Unfortunately, that is outside the scope of this study.

CHAPTER IV

FINDINGS: WHAT WE LEARNED

The findings below are presented in two sections. The first section, *Photovoice Session: Group Dynamic and Prevalent Themes*, highlights the nature of the Tribe's photovoice session, describing group dynamics and prevalent photographic themes and discussions. A small selection of participant photographs have been included, along with transcribed participant descriptions, to support the key themes captured by participants. This section of the findings serves as context for the second section, *Case Study Findings*, in which I present tribal participants' perspectives related to the value and effectiveness of community photography as a tribal tool in the context of climate change, based on their experiences carrying out the Tribe's first ever photovoice project.

Photovoice Session: Group Dynamic and Prevalent Themes

On August 27, 2013, participants gathered in the council chambers in the Coquille Indian Tribe administrative building to share their photographs and experiences. Each team took turns displaying their photography on the projector, describing the meaning behind each photo as it appeared on the screen. Casual discussions, questions, and stories were shared throughout the session. Participants shared knowledge with each other about traditional cultural resources, traditional activities, and Coquille history. The fact that teams were comprised of family members and that the various teams were well acquainted with each other as fellow community members was evident in the friendly, relaxed, and open atmosphere of the photovoice

session. Humor and subsequent laughter were prevalent, as was the unfiltered sharing of concerns.

Each team had somewhat unique photographic subjects that differed from other teams, illustrating the diversity of knowledge and experiences that form part of tribal culture. As a result of this diversity, participants learned new cultural insight from each other. For example, different families may have slightly different harvesting or craftsmanship techniques. By seeing other family's experiences and techniques as illustrated in the photography, participants could engage in discussion with each other and refine their cultural awareness. Additionally, different participants had varying levels of familiarity and connection with different ecosystems, harvest sites, and species. Each family may have different places and species with which they have formed an intimate connection, depending on what traditional activities they engage in. By seeing and hearing each other's findings through photovoice, participants became more attuned to places and species that are important to other members of the tribal community. By sharing and critically discussing their findings with each other, participants deepened their understanding of potential climate change impacts on vulnerable traditional cultural resources.

While each team documented different experiences often unique to their family, there were a number of underlying themes that were prevalent throughout the sharing session. Below I list prevalent themes, and include examples of photos, descriptions and dialogue that supported that theme.

Changes in the Abundance and Quality of Traditional Cultural Resources

Perhaps not surprisingly, the most prevalent theme was the detection of changes in the abundance and/or quality of traditional cultural resources. In many cases,

participants had a clear idea of what was causing these changes, the causes often being linked to land management practices that were negatively impacting tribal resources, or to a hotter, drier climate. In other cases, participants documented recent changes the cause and implications of which they were not yet quite certain. In those cases, some participants thought the photographs they had taken could help provide future answers as climate change and land management practices progress. In reference to Figure 1, Jon stated:

> This is a maple tree out front and this picture was taken a few weeks ago, so sometime in early August. Look at the color, the redness that's coming. I know that in my lifetime I have seen this phenomenon start to happen earlier and earlier, some years earlier than others...but it seems to me that fall doesn't start officially until mid-September, and here we have early August where things are happening. And that's due to a dryness in the climate, I mean...it's just dryer than normal. Now of course that could change from year to year, but this year is a good illustration, so...my reasoning to take this picture is that, hey, if this is happening to maple trees, this is probably...there's a good chance it's happening to other types of trees...maybe cedar, maybe, you know, whatever, and a lot of this flora and fauna is used for traditional regalia, things like that, so if there's less of a growing season, just that impact on the species is going to translate to an impact on how it's used, or in the amount of it that's available.

In reference to Figure 2, Bridgett and Brenda had the following conversation:

> Bridgett: "This is the South Fork. That used to be abundant with eel, and there's just hardly anything. There used to be people all over in the river, I mean...Powers[7], it was a gathering place—we were on that river. The people that live in Powers now drive to the Rogue! They're fishing in the Rogue!"
>
> Brenda: "Even the crawdads... we noticed, there wasn't as many crawdads this year. The water is warmer."

In reference to Figure 3, Brenda, Tom, and Sarah had the following conversation:

> Brenda: "We were commenting this year as we were getting maple, that we kind of put it off a little bit and thought that we were ok with our timing as being close to what we did the year before and the year before that. It was different this year, and I think that it's interesting that this project is actually going to need

[7] Powers is a city along the South Fork of the Coquille River in Coos County, OR.

another year, or another year [after that], because you're going to want to match it up to see. It's just our opinions, that this is changing, and the bark is different, and something is happening. To be able to document this this year, it's going to be really interesting to do it again next year. It's a need for next year, or maybe in two years, to see if it's just us or if it really is different. So she did take pictures of the leaves and kind of... just to see what it is like next year."

Tom: "Is that the sap you're talking about, for peeling it?"

Brenda: "Yes"

Sarah: "It was a lot drier this year"

Figure 1: *Early Color* by Team Ivy

Figure 2: *South Fork of the Coquille River* by Team Wheeler.

Figure 3: *Makyra Meade Learning to Peel Maple Bark* by Team Meade/Garland.

The Importance of Various Species and Ecosystems in the Restoration and Preservation of Coquille Culture

Many of the photos the participants took documented the plants, animals, and ecosystems that are culturally significant to participants. Participants pointed out that species that may not be particularly valued by non-tribal community members are sometimes vital to the traditional cultural practices of the Tribe. The species that were documented were often either vital to the Coquille's traditional diet, or a key material in Coquille traditional craftsmanship. The ecosystems documented were often those in which gathering of traditional species takes (or used to take) place, and/or ecosystems that are rich with tribal memories and stories. Several of the participants described (and sometimes illustrated) the ways in which they specifically interact with and use plants and animals to carry out the traditional activities that are important to them. In describing Figure 4, Tom stated:

> The stuff in the back of my truck is Oregon ash, it grows in swampy areas, and its leaves turn faster than the rest of the leaves, the maple leaves or anything else. So as you're driving up the highway there by the elk and you see a yellow plant turning—that's Oregon ash— and it's a hard wood...it's really a nice hard wood. And that's what we make, my son and I, make paddles out of that.

In reference to Figure 5, Sarah stated:

> I'm in the stinging nettle patch, I ended up harvesting quite a bit, 'cause you use stinging nettles, you break it down, and use it for cordage—netting especially, and I've been meaning to make some netting, and it was just so big, you couldn't pass it up.

Figure 4: *Oregon Ash in the Truck* by Team Younker.

Figure 5: *Sarah Garland Gathering Nettles* by Team Meade/Garland.

When describing Figure 6, Jon stated:

> Fish trap. Lamprey trap. This was taken just at Camp TaNae last week. And lamprey is a very significant resource to the Coquille people, for food stores...basic survival. And this just is a neat picture of Jordan holding... simulating, setting the trap. But the point being is...we do an annual lamprey float every year to get...we have a take permit, a harvest permit for X amount. Since we've been doing that, we go on the traditional spawning times, and there are less and less lamprey in the river. There are historical recounting of lamprey being so thick in the South Fork that you could walk across the river, literally. And that just doesn't happen anymore, they're there but they're not there like they used to be. So this is basically showing the trap that would have been used traditionally to catch them but they're not there anymore.

Figure 6: *Hard to Trap* by Team Ivy

Climate Change Impacts as Threats to Cultural Restoration and Preservation

Participants brought up the fact that during this process they often struggled to document something like climate change via photography, given that many climate change impacts often occur over time and may not have a visual narrative of cause-and-effect. Nevertheless, with the help of the narrative descriptions inherent in photovoice, there were several instances in which the photo and the description together succeeded

in illustrating the ways in which climate change is compromising traditional cultural resources, thereby threatening the Tribe's cultural restoration and preservation efforts.

In reference to Figure 7, Jon, Bridgett and I (Kirsten) had the following conversation:

> Jon: "This is a dugout canoe being made by some of our youth corps, and again, this is a...it takes a sizeable log to make a canoe and although we can procure some logs, we can't...they're not...you just can't go get one tomorrow if you want one."
>
> Bridgett: "It takes months to find."
>
> Jon: "Months and months! And very expensive...at a premium. Definitely climate change has had an effect on this species, and so it has had an effect on us, because we don't have—we can't have— one hundred canoes...even if we wanted to. We couldn't afford it, and it would take forever to find the material."
>
> Kirsten: "When you say you couldn't afford it, you have to buy these logs? or do you have trees growing in the Coquille forest..."
>
> Jon: "Well we don't have very many of these trees and we want to preserve the ones that are there so we have to shop around for them and buy them from others, from private industries."
>
> Bridgett: "And to find quality red cedar you have to look in a different state."
>
> Jon: "I think cedar for me...trees were the best topic to illustrate this stuff...and we have a modern day culture of canoeing, we're reviving it, it's hard to revive something when you only have a couple of them."

When describing Figure 8, Tom stated:

> This is the head of the South slough, and the one climate change I know about is my dad used to cuss during Declaration Day for the graves, because you see, that's the end of the rhododendrons, they bloom around our house there's hundreds of rhododendrons, sometimes 40 and 50 feet high, but they're just down, and it's a little bit...by Declaration Day the rhododendrons are gone now. Evidently in the past, because he was always complaining, he said "there's no, you know, you can't decorate the graves with rhododendrons 'cause their blooms are already gone". And so when he was a kid they were probably blooming later.

Figure 7: *Digging Out* by Team Ivy.

In reference to Figure 9, Brenda stated:

> It's so different this year than it was...I guess we missed last year but the year before we did Makyra's [skirt] and the same time of year and when you start taking...she has some pictures of taking the bark off the trees but, you put your fingers in between the bark and the tree and it's usually slimy, it's goopy, and that's really good. But this year it was really dry and you can see the difference in the skirts too which is interesting. The wetter the better I guess, but we were late...getting it this year. Or actually, it was the same time of year but it was drier.

Figure 8: *Rhododendron Blooms* by Team Younker.

Figure 9: *Sarah Garland Preparing Maple Bark for a Skirt* by Team Meade/Garland.

Non-Tribal Land Management Practices and Policies Affecting Tribal Access to Traditional Cultural Resources

Another theme that was notable was the fact that non-tribal land management practices and policies often affect the Tribe's ability to meaningfully interact with traditional cultural resources. Photos and stories told of various instances in which vital tribal resources have been severely depleted due to the management of these resources by non-tribal land managers. The Tribe's land stewardship approaches and objectives often differ from the land management strategies of private entities and/or federal and state agencies. Non-tribal entities don't manage landscapes to ensure the health and abundance of species that are culturally critical to the Tribe. Similarly, government policies, often developed from a Euro-centric, Western science point of view, often fail to address the needs of traditional tribal culture, sometimes interfering directly with the Tribe's ability to carry out cultural practices. This theme highlights the fact that the continued impacts of colonization (such as Euro-centric land management and policies) may intersect with climate change impacts to further challenge access to, and Coquille stewardship of, traditional cultural resources. In reference to Figure 10, Jon and I (Kirsten) had the following conversation:

> Kirsten: "You mentioned there is less camas, Jon?"
>
> Jon: "Well, it's in...like in Euphoria Ridge there's lots of camas, but there's not lots of places like Euphoria ridge anymore. So...where we've managed it, it has come back really well, but in other spots that aren't managed because of whatever, like say, along the highway, from Powers or Coquille to Roseburg, Camas Valley, there's less of it on the side of the road where you used to see it."

Figure 10: *Camas from Euphoria Ridge* by Team Wheeler.

In reference to Figure 11, Jon and Tom had the following conversation:

> Jon: "Here is a net full of lamprey again, and imagine, this is a good little catch but this was an all-day effort by a bunch of people to get this many, so really, not that many lamprey, when the river used to be full of them, and now you have just this small net full for an all-day trip."
>
> Tom: "A lot of that has to do with the wildlife policies of the Oregon Fish & Game. Up in the Siletz area same thing, they killed all the lamprey because they figured they were attacking the salmon, and they wiped out a lot of the streams, I don't know what they did down here, but that was their practices, was to would kill lamprey."

Figure 11: *Room to Wiggle* by Team Ivy

Stories Linking the Landscape with Family Relatives and Community Members

The intimate connection to local and regional landscapes was evident in the storytelling of many participants. Lessons learned by a community member or relative seem to be learned by the rest of the family or community through storytelling that endures through time. Participants told stories of their own experiences, as well as stories about their relatives and fellow community members. These stories were almost always linked to a specific species or landscape, often those being displayed on the projector. In relation to Figure 12, Tom told the following story:

> When I was a little kid, you could go and you would have fields of skunk cabbage, and the alder tree growing in the bottom like this, it would just be loaded with skunk cabbage, and I love skunk cabbage because it would grow six to eight feet tall and we loved to fight, and you'd break off the yellow stalk in the middle of the pistil I guess it would be, and you could throw it and we'd get in fights in there and somebody would duck behind the cabbage—one of those things—and you could just throw it and it would go right on through and peg 'em, and I just had a ball in there! We would chop down alder trees, we'd get someone to

climb up on the top and then we'd chop it and they'd fall with the tree, and do all kinds of things. But I don't notice as much skunk cabbage as I used to.

Figure 12: *Skunk Cabbage* by Team Younker.

When describing Figure 13, Tom and Brenda had the following conversation:

> Brenda: "There's a story that Susie Ned, when she went out to gather berries, that you could not tell where she had picked berries—other than the berries were gone— and how the white people you can tell where they picked berries cause they'd brake everything, you know lay boards in there so they could get inside, and break everything up. But you could never tell where she'd picked."
>
> Tom: "She used the heym-heym[8] right?
>
> Brenda: "She used the heym-heym!"

[8] A heym-heym is a traditional device made out of a branch that helps retrieve berries that are out of arm's length.

Figure 13: *Lyman Meade and Makyra Meade Gathering Berries With a Hyme-Hyme* by Team Meade/Garland.

Validation that Coquille Land Stewardship Practices Are Successful in Protecting Traditional Cultural Resources

During the sharing session, there were a couple of instances when participants looked at the photo at hand and were satisfied to see that traditional species are thriving and being well cared for on tribal lands. This validated the effectiveness of Coquille stewardship and management strategies in protecting and promoting the resources that are culturally vital to the community. When describing Figure 14, Brenda stated:

> I think one thing that's interesting is that this is Coquille lands, this is tribal lands, and I just wanted to point out all of the traditional materials that are just growing in that one picture, because it's phenomenal! There's different things—everything there we would use traditionally and it kind of makes you feel like you're doing things the right way.

Figure 14: *Nettles, Western Hemlock, and Big Leaf Maple* by Team Meade/Garland.

The Need for a Longer Community Photography Process to Detect Landscape Changes

Throughout the various team presentations, there was mention of the need for a longer community photography process in order to document landscape and resources changes over time. One of the four teams indicated a strong interest in continuing their documentation next year in order to notice differences in the quality of traditional species from this year to the next. Brenda stated:

> You know I think when talking about global warming and the changes in our weather and I think that for gathering purposes, I think this project is going to be...a bigger project. I think that the Tribe has done well with photographing gathering trips in the last three years...four years? five years maybe? Maybe it's longer that we've actually gotten serious about taking pictures and having it on the calendar, and I think that it's going to be something that we have to track in order to see if there's really ups and downs that are normal or if there's things that are happening that are affecting these things.

Various participants brought up the value this photography could have in the future as an illustration of what used to be. Tom emphasized that the Tribe has depended heavily on thorough documentation and archiving for political and cultural purposes. These photos could contribute to those archives for future tribal political and cultural initiatives. In reference to Figure 15, Tom stated the following:

> The green spots out there are eel grass, and eel grass is growing and seems to be increasing to me, but they're doing eel grass studies right around there so they would know. And I don't know whether the eel grass or what's changing there, but the pH is higher around the island there than it is down at the mouth or in the ocean, so the ocean is more acidic than where I live, and so we have a lot of shells, like the cockles that we were showing, we have a lot of cockles around there, we have a lot of Empire clams, they have oysters growing up the slough, and if you have a low pH—more acidic—the calcium carbonate takes longer to form, but if you have a higher base, then it will form faster, so that's maybe why we have a lot of it up the slough. And, I don't know what the salinity is, the salinity changes, and then also you have the factor that this seaweed takes away carbon dioxide—just like a tree does— so it makes a healthy area for that type of thing.
>
> We used to have an awful lot of that green grass growing, it just covers the flats and then when it dies it floats off and then you got bear ground, and your little fish came. If you go down in this area here, we were down in that area there, and looked out on it, and it was the eel grass, and you looked at the little Dungeness crabs—lots of 'em— just swimming around through the grass and as you look at the grass, you pick it up and look at it, and you look the herring spawn on it, so this area is fairly productive for things, and I don't know whether it's going to change but with those kinds of pictures if you have them archived...that was a low tide, and maybe at a low tide you won't be able to see that land in fifty or sixty years. So that's why I'm saying if you archive these things, that's the change that may be relevant to what you're looking at.

Figure 15: *Eel Grass* by Team Younker.

Mitigation and Adaptation Strategies

There were a couple of instances in which participants brought up existing or potential strategies to combat or adapt to climate change. This was meaningful in that it illustrates awareness within the community of the need to take action in order to make the Tribe more resilient in the face of climate change.

In reference to Figure 16, Jon and Tom had the following conversation:

> Jon: "This is a "Kids in the Woods" tree planting that we do every year, and my angle on this is, we plant cedars a lot, and we plant fir trees too. But cedar is very significant and one of the reasons that we're planting this stuff is that it's been harvested but, because it's drier, it's not growing back at the same rate and it's not achieving the same size and it's taking longer so the usable resource is a lot thinner. It's just not there. So this is a way of basically...this picture illustrates the combating of global warming. It's not there, so we have to put it in the ground ourselves 'cause it's not coming back naturally."
>
> Tom: "And I wanted to plant sequoias because if we're going to have global warming, sequoias might move their zone up here, and in 100 years we might

have a forest of sequoias along with our other indigenous trees that may be moving north."

Figure 16: *New Beginnings* by Team Ivy.

Case Study Findings

Overall, participants were enthusiastic about the value of community photography as a tribal tool. Survey and interview responses provided insight as to the value of community photography as a climate change tool, as a tool for cultural restoration and preservation, and as a tool to communicate inter-culturally. Additionally, survey and interview responses revealed ways in which future community photography processes can be improved.

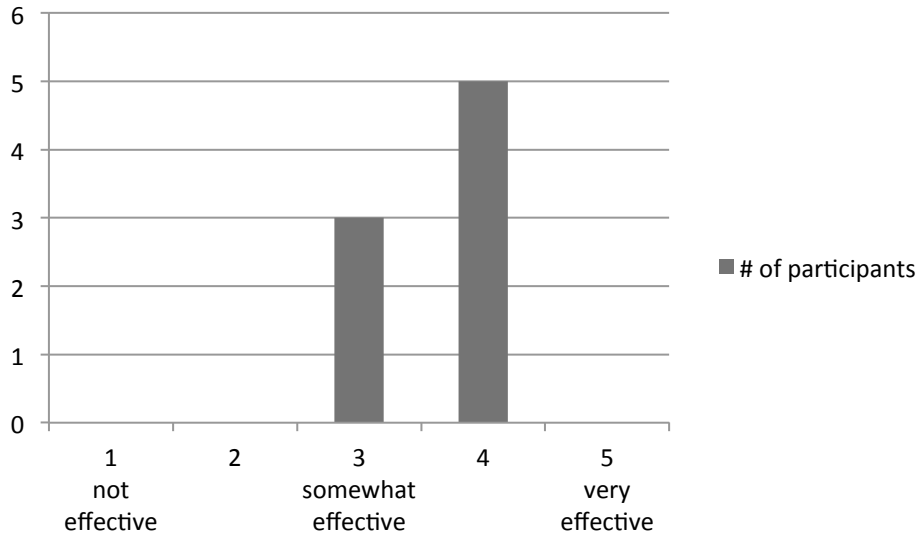
Community Photography as a Climate Change Tool

The survey revealed that most participants felt that the effectiveness of the photovoice process in which they had participated was somewhere between "somewhat

effective" and "very effective" at documenting the Tribe's climate change concerns relating to traditional cultural resources. Figure 17 graphs participant responses.

Participants felt that in order for community photography to be particularly useful in documenting climate change impacts on traditional cultural resources, this project had to be long-term. When asked how this project could be improved, one participant wrote: "A longer timeline (possibly years) to look over and compare changes in participation and landscape." Some participants described that it is sometimes difficult to capture climate change impacts within a single photograph. Many climate change impacts might not be visually noticeable until years from now. In the interviews and in the photovoice session itself, participants suggested that a key way in which this project could serve the Tribe when seeking to document climate change impacts was to start a photo archive that could later serve to compare conditions through time.

Figure 17: Participant opinions on the effectiveness of this community photography process in documenting the Tribe's climate change concerns relating to traditional cultural resources.



100% of survey respondents thought community photography could serve future tribal climate change initiatives. When asked why, respondents stated:

> "It brings people together over topics of importance that we tend to overlook on a daily basis"
>
> "I think it can serve in the future because it shows the past"
>
> "Having pictures that are archived for reference"
>
> "Perfect way to document—show evidence of plant species existence, condition, areas it grows, and changes over years"
>
> "I think pictures speak a thousand words. The Coquille people will be here forever on this land...who better to watch."
>
> "Because we have pictures to compare"
>
> "We are now documenting with pictures to compare in the future"

These responses once again reveal that when it comes to climate change, most participants expected the most significant benefits from community photography to result over the long term.

Some participants indicated that embarking on this community photography process gave them the chance to reflect upon activities they often take for granted, and pay closer attention. As one participant stated:

> It was very useful and it allowed us to have a process...really just taking time to think about things a little bit before hand. I mean, we do things like going out clam digging or going out and gathering cedar bark or maple bark, we normally just do it and we don't have a lot of forethought into timing, and how things are when we're doing it, and I think this project has been very useful to kind of give us a process that we stop and think about things as we're doing it. Kind of reflect too.

By sharing their photographs and descriptions with each other, participants learned about each other's observations and concerns, and gained new insight on landscape changes occurring within the region. In fact, the survey revealed that after participating in the photovoice project, 100% of respondents felt they had a better understanding of how climate change may impact traditional cultural resources.

Community Photography as a Tool for Cultural Restoration and Preservation

Participants seemed to find the most promise for community photography in general, and photovoice in particular, as a tool for cultural restoration and preservation. Participants saw value not just in the resulting images, but also in the community photography process itself. For some participants, partaking in the photovoice session was a very meaningful learning experience. One participant stated:

> I think that this is actually extremely powerful because the Tribe has struggled with "how do we rejuvenate some of the cultural traditions and that knowledge?". And I've learned more just sitting here today, even though I've had books on my desk, and you know...I could have easily probably looked it up but I just haven't done that. And so I was thinking with how we struggle with "how do we capture this and share it with tribal members?" I was thinking for this project: I learned a lot just sitting here listening to Sarah, and Jon, and Brenda, and Tom, and I just think how lucky...what a special morning this was to me, and sharing that with other tribal members.

Several participants brought up the fact that community photography processes such as photovoice might serve to enhance tribal education curriculums. One participant described photovoice as a tool that engages people of all ages. Additionally, photovoice's combination of imagery and oral descriptions seemed to be particularly alluring to participants, given that it taps into ways of sharing and learning that come naturally to the tribal community. One participant stated:

> I'm kind of curious to see how the voice aspect plays into it, I think that a lot of people are really pushing for more of an oral and visual presentation 'cause, a lot of us, that's how we learn...we learn it much better than just looking at a written

> paper with instructions. Sometimes it's easier to see it, and catalogue and archive it, and things like it's there you can see—this plant has blight. Then next year—two plants have blight. And I think that is one of the highpoints that I'm kind of looking forward to see how that would play into having more of an expanded learning.

Another stated:

> Anytime that we document things, whether it's with pictures or it's family representation doing things I think it's very powerful and it really becomes a part of the Tribe's history. And for me I feel like this project is really just a starting point for the Tribe here, because we really recognize how we teach our history and how we teach our culture is by word of mouth, or by stories, or by talking about something that happened, and who was there...and this process allows that to happen with the pictures and the recordings and a final process, a final...I guess, something we will always have and share.

The multi-generational nature of the participant teams brought out topics of conversation related to the use of photovoice as a tool to bridge the knowledge gap between elders and youth. Several participants brought up the importance of having youth involved in community initiatives that teach them about their cultural heritage and give them a vested interest in the community. When discussing how the photovoice process with his granddaughter went, one participant described:

> We had a good time when we were doing things, and the thing about having youth involved is giving them a time perspective also. Like, I know a few years ago—quite a few years ago I guess it was— I said "we should get youth involved in planting trees in our forest so they'll have something that is theirs." And by having our grandchildren—our young children— being involved in this photo opportunity, it's something that they belong to and they will watch, and it gives them a vested interest in our Tribe.

Another participant emphasized the importance of youth involvement in projects such as these, while also stating that she wished her team would have requested the participation of a family elder:

> I am the biggest advocate on taking our youth out, because it's amazing to be able to give a young person the knowledge that they are on tribal lands, and that you know, people have done this for 10,000 years, your grandmas did it here, and we're doing it here. It's so interesting to see them take that on and be in

> those conversations and have ownership. I think the one piece we were missing was that we should have thought a little bit further ahead and had an elder with us, 'cause that adds a whole other piece too, and we recognize that as being important. You know...for tribal gatherings we make sure that happens, so that was one piece we were missing on this project.

Elders hold cultural knowledge and experiences that are critical to the tribal community. Several participants expressed interest in working with their elders to document elder perspectives and knowledge. This would facilitate the restoration and preservation of cultural knowledge for future generations. As one participant describes:

> As long as you've got all of the things that the different people were photographing, and you have that record, I think that will positively affect the Tribe in the long run. Our Tribe's not here for the 10-year, the 20-year, the 30-year—we're here for the 100-year type situation. And so with this kind of information if we collect it now, we won't have to worry about people living to be 100 years old to be able to tell us about it from their point of view—we'll be able to see it.

A theme that was heartfelt and prevalent was the way in which community photography could help validate Coquille culture. Like many other indigenous peoples in general, and restored tribes in particular, the Coquille have been striving to define their contemporary identity on their own terms, and not based on the stereotypes and expectations of mainstream society. The following conversation reveals the ways in which three participants felt photovoice could serve to strengthen cultural confidence within the community by documenting and sharing experiences that validate and place value on contemporary Coquille culture:

> Participant 1: "It also kind of helps us point out the things that... we all kind of said, we take things for granted, especially with our grandparents. A lot of times they'll be doing something like making pies, they've been doing it forever, they gather in a specific spot and they just don't think about that they were taught by their parents to go there and get berries, and why is that important. You know...to our people, it's just how we live, we live off the land here, and we don't think about it sometimes, sometimes we just have to be like oh! I guess I do a lot of things that I don't think of as cultural, or I don't think of as almost like a family legacy that even if it's not Native we still do it and we carry it on."

Participant 2: "And I think it's even good to show maybe some things that other families are doing that are Native traditions and practices that other families are doing but don't recognize as that, and I think that you'll see this trend of a lot of tribal families doing more common things that other families are doing, they just hasn't been that communication or that expression that this is what our grandparents have done, you're just doing it—you don't know why—that's just how you've always done it."

Participant 3: "And those things might be, you know, historical in nature, but we also always talk about in restored tribes especially, like ours, what we do today, yesterday, and the year before—that is our modern culture—because we have such a disconnect, there's such a void back to ancient culture, we only have bits and pieces, and maybe a few photographs of some old things. And we have to take liberties and kind of reinvent based on the little bit that we know from the past, we have to reinvent for now. And so a lot of these practices maybe making berry pies or things that are common in my family that my grandma's done...those are based loosely on other traditions. They may not be the same as those, but they are still something that has been done in my family for forty or fifty years...well that's a cultural tradition. And we may find out that you do this same thing in your family, and you have a variation of that...so that becomes the modern tradition, the contemporary culture of Coquille people. And we struggle with that, you know? When you say culture, people automatically make the jump to historical... and, you know, the way we meet, the way we do business, the way we offer gifts and feed people—that's culture! As strong as any ancient culture. 'Cause we will always do that. We always have. We do it differently now, we don't know as much about then...but we know a lot about what we do now. So this is another way to strengthen that: "Look people! We are out stripping maple bark!" and yeah we've got some modern tools and chain saws come out, and we take the logs home 'cause it's convenient, but it's still based on the thing that's been done for a long, long time. We just do it differently 'cause we have to— we don't have the directions from 300, 400 years ago that have been passed down."

Community Photography as a Tool for Intra- and Inter-Cultural Communication

As part of this case study, we also discussed the potential value of community photography as a tool to convey tribal concerns and needs to a non-tribal audience. Given that many of the Coquille's traditional places, harvest sites, and hunting and fishing grounds are controlled by non-tribal entities such as federal and state governments, the Tribe may find it necessary to convey tribal findings, concerns, and needs to land managers who often struggle to understand tribal values, knowledge, and ways of life.

Overall, participants thought community photography processes such as photovoice had potential as a tool to communicate tribal perspectives to non-tribal audiences. One participant described the way in which community photography could help illustrate the fact that the Tribe is still very much engaged in traditional cultural activities, as well as the fact that plant and animal species that may hold little importance to non-tribal citizens are critical to Coquille culture.

> All of our projects kind of hit on different things...difference importances. But the point is that we're doing things, and we're ALL doing things, all of these resources are important to us. We see what's going on—we're not blind. Everything...we use them, we have to manage them. Things that people consider weeds are important to us, you know? Plants that nobody's even heard about, you know...bear grass! Most people don't know what bear grass looks like. Bracken fern! People are like: "what's bracken fern?" It's everywhere around here! I mean...it's out in the front! And all these things are so important and we still use them, and I think that's part of the thing is, a lot of people look at smaller tribes, and just tribes in general, and make generalizations that "oh they don't do anything anymore, they don't really carry on their cultural practices anymore, they're not...it's not part of their lives! It's just something that they're grandparents used to do" And that's not really the case 'cause those younger kids are going out and they're learning from their grandparents, and they find that important. And even if they didn't learn from their grandparents, they live in an area where these things are important. Salmon is important to our economy—if it goes away it's bad for our economy. Forestry is a large part of our economy—if it goes away, our town suffers. It's all connected. So I think this shows that even just our small community, within our community, these things are really important to us.

Another participant seconded that notion, and added that community photography could help illustrate the meaningful way in which Coquille families engage with the landscape to non-tribal entities that sometimes question the motives behind tribal land management and land use strategies:

> I think it's definitely useful, I can think of so many times when we are...well we are constantly trying to educate people on purposes of our land management, and priorities of the Tribe, and you know...pictures are worth 1,000 words. People don't realize that tribal people are still doing cultural activities, you know...it's just different now. Yes—we drive our trucks up, we do different things—but you know it seems like we're always trying to justify to maybe state

> or federal government, but these things are really, really important to the well-being of the Tribe and sometimes you have to see it to understand it. You have to see a picture of Tom and his granddaughter out there digging those clams out in that specific place and why it's important to us. Because sometimes people are at a different level, especially governments...they hear a tribe say "we want rights to clam digging" or "we want rights to be able to go up and peel maple bark" or whatever it is and it doesn't make sense; it's almost maybe a thing where they think that we're trying to get something. It's not that!

While most participants saw some value in community photography as an inter-cultural communication tool, they saw even more value in community photography as a tool to communicate critical cultural topics internally within the Tribe. Participants felt that among other perks, community photography could help remind tribal members of the places, plants, animals, knowledge, and activities that are critical to the tribal community. One participant mentioned that the images and descriptions resulting from community photography processes could be used to inform tribal members that live far away, or that don't have the opportunity to engage in traditional activities. This could help maintain cultural awareness and keep tribal members connected to their tribal community.

In regard to the value of community photography as a tool to communicate with fellow tribal members, one participant stated:

> To strengthen that: the culture, the tradition, just the knowledge...that's more important. Agencies are going to do what agencies do, and you're going to always have those negotiations—those are ongoing. But...strength in numbers; the more people in the tribal communities that are knowledgeable and have practical experience, the better chance you have of sustaining something, at least on your own lands—when you're managing your own.

Successes and Failures of this Photovoice Project

The interviews and surveys provided insight into the way this project succeeded, and the ways it could have been better. One team praised this project's ability to provide a process by which they could document important family and cultural

information. They stated that their family normally forgets to bring their camera when they go out gathering, and that this project held them accountable to their family and to other teams, which made them commit. On a related note, one participant stated that his least favorite part of the project was using the camera, stating that this was the most he had photographed in his life. Contrasting this response was another participant's response stating that using a camera was his favorite part of the project. When asked whether community photography was a tool that was detrimental to tribal cultural integrity, all participants agreed that it was not.

One participant stated that one way in which the photovoice process could have been improved would be by including periodic participant meetings throughout the photography period. This would have given teams an opportunity to check in with each other and engage in more group discussion throughout the process. Another suggestion made by at least two participants was that the photovoice process could have been strengthened by increasing tribal participation. More tribal participants would have resulted in the capturing and sharing of more tribal perspectives and areas of traditional cultural expertise. One of the participants also stated that many tribal members are unaware of the fact that this project even took place. More effective and thorough outreach to the community could improve future community photography initiatives.

In regards to expanding the types of photography subjects, one participant made the interesting suggestion to consider "trips into the ocean to record the near shore for kelp concentration" in future community photography projects. Ocean flora and fauna are critical to Coquille culture, and trips into the ocean for the purpose of photodocumenting these important resources could enhance tribal archives in the context of climate change.

When asked how effective this project was in engaging the youth in their teams, two participants stated that while their children enjoyed being out on tribal lands, they sometimes struggled to stay on task with the photography. One participant stated that his child would quickly get distracted and want to "go play with bugs," while another participant struggled to get her child to not pose for the camera. And yet, this same participant stated that her child was far more in tune with her elders' knowledge of traditional cultural resources than the participant herself, mostly because her child spends a lot of time with grandparents and great-grandparents.

On a related note, one aspect of the photovoice design that proved effective was tribal participants' decision to assemble into family teams. When asked what their favorite aspect of the photovoice process was, participants provided the following responses:

"Highlighting a certain activity of my family's daily life and sharing it with others"

"Learning new things about plants and animals with grandpa"

"Being with my granddaughter"

"Spending time on ancestral lands with four generations of women in my family"

"Getting to do what we love"

"Taking pictures. Sounds funny, but photography is a hobby and any excuse to see the world through a lens is fun for me."

"Sharing information about our lands with my mom and grandma and learning new things"

"Sharing information about our lands with my daughter and granddaughter"

It's clear that many participants' responses involved spending quality time with family on tribal lands. Regardless of whether this project would have been deemed effective or

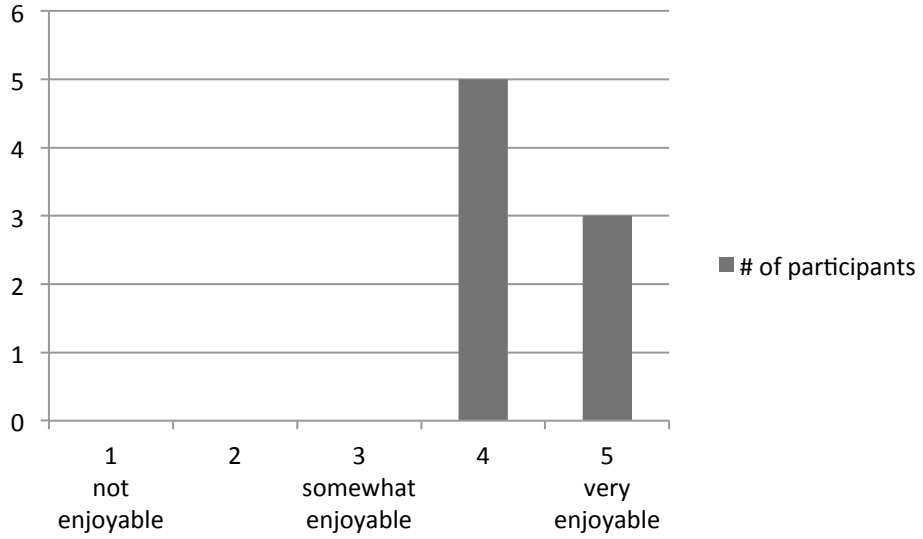
ineffective, tribal staff and participants set it up so that at least, if all else failed, they used it as an opportunity to spend time with family.

Related to the benefits of having family teams was one participant's suggestion to incorporate the use of a voice recorder while families are engaged in traditional activities. She stated that it would have been interesting to document her family's conversations as they were peeling maple bark. Among other benefits, this would allow the family to remember some of their observations when presenting during the photovoice session. Another participant agreed, stating that during her family's outings, her mom talked for about an hour about things she hadn't talked about before, related to berries and other traditional cultural resources and practices.

One participant praised the fact that this collaboration had respected tribal timelines and needs, and stated that she was pleased by the fact that the process hadn't felt forced. She described that when tribes are allowed to work on their own terms and on their own time, things come naturally, and mentioned that this project provided room for this to happen. On a similar note, another participant appreciated the fact that few rules or guidelines were provided in terms of photography content. She stated: "...giving too many rules for the project could keep people from being imaginative in their project. This way I'm sure everyone did it their way."

Overall participants found this project to be enjoyable. Figure 18 graphs participants' survey responses in terms of how enjoyable they found this community photography process. When asked if they would be willing to participate in another community photography project, 100% of survey respondents answered "yes."

Figure 18: Participant opinions on how enjoyable they found the community photography process.



CHAPTER V

CONCLUSION

Discussion of Findings

This community photography process brought together Coquille families and community members to document their experiences, concerns, and observations related to traditional cultural resources in a changing climate. After partaking in this process, sharing their photography and experiences with each other, and using the photographs to initiate meaningful discussions about current threats to Coquille culture, participants were enthusiastic about the value of community photography as a tribal tool. Participants felt that community photography could serve the Tribe to document landscape changes over time, preserve cultural information, communicate tribal concerns to non-tribal audiences, enhance cultural literacy within the tribal community, increase cultural confidence, and help define contemporary Coquille identity.

The most significant benefits of this community photography process might not be known for some time, and will likely depend on the Tribe's willingness and ability to follow this process up with future community photography initiatives. As participants readily noticed, it is difficult to document climate change impacts on traditional cultural resources within a single photograph, yet that photograph may prove useful in the future as a visual reference of what used to be. In recent decades, the Tribe has used meticulous historical documentation and archives as a mechanism to assert their sovereignty and culture. Expanding that documentation to include tribal findings pertaining to landscape changes over time might serve the Tribe in future conversations and negotiations pertaining to climate change impacts.

This community photography process clearly illustrated that contemporary Coquille Indians are still very much engaged in traditional relationships with plants, animals, and ecosystems. While participants' opinions didn't prioritize the use of community photography as an inter-cultural communication tool, they did feel that illustrating the way in which Coquille Indians continue to engage with traditional cultural resources in meaningful ways might disprove some of the misconceptions outsiders seem to have about Coquille land management practices.

Tribal participants seemed most confident in the ability of community photography to assist in the restoration and preservation of Coquille culture. The photovoice process was as meaningful as the resulting images themselves. Participants that may have doubted the value and importance of their family traditions and knowledge seemed to gain validation by participating in this process. As was described in the literature review, false stereotypes perpetuated by Euro-centric narratives and imagery have sometimes affected the ways in which indigenous peoples view and value themselves (Cummings 2011, Tsinhnahjinnie and Passalacqua 2006, West 1998,). There is sometimes a real pressure to meet others' expectations of what it means to "be Indian," and that pressure can lead to self-doubt. Younker (2003, p.30) describes the way in which his father, a Coquille elder, often discredits his own knowledge and cultural awareness:

> For example, my father, who grew up on South Slough deep within the Coquilles' aboriginal territories, where he still lives today, will say how little he remembers of the culture and lifeways of his ancestors. However, if you take him clam digging, crabbing, or any of the other South Slough activities which were common traditional subsistence practices among the Coquilles, he presents an impressive example of how cultural memories are often recalled among living descendants.

On a related note, Linda Tuhiwai Smith (2005, p.101) states:

> ...indigenous communities hold an alternative way of knowing about themselves and the environment that has managed to survive the assaults of colonization and its impacts. This alternative way of knowing may by different from what was known several hundred years ago by the community, but it is still a way of knowing that provides access to a different epistemology, an alternative vision of society, an alternative ethics for human conduct. It is not, therefore, a questions of whether the knowledge is "pure" and authentic but whether it has been the means through which people have made sense of their lives and circumstances, that has sustained them and their cultural practices over time, that forms the basis for their understanding of human conduct, that enriches their creative spirit and fuels their determination to be free.

The above statements resonate with some of the conversations that took place during the photovoice process. In the process of pursuing their visual sovereignty, participants seemed to find an avenue to continue to explore and assert their contemporary indigenous identity on their own terms.

In sharing their knowledge, observations, and experiences with each other, participants gained insight on the current state of a wider array of traditional cultural resources. By engaging more tribal members in future community photography projects, or by sharing their photography and descriptions with more members of the Tribe, participants believed cultural restoration and preservation efforts could be enhanced. By raising cultural awareness within the community, participants feel the Tribe's ability to protect tribal culture and self-determination increase. As one participant stated:

> To strengthen that: the culture, the tradition, just the knowledge...that's more important. Agencies are going to do what agencies do, and you're going to always have those negotiations—those are ongoing. But...strength in numbers; the more people in the tribal communities that are knowledgeable and have practical experience, the better chance you have of sustaining something, at least on your own lands—when you're managing your own.

The above statement resonates with Daniel Wildcat's statement encouraging indigenous peoples to view self-determination as something larger than the ability to determine tribal policy within Western-defined political arenas. Again, he states:

> The question of self-determination is one of degree: how engaged, connected, and attentive are we to our community? This will seem contradictory and paradoxical to Western-thinking students and teachers. The more attentive one is to their community, the more self-determining they can be; the less attentive, the more selfish and self-destructing they will be (Deloria and Wildcat 2001, p.149).

By having the potential to increase community engagement, connectedness, and awareness, community photography may serve as a tool that not only facilitates the restoration and preservation of tribal culture, but also helps assert tribal self-determination in Daniel Wildcat's broader sense of the word. By having tools such as community photography at the Tribe's disposal to promote cultural awareness, protect tribal culture, and assert tribal self-determination, the Coquille may enhance their climate change resilience. As one elder participant described:

> If we took pictures of our Restoration Days and how we manage the fish that we have, and the different resources that we have, how we manage to eat everything, and take care of everything, I think it will have a big impact, and can have a big impact in the preservation, because one of these days we're not going to have the access to as many mussels as we've got, and maybe clams... because as the populations increase, as changes happen, you get more stress on those things. So the photos we have of those things, what we did, will make a difference.

Suggestions for Future Initiatives and Research

This project and related case study may serve as a catalyst for what can become additional community photography initiatives and research opportunities within the Coquille Indian Tribe. As tribal participants readily noted, the most significant benefits of community photography might not be known until years from now, especially as it

pertains to climate change impacts. In this collaboration, the length and magnitude of the photovoice process and related case study were limited by the timeline of my master's degree. Additional (or continued) community initiatives and research could reveal longer-term findings and strengthen tribal uses of community photography. Below I suggest potential initiatives and research opportunities that could follow up this collaborative project and possibly result in additional benefits to the Tribe. Tribal participants themselves provided some of these suggestions.

Long-Term Community Photography

The Tribe could develop a long-term community photography endeavor that involves a larger number of tribal community members. This process could be as formal or as informal as the Tribe sees fit. Community photographers could submit their photos to a tribally appointed community member, employee, or intern (see below) in charge of archiving the photographs based on relevant categories. The tribal community could have access to the community photography pool, using it, for example, to assess changes in the landscape over time, or to have a visual reference for traditional cultural resources and practices. The Tribe and community members could use this photography to illustrate landscape changes to non-tribal outsiders, illustrate tribal needs, and assert tribal rights.

Annual Photovoice Sharing Session

The Tribe could incorporate an annual photovoice sharing session into one of the various tribal celebrations, or have an annual photovoice sharing session be a stand-alone event that could bring the Tribe together. Tribal members could photograph tribal resources, events, traditions, and landscapes throughout the year, either individually or in teams, and come together to share their photography with the community. Some of

the participant suggestions highlighted in the findings above, such as voice recording family conversations during traditional activities, or taking ocean trips to photodocument ocean flora and fauna, could be incorporated into this process. This could serve as a platform to discuss important tribal issues that have been documented in the photography, and could also serve as a mechanism to have tribal members learn from each other. Tribal youth could learn from their elders by forming part of multi-generational photography teams, and/or by hearing the photovoice presentations. With the permission of each photographer and/or photography team, the photos presented at these annual sharing sessions could be archived by the Tribe to serve as future reference.

Cross-Cultural Photovoice Sharing Session

The Tribe could hold photovoice sharing sessions with non-tribal entities such as a federal agencies, state agencies, or other organization with which the Tribe struggles to communicate cross-culturally about tribal finding, needs, and objectives pertaining to traditional cultural resources, among other topics. Photography might help to convey cultural concepts that are difficult to convey to a non-tribal audience using just words. The Tribe could select photography that illustrates the point at hand without disclosing sensitive tribal information. The oral descriptions accompanying the photography could be as specific or as vague as the Tribe saw fit, affording the flexibility to appropriately ensure that tribal knowledge remains protected.

Tribal Multi-Media Development and Archiving Internship

If the Tribe wanted to make community photography and/or photovoice a long-term initiative, they could formalize the media development and/or photo archiving process by creating a tribal internship. The intern/s could engage in a variety of tasks,

including producing multi-media projects that combine voice recordings and photography from photovoice sharing sessions, digitally archiving community photography based on date, location, and/or photography subject, documenting interesting photographic findings and/or trends, and being in close communication with community members that are participating in community photography initiatives and/or are willing to contribute to the Tribe's photo archive.

Future Research Endeavors and/or Collaborations

If the Tribe embarked on one or more of the above initiatives, there might be opportunities to expand upon the case study that was carried out as part of this thesis. If the Tribe felt additional research could be useful, the Tribe could work with a tribal student, researcher, or scholar to document and assess the continued uses and effectiveness of community photography as used by the Tribe in one or more of the above initiatives. The Tribe could also embark on research collaborations with non-tribal students or scholars that have research interests aligning Coquille community photography initiatives. This research could address a variety of important topics, including:

- How does long-term community photography contribute to tribal climate change initiatives?
- How does participation in community photography projects enhance cultural literacy within the community, particularly when it comes to youth?
- Does community photography facilitate cross-cultural communication with a non-tribal audience?

- How does long-term community photography contribute to Coquille culture restoration and preservation efforts?
- Does asserting visual sovereignty help assert political sovereignty?

APPENDIX A

PHOTOVOICE PARTICIPANT SURVEY

1. Age:
□ 12-18 □ 19-35 □ 36-60 □ 60+

2. In your opinion, how effective was community photography at documenting the Coquille Indian Tribe's climate change concerns relating to traditional cultural resources?

Not Effective		Somewhat Effective		Very Effective
□	□	□	□	□

3. How would you rate your community photography experience?

Not Enjoyable		Somewhat Enjoyable		Very Enjoyable
□	□	□	□	□

4. What was your **favorite** part about participating in this community photography project?

5. What was your **least favorite** part about participating in this community photography project?

6. After participating in this community photography project, do you feel you have a better understanding of how climate change may impact traditional cultural resources?

□ Yes □No

7. In the future, community photography could be used by the Tribe to (check all that apply):
□ Document landscape changes (before and after photography)
□ Preserve tribal culture
□ Communicate tribal concerns and findings to non-tribal agencies and organizations
□ None of the above
□ Other:

8. Do you think community photography can serve future tribal climate change initiatives?

□ Yes □No

Why or why not?

9. If given the opportunity, would you participate in another tribal community photography project?

□ Yes □No

10. In what ways could we have made this community photography project better?

APPENDIX B

INTERVIEW PROMPTS

What were the strengths and weaknesses of photovoice as a method to capture complex tribal issues?

In what ways did the photovoice process benefit the Tribe? In what ways did it negatively affect the Tribe?

For teams who had children involved: what was that experience like? Were your children interested? How could this process have been made better for youth involvement?

Do you think that photovoice could help convey difficult intercultural issues to a non-tribal audience?

Are there ways in which the photovoice process could have been more useful for the Tribe?

In what ways could community photography be used by the Tribe to advance tribal causes in the future?

APPENDIX C

TERMS AND CONCEPTS

Climate Change: Within this thesis, I use climate change to refer to changes in the Earth's physical systems that are resulting from anthropogenic increases in greenhouse gas emissions into the earth's atmosphere. Increases in atmospheric greenhouse gases are leading to overall warmer Earth temperatures, which in turn can affect weather patterns. The Environmental Protection Agency (EPA 2013) states:

> Earth's average temperature has risen by 1.4°F over the past century, and is projected to rise another 2 to 11.5°F over the next hundred years. Small changes in the average temperature of the planet can translate to large and potentially dangerous shifts in climate and weather.

Climate change impacts often vary by region. Some existing and projected climate change impacts include warmer air and water temperatures, sea-level rise, higher frequency and severity of extreme weather events such as storms and drought, ocean acidification, and melting glaciers (EPA 2013).

Federal trust responsibility: For the purpose of this thesis I use the National Congress of American Indians' (NCAI 2013) definition of the federal trust responsibility, which states:

> The federal Indian trust responsibility derives from the fiduciary relationship between the United States and Indian tribes, which has been likened in court cases to the relationship between a trustee and a beneficiary. Since the Unites States holds the vast majority of Indian lands, money, and resources in "trust" status, it is required to manage those lands and resources in a manner most beneficial to the tribes and individual Indian people.

Indigenous: Definitions of indigenous and what constitutes an indigenous community vary. For the purpose of this thesis, I use the definition put forth by Jose R. Martinez

Cobo for the United Nations (UN and Martinez Cobo 1987), which defines indigenous communities as:

> ...those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system.

Given the United States context of this research, when I refer to "indigenous peoples," "indigenous populations," or "indigenous communities," I am referring specifically to indigenous peoples in the United States; in other words, those forming part of American Indian, Alaska Native, and Native Hawaiian populations, federally recognized or otherwise. In this document, I also use the terms "tribes," "Indian tribes," "Indian Nations," "Indians," and/or "Native groups" to refer to indigenous communities in the United States.

Self-determination is a complex term the meaning of which varies depending on the interpretation. The United Nations Declaration on the Rights of Indigenous Peoples (UN General Assembly 2007) refers to self-determination as the right to freely determine one's political status, pursue one's economic, social and cultural development, self-govern in matters related to internal and local affairs, and have access to means to finance autonomous functions. Today in the United States, tribal governments exercise increasing political self-determination in part as a result of the Indian Self-Determination Act of 1975. However, self-determination can have broader meanings that transcend Western political systems and focus more on the social implications of the term within indigenous communities. Indigenous scholar Daniel Wildcat encourages indigenous

communities to look beyond the political interpretation of self-determination by stating the following:

> The question of self-determination is one of degree: how engaged, connected, and attentive are we to our community? This will seem contradictory and paradoxical to Western-thinking students and teachers. The more attentive one is to their community, the more self-determining they can be; the less attentive, the more selfish and self-destructing they will be (Deloria and Wildcat 2001, p.149).

For the purpose of this thesis, I use "self-determination" to encompass both the political and broader social meaning of the term.

Traditional cultural resources refer to the plants, animals, landscapes, and waterscapes that are vital to traditional indigenous subsistence and spiritual practices and activities.

Traditional ecological knowledge (or indigenous knowledge) refers to ways of knowing and being that both guide and result from indigenous peoples' close interactions with lands, waters, plants and animals. The Swinomish Indian Tribe (2010, p.5) define it as the "holistic, evolving practices and beliefs passed down through generations about the relationships of living beings to their environment". This way of knowing and being may encompasses language, naming and classification systems, and sustainable practices for the use of resources. It also guides the use of rituals and defines indigenous worldviews and spiritualities (Boven and Morohashi 2002). Different tribes and indigenous communities often have different ways of referring to, developing, and transmitting traditional ecological knowledge. Within a single tribe or indigenous group, different families and individuals may have their own way of developing, and/or transmitting traditional ecological knowledge.

Visual Sovereignty refers to the ability to have control over how one's culture or identity is represented through visual media.

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