Native Cultural Design:

Exploring Design to Address Historical Trauma and Assist with Village Relocation on the Quinault Indian Nation in Taholah, WA

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A thesis submitted in partial fulfillment of the requirements for the degrees of:

Master of Urban Planning and Master of Landscape Architecture

University of Washington

2017

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Programs Authorized to Offer Degrees:

Urban Design and Planning

Landscape Architecture

University of Washington

Abstract

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Native American communities are in need of improvement, which I attribute to historical trauma from the deplorable acts that Native American communities have gone through. Historical trauma creates difficulties for the planning and design professionals who seek to work with Native communities. Through new creative processes and thought, designers and planners are offering a new sense of agency that Native communities have been without since the colonization of the land they once inhabited. I present new concepts that are empowering Native communities through world and local examples. I argue that it is through these new concepts that the Quinault Indian Nation can relocate their lower village, due to a tsunami threat, while maintaining their Tribal culture and traditions imperative to the integrity of their Nation's history and future.

Acknowledgements

I first want to dedicate this paper to my mother who passed away during my first year in Graduate school. I love and miss you. I would like to thank my thesis committee, Dan Abramson and Manish Chalana for having patience through a process that was completely foreign to me. I would like to thank many of my professors Daniel Winterbottom, Lynne Manzo, Ken Yocom, Dan and Manish for their teachings. They have provided me with tools that will help me thrive in my profession. I want to thank Bob Freitag and Ron Kasprisin for employing me throughout school and for being amazing mentors. I want to thank Charles Warsinske and the community of Taholah for welcoming me and providing me with amazing information. Thanks to all the new lifelong friends that I have created while pursuing my education and for their support throughout school.

List of Figures

Chapter 1

Introduction

Having lived on a reservation during my life and while in school and working with Native American communities of Washington State, I gained a unique insight. I learned it is quite clear that Native American reservation communities need planning and design that is sensitive and specific to the integrity of their history. Many Native individuals unable to obtain the necessary education to address this need themselves, is just one of many reasons numerous reservations have fallen into the degraded state they are currently in.[1] Other critics have proposed that Eurocentric curricula disallow the proper education needed for design and planning professionals to work with and for Native communities.[2] What I have come to understand is that cultural landscapes are complex and that the built environment plays an enormous role in shaping the cultural landscape of a given community. “The reinforcements of individual and social identities are not merely learned and repeated bodily actions and individual thoughts, but also are something deeply intertwined with cultural landscapes. The built environment is thus a key part of habitus, an important ‘field’ of society and culture.”[3] From my experience I have noticed

[1] Raphael M. Guillory and Mimi Wolverton, "It's About Family: Native American Student Persistence in Higher Education," *The Journal of Higher Education* 79, no. 1 (2008): 59, doi:10.1353/jhe.2008.0001.
[2] Marie Battiste, "You Can't Be the Global Doctor If You're the Colonial Disease," in *Teaching as Activism: Equity Meets Environmentalism*, ed. Peggy Tripp and Linda June Muzzin (Montréal: McGill-Queen's University Press, 2005), 124.
[3] Alexandru Calcatinge, *Critical Spaces: Contemporary Perspectives in Urban, Spatial and Landscape Studies* (2014),

that there is a fracture within the cultural landscape on Native reservations. A disconnect exists between Native communities and outside professionals and academia. This disconnect comes from the distrust Native communities have in outsiders that lack the proper knowledge in addressing the unique needs of reservation communities. Planners and designers have not acquired proper understanding of what it means to be a Native American and what it means to be living on a reservation. As professionals, it is needed of us that we enter a community to which we do not belong and provide that community with a service unique to their needs. My thesis will focus on Native cultural design within the Quinault Indian Nation, whom because of a serious tsunami threat, are facing a planned relocation of their reservation community.

Purpose

The purpose of this thesis is to examine research that is critical of how design and planning professionals perceive and work with Native communities. I will introduce elements of design and planning that professionals may not have a full understanding of when working with Native communities. Combining what we have done in the past with what research currently shows, it is possible to come up with alternatives for how design professionals view and work with Native communities in such a way that both will be better served. I want to stimulate conversation about the current state of design and planning in Native communities and start questioning what it is we as designers are

250.

doing to address specific and individual needs. Being Native American myself, I have a better understanding of what it means to live in one of these communities. Since starting Graduate school I have been struggling with the concept of cultural planning and design in Native communities. I want to explore innovative responses to cultural design and planning for Native communities and focus on what those responses look like within the communities themselves.

Critical Stance

Designers and planners must do more to understand the underlying problems that exist within all Native communities. The principal issue that designers have yet to consider is the issue of historical trauma within the community. “Historical trauma refers to a complex and collective trauma experienced over time and across generations by a group of people who share an identity, affiliation, or circumstance”.[4] The concept of historical trauma is under two decades old. The term historical trauma surfaced to describe the effects traumas experienced during World War II had on Holocaust survivors’ children. Recently however, the understanding of historical trauma is applied to Native communities and many other communities affected by Euro-colonialization. Native Americans were victims of mass genocide[5] and thereafter forced to live on

[4] Nathaniel V. Mohatt et al., "Historical trauma as public narrative: A conceptual review of how history impacts present-day health," *Social Science & Medicine* 106 (2014): 2, doi:10.1016/j.socscimed.2014.01.043.
[5] Roxanne Dunbar-Ortiz, "History News Network | Yes, Native Americans Were the Victims of Genocide," History News Network, last modified May 12, 2016, http://historynewsnetwork.org/article/162804.

reservations across the United States, the results of which still affect Natives today. Historical trauma refers to these communities because of this and several other reasons. In not considering this horrifying past and what that might still mean for Natives today, there is a disconnect between Native communities and the people and professionals that seek to aid them. Historical trauma impedes the process between professionalism and indigeneity which is necessary for design and planning in Native communities.

Comparing Native Americans with other minority groups provides a keen insight into some of the day-to-day struggles reservation residents face. Native Americans are at the top of almost every statistical category for detrimental physical health and mental health, supporting the fact that Native Americans are at a greater risk of poorer overall physical and mental health and are more likely to experience psychological distress.[6] Psychological distress leads to actions such as suicide among others. Suicide rates for Native Americans are higher than the national average. Suicide is the second leading cause of death among Native Americans between the ages of 10 to 34.[7] I bring up suicide to demonstrate the mental distress that many Native Americans struggle with daily. Psychological distress can lead to other problems affecting everyday life. Native Americans have the lowest income, are the least educated, and have the highest

[6] Patricia M. Barnes, Patricia F. Adams, and Eve Powell-Griner, *Health Characteristics of the American Indian or Alaska Native Adult Population: United States, 2004–2008*, (Division of Health Interview Statistics, 2010).
[7] Centers for Disease Control, *Suicide at a Glance 2015*, (National Center for Injury Prevention and Control Division of Violence Prevention, 2015)

poverty level of any group in the United States.[8] What is more, Native Americans also have the lowest life expectancy of any population in the United States.[9]

Native Americans have suffered enough. Everyone is entitled to good health, proper shelter, and happiness. If a community is not happy with itself, the goal of the designers and planners must be to make sure that they will remain satisfied after the job is complete. My goal for this thesis is to bring to light historical trauma within Native American communities and what exactly that means. Keeping in mind that historical trauma is a prevalent problem that Native Americans face, I would like to investigate what it is we can do, as designers, to create and implement designs and plans that will aid and support communities that are particularly sensitive to change.

Many Native reservations have outdated laws and policies that at one time looked to keep a Native community divided. Addressing outdated policies and practices will aid in the process of providing communities with design that will help them move forward productively while maintaining their culture. This work will discuss the necessary relocation of Native communities due to the risk of natural disasters. Coastal Native communities are facing natural disasters in the form of earthquake and tsunami, that will have a significant impact on their communities due to their proximity to the Washington

[8] Clark H. Denny et al., "Disparities in Chronic Disease Risk Factors and Health Status Between American Indian/Alaska Native and White Elders: Findings From a Telephone Survey, 2001 and 2002," *American Journal of Public Health* 95, no. 5 (2005): xx, doi:10.2105/ajph.2004.043489.
[9] Indian Health Service, *Disparities Fact Sheets*, (U. S. Department of Health and Human Services, 2016).

coast.

As designers, we know that there are many factors to consider when working with any community and these factors play into the design itself. For communities that need to move, we need to consider elements that we have not necessarily looked at before. Our outlook as designers and planners needs to change to better help these communities thrive and become healthier environments to live in. Native people have lived with trauma for generations and designers and planners need to take this into account in the designs they provide for Native communities. It is our responsibility as planners and designers to make sure a healthier environment is provided through respectful, thoughtful, and unique design for a people such as Native Americans who are sensitive to change due to their tumultuous history. Once we understand the history and how our education has influenced our views of Native Americans, we can gain insight of how to most successively and respectively understand and work with Native communities. Agency does not fall squarely on the designers as community/designer interaction and cooperation is imperative to success. It is the responsibility of the community to take action and relocate, though it is the designers' job to help them with the process of relocation to a culturally appropriate area meeting specific cultural needs. I am writing this thesis to provide insight into what we can do as designers and planners to help Native communities implement designs that are sensitive to their cultural heritage and ensure a brighter future, thus fulfilling my thesis requirements for dual Masters Degrees in Landscape Architecture and Urban Design and Planning.

Research Questions

Does historical trauma affect Design and Planning in Pacific Northwest Native Communities when a community needs to relocate and how does that manifest itself within these communities?

When it is inevitable and necessary for the community of Taholah to relocate from an area that has cultural importance and meaning due to a tsunami threat, how can the community re-establish/maintain culture in the new development?

To discuss and answer these questions, I will first elaborate on and provide an understanding of historical trauma and the relationship it has with Native Americans. Historical trauma is a new idea used by social workers and environmental psychologists to describe the collective emotional and/or psychological harm of an individual or generation because of a traumatic event or experience. I researched these two fields to offer a framework to better understand what historical trauma refers to and what tools planners and designers can use to help enrich Native communities despite a history of trauma. In addition, I researched Indigenous writers addressing post-colonial thinking to gain a better understanding of how the current education model has led us in perception of Native communities. I discuss what is going on with the Quinault Indian Nation and their circumstantial relocation in Taholah, Washington. Looking at relocation due to tsunami preparation is useful because the community is choosing to relocate, unlike the not too distant past when the community was forced to live where it is today. Although the community has agency in the regard of choice, historical trauma will be a factor in the planning and design process because of the potential consequences that the

uprooting of an entire reservation community may have.

Audience

This thesis is aimed at planning and design professionals who work with and those that want to work with Native communities. In addition to design professionals I would like to include professionals in the fields of social work and environmental psychology, as well as to anyone in between the two. This thesis is for individuals who want to find new solutions for Native communities to find agency for the challenges they collectively face.

Methodology

To help explore my questions, I reviewed literature from secondary sources that discussed and looked to answer problems with design and planning in indigenous communities that had lost their ability help themselves because of a dominate Eurocentric culture that looked to take advantage of said communities. The literature utilized looks at indigenous communities that have gained agency through the design or planning process with the help of outside professionals. Other literature used discusses the theory behind colonial and post-colonial thinking and how these ideas lead to design and planning that help empower Native communities.

Three case studies will show how agency can be acquired when outside professionals help Native communities who need design and planning. The three case studies shown are bound by the need to plan for a tsunami threat and sea level rise, while at the same time the three communities also need to address the lasting legacy of historical trauma.

Two of the three communities I have personally worked with as a professional and a student. The three case studies will provide a framework from which the Quinault Indian Nation can use to plan and design their own relocation to a new uphill site.

Limitations

Historical trauma is a theory of mental health professions. However, it has not played a major role in informing the design and planning fields and practice. Therefore, there are limitations to the research available from which to use from the design and planning professions. I will be using theory from design and planning and will be applying it to the new premise of historical trauma.

Thesis Organization

The organization of this paper starts out with the history of the Quinault Indian Nation. The chapter explains who the tribes are within the Quinault Indian Nation and describes what their living conditions and habits once were before life on a reservation. Information is provided on the tsunami threat to the Washington State Coast.

Chapter 3 explains historical trauma and puts it into context in regards to Native Americans and reservation life. A breakdown of why this is important is provided with examples from indigenous communities. The chapter also reflects on how designers can combat the effects of historical trauma through a change in how we view ourselves and the communities in which we work with by providing examples of how this can be achieved.

Chapter 4 is an examination of three Washington state reservation communities. The Makah Tribe located in Neah Bay is involved in a planning process that is looking at relocation and design that will prepare their community for a tsunami. The community has strong identity and values that the Quinault Nation can learn from. The Quileute Nation, which is a coastal community located in La Push, Washington recently has had a land swap for higher ground to relocate their lower village from a tsunami threat. This community provides a design that takes into account their community's needs. The Swinomish Tribal community located in LaConner, Washington, is using planning to combat sea level rise. A comprehensive plan has been created to ensure their cultural identity, to protect their land, and to include every surrounding interest to help protect their fisheries.

Chapter 5 is about the Quinault Indian Nation located in the village of Taholah, Washington. A site analysis is provided to give context on their current situation. What follows is their planning process and products so far for the relocation of the lower village. Community views will help to provide context of what needs to be done to help improve the overall plan. The chapter ends with design considerations taken from chapters 3 and 4 discussing how these considerations may benefit the Quinault in their design and planning process.

Chapter 6 concludes with answers to my questions that I originally wanted to answer. I include a personal reflection of what I have learned while writing this thesis and argue what needs to be done to help Native communities gain a sense of agency and

collaborative capacity to better their communities.

Chapter 2: Background

Many Native communities along the Western coast of the United States including northern communities in Alaska, face the possibility of relocation either due to sea levels rising or the threat of a tsunami. The Quinault Indian Nation, on the Pacific coast of Western Washington, is one such Native community that has a unique and opportunistic case in regards to relocation. The Quinault Indian Nation is currently amid relocation. Due to the unique circumstances that the Quinault Indian Nation has with regards to the government and the stage at which the planning process for relocation is, the Quinault Nation is my area of focus for this work.

A Brief Look at the Quinault of the Past

The Quinault Indian Nation consists of seven tribes: Quinault, Queets, Quileute, Hoh, Chehalis, Chinook, and Cowlitz.[10] The lands of these tribes spanned from the Ozette River on the north side, south to the Columbia River and the Pacific Ocean east to the Puget Sound. Areas of habitation in the south consisted of bays, estuaries and sluggish rivers.[11] Areas of habitation to the north consisted of villages directly on the coast and rivers that were rapid due to proximity to the Olympic Mountains.[12] The tribes from the Quinault Indian Nation from this geographic area were considered to be some of the

[10] Jacqueline M. Storm, Pauline K. Capoeman, and David H. Chance, *Land of the Quinault* (Taholah, Wash: Quinault Indian Nation, 1990), 15.
[11] Storm, Capoeman, and Chance, *Land of the Quinault*, 45.
[12] Ibid., 45.

wealthiest tribes before settlers came due to their sheer abundance of resources such as fish, elk, and the “life tree” the Western Red Cedar that they used extensively and more importantly maintained. [13]

The tribes of the Quinault Nation primarily lived in longhouses made from the abundance of forest that surrounded their environment. Tribal members moved up and down the rivers seasonally to live in longhouses big enough for multiple families. In the village of the Quinault (present day Taholah), longhouses could accommodate anywhere from two to six families at once.[14] More families belonging to a longhouse meant more daily chores and duties were shared amongst them. Education and cultural activities such as basket weaving were easier to teach as well, as it was with telling stories that could be passed to more listeners with multiple families in a longhouse.[15] The tribes had longhouse camps at different points along the rivers where members

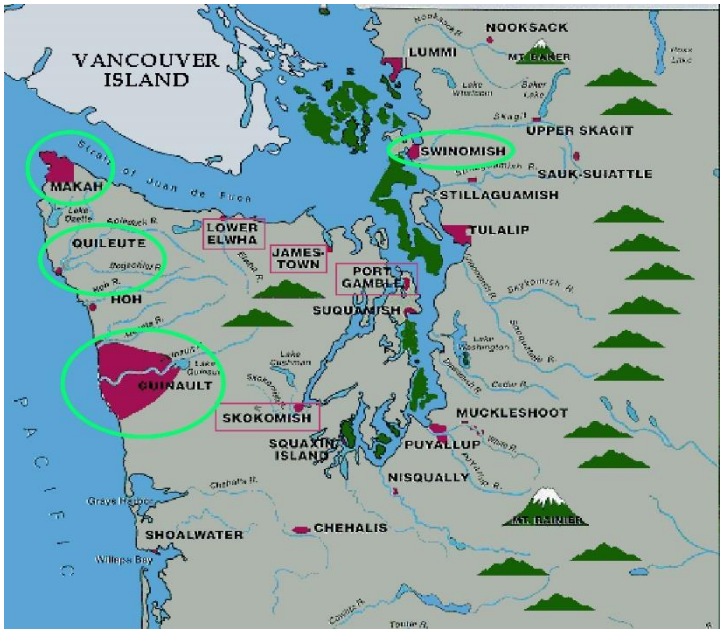

Figure 1: Context map for the Quinault Reservation

[13] Quinault Indian Nation, "People of the Quinault," Official Site of Quinault Indian Nation, accessed October 6, 2016, http://www.quinaultindiannation.com/. (Archived by WebCite® at http://www.webcitation.org/6nZML3cgT)

[14] Storm, Capoeman, and Chance, *Land of the Quinault*, 53.

[15] Ibid., 54.

Figure 2: A longhouse from the Pacific North West

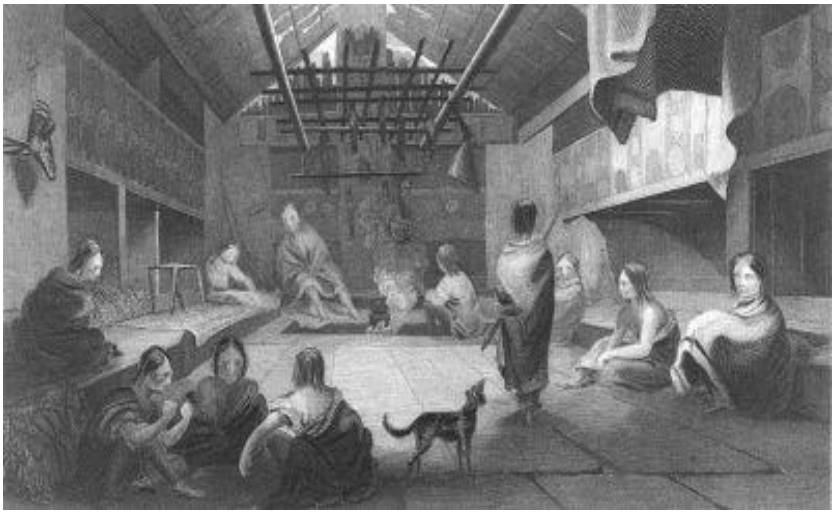

Figure 3: Photo of life in a longhouse

who were traveling could stay indicating a tribal collective, meaning there was no claim to these camps and everyone could use them. These camps came in handy seasonally when it was time to fish and hunt, especially when traveling along the river system of the peninsula.

The Quinault people stayed isolated from European contact until they visited the

Spanish vessel Sanora in their canoes on July 13, 1775.[16] The next day there was an encounter with the Spanish and the Quinault that resulted in violence with the Quinault killing an entire landing party. In the 1790s and beyond, white trappers, traders and settlers began to discover the Quinault and other Western Washington tribal homelands.[17] The Quinault River Treaty of July 1855 was drawn up and the reservation of 10,000 acres was later created around the Village of Taholah.[18] To accommodate many additional Natives, the reservation was expanded to nearly 200,000 acres by an order of President Ulysses S. Grant on November 4, 1873 in order to cluster more tribes of the Washington Peninsula together.[19] The Allotment of 1887 fragmented much of the tribal trust land into individual land trusts. There are four types of land tenure on reservations: individual fee simple land that is privately owned land by individuals; individual trust land that is held in federal trust for individuals; tribal trust land that is held in federal trust for the tribe; fee simple tribal land that is owned by the tribe and is not in federal trust.[20] Although in the beginning most of the allotments were Native American owned, by 1965, 50,000 acres, approximately 25% of the current reservation, went into non-Indian ownership and became primarily timber company owned.[21] By 1978 one

[16] Ibid., 48.
[17] Ibid., 76.
[18] Ibid., 103.
[19] Linda M. Stumpf, *The Last Stand: the Quinault Indian Nation's Path to Sovereignty and the Case of Tribal Forestry*, (Olympia, Washington: Evergreen State College, 2008), http://nativecases.evergreen.edu/collection/cases/last-stand-quinault.html.
[20] Carlos L. Rodriguez, Craig S. Galbraith, and Curt H. Stiles, "American Indian Collectivism Past Myth, Present Reality," *Property and Environmental Research Center* 24, no. 2 (Summer 2006): http://www.perc.org/articles/american-indian-collectivism.
[21] Quinault Indian Nation, "People of the Quinault."

third of the reservation was owned by fee owners, most of whom were timber companies.[22] Fee owners means that the land purchased is subject to taxes. Allotment ended on the Quinault Reservation in 1933 when all the lands had been dispersed to tribal members. Today, because of inheritance, there is an average of 15 owners of undivided interest on Trust allotments with some 80 acre allotments having more than 300 owners.[23]

The Quinault Indian Nation became a sovereign nation with the right to govern itself and to deal with other nations and tribes. By-laws created in 1922 and a constitution approved in 1975 form the foundation of a modern-day Quinault government. A General Council meets annually to hold elections and to perform such actions as acceptance of new tribal members, allocation of fishing grounds for community members to use, and to discuss other issues relevant to tribal operations. The Quinault Business Committee consists of four executive officers and seven councilmen, they perform the business and legislative affairs of the Quinault Indian Nation throughout the year.[24]

Today several major rivers cross the Quinault Indian Reservation, including the Queets, the Raft, and the main stem of the Quinault River. The Quinault Indian Reservation is abundant in forest lands, rivers, lakes and 23 miles of Pacific coastline that all contribute to the livelihood of the people of the Quinault Indian Nation.[25] The Reservation is ringed

[22] Storm, Capoeman, and Chance, *Land of the Quinault*, 178.
[23] Ibid. 178
[24] Quinault Indian Nation, "People of the Quinault."
[25] Ibid.

by the Olympic National Forest, Olympic National Park, Washington State Department of Natural Resources lands, Copalis National Wildlife Refuge, the Olympic Coast Marine Sanctuary, and by private commercial timberlands. The Reservation has an annual rainfall of 80 to 180 inches.[26]

Issues facing Washington Coastal Native Communities and the Taholah Village

What is looming for not only the Quinault Nation but for other communities Native and Non-native is the probability that the Cascadia Subduction Zone Fault will rupture and cause an earthquake and subsequent tsunami. It is a mega thrust fault[27] that is approximately 50 to 80 miles off the Washington Coast that will create a Great Subduction Zone earthquake that will produce an earthquake greater than 9.0 magnitude. [28] The last known megathrust earthquake in the northwest was in January of 1700, just over 300 years ago, and geological evidence shows that such massive earthquakes have occurred at least seven times in the last 3,500 years, a return interval of 400 to 600 years.[29] Which means that the Coast of Washington is due for another devastating earthquake.

Not only will the earthquake cause havoc for the Washington Coast, it will cause a

[26] Stumpf, "The Last Stand."
[27] Pacific Northwest Seismic Network, "Cascadia Subduction Zone," Pacific Northwest Seismic Network, accessed October 26, 2016, https://www.pnsn.org/outreach/earthquakesources/csz. (Archived by WebCite® at http://www.webcitation.org/6nZLxKHwz)
[28] Pacific Northwest Seismic Network, "Cascadia Subduction Zone."
[29] Ibid.

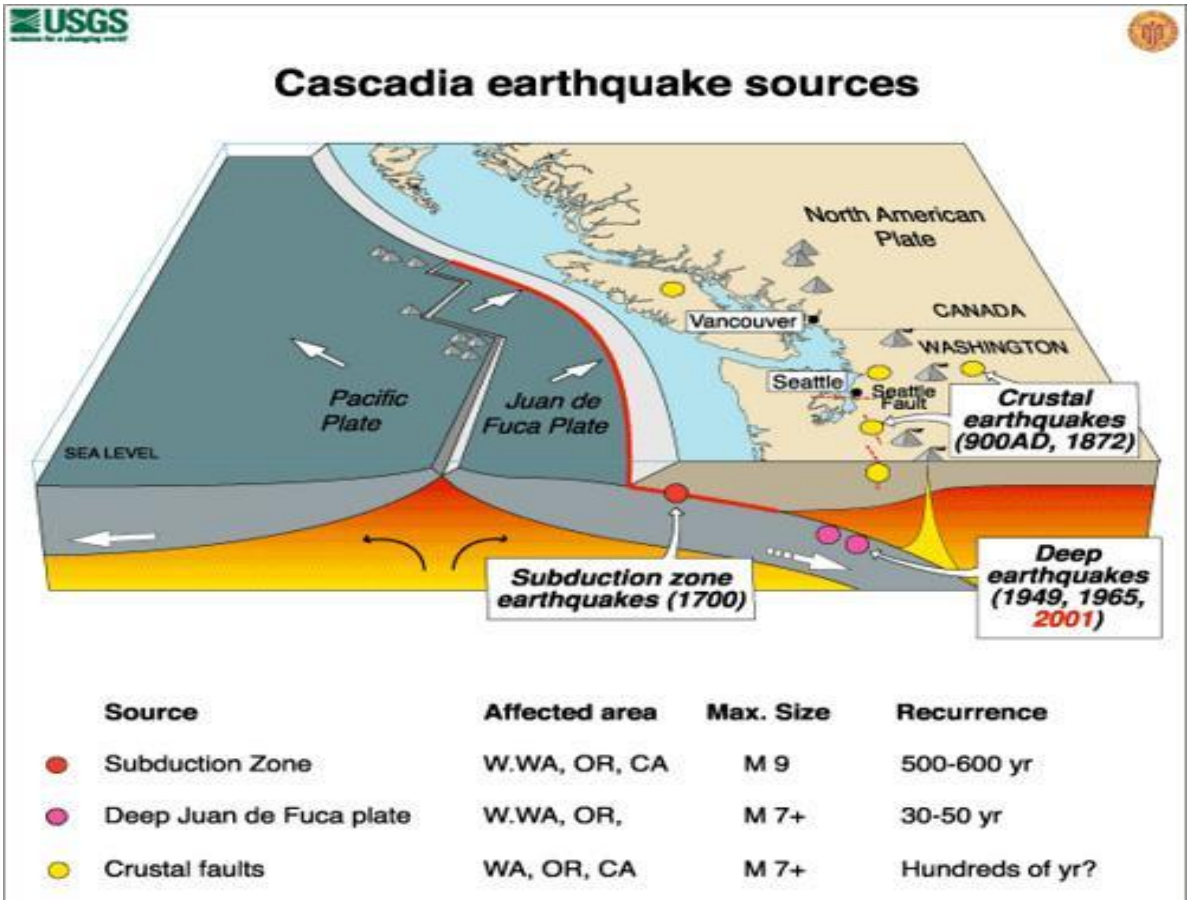

Figure 4: Graphic of the Cascadia Subduction Zone

tsunami which is a series of waves with massive energy that will impact the coast. [30] The tsunami will reach the Coast of Washington State within 20 to 25 minutes, giving little time for the communities to evacuate. This is troublesome for the coast because there is not much high ground that will be accessible in a short amount of time. On the coast the ground will sink in places do to liquefaction which will not allow people to get in cars and drive away from danger, meaning the evacuation needs to be carried out on

[30] University of Washington, *Project Safe Haven: Tsunami Vertical Evacuation on the Washington Coast*, (Seattle: University of Washington School of Urban Design and Planning, 2012).

foot making the 20 to 25 minutes between earthquake and tsunami even shorter than it would be if people would be able to use vehicles.

As we can see in figure 5, the entire lower village of Taholah will be consumed by the resulting tsunami waves that could reach a height of up to 20 feet.[31] The Taholah Village does have an evacuation plan that takes roughly 25 minutes to evacuate the village.[32] However this means that the lower village will risk being caught in tsunami if waves reach sooner than 25 minutes.

What we have seen in this chapter is common with other Washington Coastal communities, three of which will be of focus in chapter 4. Now that these coastal communities face a tsunami threat, they must work through the legacy of historical trauma that has taken away their ability to adapt, which they were accustomed of doing when their communities faced danger.

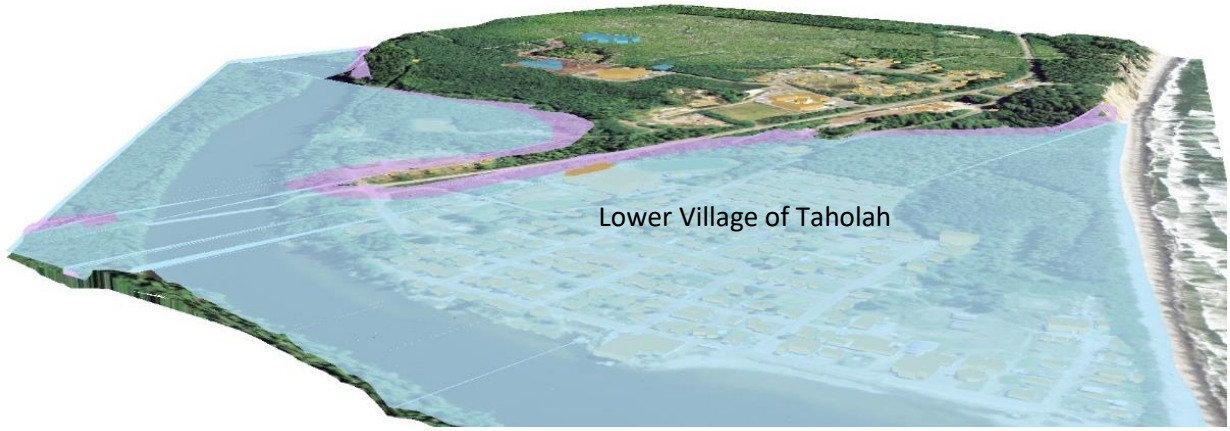

Figure 5: Map of Taholah inundation zone

[31] Quinault Indian Nation Planning Department, *Taholah Tsunami Zone*, (Taholah, Washington: Quinault Indian Nation Planning Department, 2010).
[32] Charles Warsinske, Personal interview, Taholah, Washington November 4, 2016.

Chapter 3: Being Post-Colonial in Thought and Actions

Events of Trauma in Native American History

The population of Native Americans in North America decreased by 95% from the time Columbus came to America in 1492 and the establishment of the United States in 1776.[33] There are two main factors that can help explain this travesty: the intentional killing of Native Americans by settlers and the United States government, and the exposure of Native Americans to European diseases.[34] An example of this in the Pacific Northwest was recounted by Charles Wilkes stating that a malaria outbreak in the 1830's decimated the natives in southwest Washington to below 10 percent of what they once were.[35] The majority of the Native American population died due to new diseases that were introduced by colonial settlers. Diseases such as Smallpox, Cholera and Measles took a devastating toll on Native Americans.[36] While exposure to these diseases was inevitable with the contact that took place between Native Americans and Europeans, there are documented cases that many times in history the Native American people were purposely subjected to these diseases. One such case in 1763, Lord Jeffrey Amherst ordered his subordinates to introduce Smallpox to the Native American

[33] Scott Plous, *Understanding Prejudice and Discrimination* (Boston: McGraw-Hill, 2003), 373.
[34] Jerry Trusty, Eugenie Joan Looby, and Daya Singh Sandhu, *Multicultural Counseling: Context, Theory and Practice, and Competence* (Huntington, N.Y.: Nova Science Publishers, 2002), 7.
[35] John M. Findlay, "Lesson Seven: The Changing World of Pacific Northwest Indians" (presentation, History of Washington State and the Pacific Northwest, University of Washington, Seattle, n.d).
[36] Trusty, Looby, and Sandhu, *Multicultural Counseling*, 7.

people through blankets they offered to them.[37]

The loss of population further impacted the Native American community significantly because of the absence of public acknowledgment of the genocide that was occurring. By 1883 Native Americans were denied the right to mourn their losses properly. Mourning practices were disrupted when an 1883 federal law prohibited Native Americans from practicing traditional ceremonies. This law stayed in effect until 1978, when the American Indian Religious Freedom Act was enacted.[38] Local missionaries imposed upon local Indians trying to convert them to European ways, including Christianity.[39] As a result of not being able to use traditional cultural practices to mourn properly, subsequent generations have been left with feelings of shame and loss. They were told that their cultural practices were wrong and thus felt powerlessness because they could not do anything at the time.[40]

The sequestration of Native American lands was a major agenda for many United States government officials in the 19th century. President Andrew Jackson had approved the Indian Removal Act of 1830, initiating the use of treaties in exchange for Native American land east of the Mississippi River, forcing the relocation of as many as

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[37] Plous, *Understanding Prejudice and Discrimination*, 350.

[38] Maria Y. Brave Heart et al., "Historical Trauma Among Indigenous Peoples of the Americas: Concepts, Research, and Clinical Considerations," *Journal of Psychoactive Drugs* 43, no. 4 (2011): 284, doi:10.1080/02791072.2011.628913.

[39] John M. Findlay, "The Changing World of Pacific Northwest Indians."

[40] Maria Y. Brave Heart and Lemyra M. DeBruyn, "The American Indian Holocaust: Healing Historical Unresolved Grief," *American Indian and Alaska Native Mental Health Research* 8, no. 2 (1998): 64, doi:10.5820/aian.0802.1998.60.

100,000 Native Americans.[41] “Native peoples found themselves increasingly on the defensive and subject to the policies and preferences of colonizers from Europe and the United States. For the lands that eventually became the states of Washington, Idaho, and Oregon, these changes meant that by 1860 people from the United States were essentially in control of the territory.”[42] By 1876, the U.S. government had obtained the majority of Native American land and the Native American people including Washington tribes were forced to either live on reservations or relocate to urban areas.[43]

Reservations were not the best lands for agriculture and hunting. Native Americans relocating to urban areas had a huge impact as well. The relocation removed Native American people from the important cultural landscape that they called home. Native Americans declined in socioeconomic status because of leaving their domestic lands which did not enable Native American men to support their families. As a result, many displaced Native families became dependent on goods offered by the U.S. government.[44] These relocations resulted in the disruption of families and the severing of a group from their culture. Forced relocation helped to divide Native American peoples and culture. The Allotment Act of 1887 helped divide property rights on reservations that we will learn still has a huge impact for the people who live on

[41] Library of Congress, "Indian Removal Act: Primary Documents in American History (Virtual Programs & Services, Library of Congress)," Library of Congress, last modified November 5, 2015, https://www.loc.gov/rr/program/bib/ourdocs/Indian.html.
[42] John M. Findlay, “The Changing World of Pacific Northwest Indians.”
[43] Brave Heart and DeBruyn, "The American Indian Holocaust," 64.
[44] Ibid., 64.

reservations and the professionals trying to design and plan for them.

The Effects of Historical Trauma

"Lives are lived in specific historical times and places… If those historical times and places change, so too does the way people live their lives."[45] The basis for historical trauma is that populations historically subjected to long-term, mass trauma display a higher prevalence of disease even several generations after the original trauma occurred.[46] That is why I listed many atrocities that were in fact committed towards Native Americans. Acts committed against Native Americans still affect their communities. As described in the opening chapter, Native Americans are the most distressed group of people in the United States and are still even when compared to other countries around the world.

Michelle Sotero offers a conceptual model of historical trauma, discussed here, and attempts to synthesize the literature and explain physical, psychological, and social pathways linking historical trauma to disease prevalence and health disparities that Native Americans face today. The model shows that historical trauma originates with the subjugation of a population by a dominant group. Successful subjugation needs at least four elements: overwhelming physical and psychological violence; segregation

[45] Elder, G. 2001. The Life Course in Time and Place. Presentation to the International Symposium on Institution, Interrelations, Sequences: The Bremen Life-Course Approach. Breman, Germany. Accessed 09/30/2016 at http://www.unc.edu/elder/presentations/Life_course_in_time.html

[46] Michelle M. Sotero, "A Conceptual Model of Historical Trauma: Implications for Public Health Practice and Research," *Journal of Health Disparities Research and Practice* 1, no. 1 (Fall 2006): 94.

and/or displacement; economic deprivation; and cultural dispossession.[47] All elements of this model are covered in the beginning of the chapter.

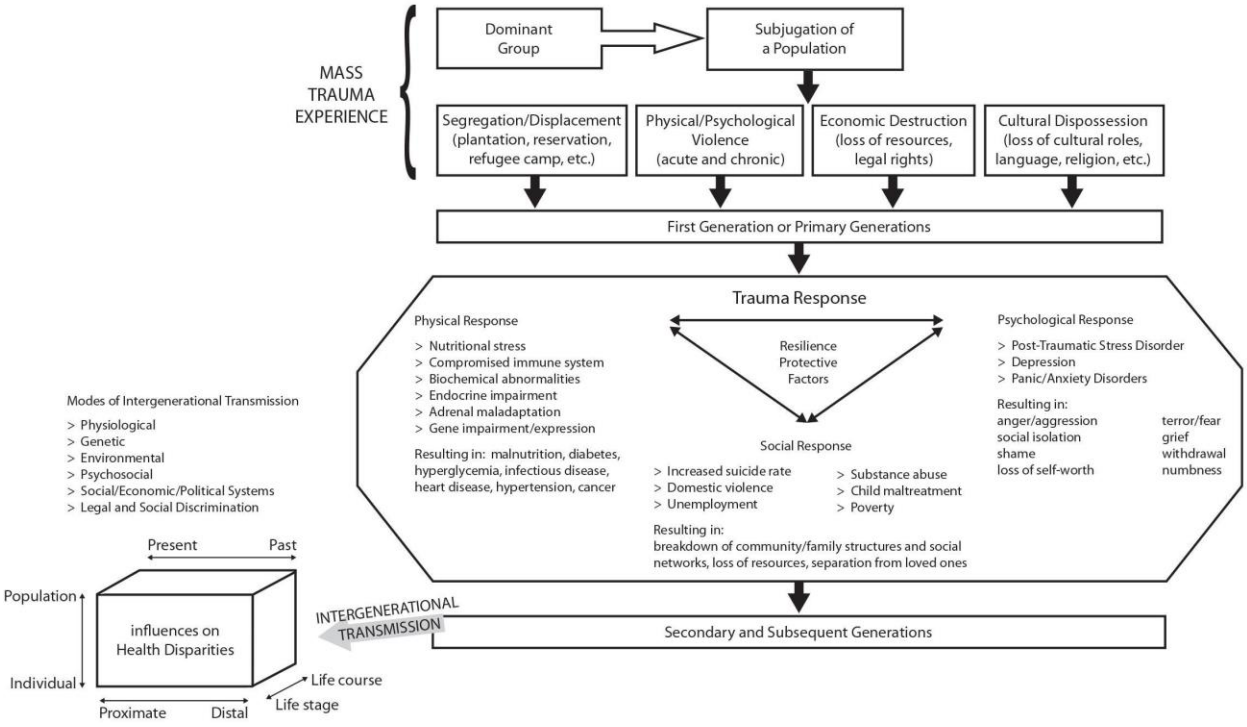


Image 6: Michelle Sotero's model of historical trauma

The dominant group enforces subjugation[48] through various means. Even though the subjugation of the past has rescinded over time, its legacy remains in the form of racism, discrimination, and social and economic disadvantage that have maintained throughout time. The universal experience of subjugation forms significant physical and psychological trauma for the effected population; communities feel the impact, not just individual victims. Even though it may be challenging for design and planning

[47] Sotero, "Conceptual Model of Historical Trauma," 99.
[48] Ibid., 99.

professionals to address psychological and physical trauma, we can tackle the legacy of the original subjugation that may still exist. For designers and planners, the traumas we can tackle are loss of culture and outdated laws like the Allotment Act of 1887.

The Allotment Act of 1887 still has a huge influence on planning in Native American communities. As explained earlier The Allotment Act of 1887 divided much of the tribal lands. Modern reservation land is primarily a combination of individual and tribal trust land. Land that was intended for an individual homestead or for subsistence farming became perceived as personal property and made up individual trust land. These assets can be improved, leased, or inherited among tribal family members.[49] However, these lands are not actually owned by an individual, but by federal government and as a result, land cannot be sold.

Land held in trust has led to many issues. Average number of owners of any given parcel of land on the Quinault Reservation is 15. When an owner passes away it is either willed away to one or multiple interests or if a will did not exist, the land splits amongst the family members who qualify to inherit the land. The result is disorder in terms of ownership. With so many interests creating fractional ownership for one given parcel of land it is near impossible to get all the owners to agree on what to do with it. Fractional ownership of a community's land affects any design or plan because of the necessary consideration of multiple interests.

[49] Rodriguez, Galbraith, and Stiles, "American Indian Collectivism Past Myth, Present Reality."

Loss of Culture Affecting Design Within Native American Communities

Native American culture and agency are absent in design and planning because of the successful attempt to remove Natives from their homelands to areas that the United States Government approved. Historical trauma is the overwhelming and lasting legacy that has been left behind. Daniel Wildcat wrote that there were three attempts to remove Native Americans from their culture. The Trail of Tears is his example of moving Native Americans from one coast to the other. The second example is the removal of children from their homes and placement in off reservation boarding schools in an attempt to educate Native American children, some of these schools are still operating today.[50] Wildcat argues that boarding schools were detrimental to Native communities because "One of the surest methods of destroying a people, their families, communities, and culture is to take their children away."[51] These schools were based on the premise of stripping Native children of their unique tribal identity and culture. Education was the third attempt, in conjunction with the boarding schools, to remove the "Indianness."[52] The intentions of these actions were however, supposed to be in Native Americans' best interests. The removals were done by "friends" who were looking to help solve the "Indian problem."[53]

[50] National Public Radio, "American Indian Boarding Schools Haunt Many: NPR," NPR.org, last modified May 12, 2008, http://www.npr.org/templates/story/story.php?storyId=16516865.
[51] Daniel R Wildcat, *Red Alert!: Saving the Planet with Indigenous Knowledge* (Golden, Colo: Fulcrum, 2009), EBL, 2.
[52] Ibid., 3.
[53] Ibid., 2.

Eurocentrism is the intent to place emphasis on European culture and values at the expense of other cultures.[54] The action of Eurocentrism has been applied to Native communities from the beginning of reservations. Institutions carried on with Captain Richard Henry Pratt's guiding principles that he stated at the National Conference of Charities and Correction held in Denver, Colorado in 1892, "Kill the Indian in him and save the man."[55] These actions not only took away culture, they severed traditional knowledge that was passed along with each generation. With the loss of culture because of historical trauma, communities and professionals working with Native communities do not have a proper foundation from which to work with.

Marie Battiste describes the importance of knowledge, experience, and culture among Native peoples from a generational standpoint. "Each generation passes their knowledge and experience of the social and cultural contexts of their ecological origins to succeeding generations. They transfer their knowledge through their languages and through many diverse ceremonies and traditions. These cultural forms are the fundamental sources of Indigenous knowledge."[56] However with current Native Americans and the issue of historical trauma, the transfer of knowledge and culture has been severed because the United States government actively tried to break them from

[54] Richard Howit et al., "Capacity Deficits at Cultural Interfaces of Land and Sea Goverance," in *Reclaiming Indigenous Planning*, ed. David C. Natcher, Ryan Christopher Walker, and Theodore S. Jojola (London: McGill-Queens University Press, 2013), 315.
[55] Wildcat, *Red Alert!*, 3.
[56] Marie Battiste, "You Can't Be the Global Doctor If You're the Colonial Disease," in *Teaching As Activism Equity Meets Environmentalism*, ed. Peggy Tripp and Linda June Muzzin (Montréal: McGill-Queen's University Press, 2005), 122.

their culture, took away their language, made them stop their ceremonies, and belittled and ignored their traditions. Of course, they did not completely succeed and all Native communities have preserved some culture that they can recount. However, evidence from the aspect of historical trauma shows that there has been a negative and lasting impact. What is left is a distrust between Native American peoples and any province of government, institution, and professionals that seek to assist Native American communities. The distrust created in these communities makes cooperation and progress difficult for a professional who is an outsider.[57]

Battiste elaborates on the importance of culture and the connections to the land that Native Americans have. “The neglect and destruction of Indigenous knowledge is a widely felt historical legacy. All around the surface of the earth, Indigenous peoples live in communities where they acquire, develop, and sustain relationships with each other and with their environments. By building relationships with the land and its inhabitants, they come to understand the forces around them.”[58] It is the designers’ job to work with Native communities to help them establish agency to actively develop and sustain the culture within each Native community. What history has shown is Native communities are defeated in both the literal and figurative. These defeated communities have lost the power and the means to improve current conditions. Once a Native community does finally try to progress past historical prejudice and trauma, policies like the Allotment

[57] Phyllis Eide and Carol B. Allen, "Recruiting Transcultural Qualitative Research Participants: A Conceptual Model," *International Journal of Qualitative Methods* 4, no. 2 (2005): 48, doi/10.1177/160940690500400204.
[58] Battiste, "Global Doctor," 122.

Act, make design and planning extremely difficult for community members and professionals, as we will see with the Quinault Indian Nation. We will see that the Native communities in chapter 4 are working towards creating better living environments through the agency gained by working with an outside professional.

Disempowerment

Eurocentric thought and actions from the past have disempowered the Native community. Treatment of space and borders within the Eurocentric mindset empowers the individual; that was an intention with assigning land trusts. However, it proved to make it even more difficult for Native communities to come together and reach a consensus on how to best govern their environment. An example of where this did not happen is with the Makah Tribe. During the time of treaty negotiation, the Makah protected the element they knew to be most important to them, the sea rather than the land.[59] This allowed the Makah People to succeed for most of the nineteenth century through trade.[60] It was not until later that the non-Native industries wiped out the marine resources the Makah depended on.[61] What will be shown in subsequent chapters is the division of land with the Quinault that has hindered their relocation process and a successful land swap with the United States government that allows the Quileute to

[59] Joshua L. Reid, "“The Sea Is My Country”: The Maritime World of the Makah, an Indigenous Borderlands People," (PhD diss., California Davis, 2005). 312.
[60] Reid "The Sea is My Country." 312
[61] Ibid. 312.

relocate their lower village to higher ground.

Being Post-Colonial in Our Thinking to Develop Culturally Appropriate Design

In my introduction, I talked about how more is required by professionals to understand the underlying problems that exist within Native communities as designers and planners. Of course, this is not by any lack of intent by professionals trying to understand the current situations on Native reservations. It is the education from which we have been exposed to on Native culture, issues and needs, that has had an influence on how reservations and Native communities are perceived. Maria Battiste argues that it is the education system that is at fault and that we need to come up with a post-colonial curricula and attitude from which to learn. It is the colonial history of education and Eurocentric content of current curricula that nurture an attitude of superiority that continues to demean the roles of Indigenous knowledge and people in education.[62] Post-colonial theory is a change in how we think as designers by offering a framework to better understand how Indigenous peoples are living. Battiste stressed that a post-colonial way of thinking is not the actual rejection of all research and theory completed so far with a Eurocentric view, but it is about creating room for Native peoples' knowledge, identity, and future in considering the larger goal of design and planning.

[62] Marie Battiste, "Post-Colonial Remedies for Protecting Indigenous Knowledge and Heritage," in *Teaching as Activism Equity Meets Environmentalism*, ed. Peggy Tripp and Linda June Muzzin (Montréal: McGill-Queen's University Press, 2005), 224.

Libey Porter refers to postcolonial thought as “unlearning one’s privilege,”[63] which she feels highlights the importance of doing good cross-cultural research. She says that “It requires critical reflection on how we have come to value our own knowledge and practices and investigating why that knowledge is privileged.”[64] In this circumstance privilege works to “maintain personal positions of status and power”[65] that blinds the planner. In south-east Australia, a group of professionals acknowledged the Eurocentric practices of exclusion, marginalization, and denial of basic rights to indigenous communities that were continuing to plague the community that they worked for. However, this was only accomplished after the group removed a non-Indigenous figure who held power within the group. In doing so, the group was also able to acknowledge and be sensitive to divisions within the Indigenous community created by past actions and decisions of non-indigenous officials.

Post-colonial theory helps us unravel the colonial mentality that has critically harmed Native Americans by seeing no value in their culture and practices and forcing them to live on reservations. The action of re-thinking our own education will help designers engage Native communities by having a clearer idea of what Native Americans have gone through in just the past 150 years, and how the community is now having to deal with the legacy of earlier attempts at planning and design. Post-colonial thinking will

[63] Libby Porter, "Unlearning one's privilege: reflections on cross-cultural research with indigenous peoples in South-East Australia," *Planning Theory & Practice* 5, no. 1 (March 2004): 105, doi:10.1080/1464935042000204222.
[64] Porter, "Unlearning One’s Privilege," 105.
[65] Ibid. 105.

help us engage Native communities through 'transformative action'.[66] Transformative action uses the community's knowledge and culture to embrace the community and their goals. A community that has been at the forefront of transformative action is the Confederated Tribes of Warm Springs, found in Oregon State.[67] Once the Confederated Tribes received the power to self-govern, the tribes looked to planning as their main tool for agency. The new tribal government instituted a planning program to focus on the preservation and management of their reservation land.[68] Thus, today the "Confederated Tribes of Warm Springs are characterized by a strong communal orientation to the protection of their land, their resources, and their distinct cultures and to the betterment of the community as a whole."[69] The first several attempts at comprehensive planning at Warm Springs relied heavily on outside professionals.[70]

Battiste states that "Indigenous knowledge may be endangered, but is still available to those who wish to acquire and benefit from it. It must be accessed in ways that are respectful to those who have nurtured it in the past and will sustain it for the future."[71] At first look, this statement seems to be directed towards professionals outside of the realm of Indigenous communities, however I feel that planning for Native communities can benefit from it as well. Native communities have the knowledge to heal their

[66] Battiste, "Global Doctor," 121.
[67] M. B. Lane, "Doing It for Themselves: Transformative Planning by Indigenous Peoples," *Journal of Planning Education and Research* 25, no. 2 (2005): 180, doi:10.1177/0739456x05278983.
[68] Lane, "Doing it for Themselves," 180.
[69] Ibid., 181.
[70] Ibid., 181.
[71] Battiste, "Global Doctor," 122.

fractured communities, they simply need the agency required to use it.

Applying Culturally Appropriate Design

Transformative action places importance on trying to understand what needs to change in the process that designers and planners use to assist Native communities. Tania Martin and André Casault have been incorporating these ideas discussed within their work with First Nations Peoples in Quebec. “What if, instead of favoring spatial homogenization and cultural assimilation we started from the premise that the preservation of cultural specificities and hence the maintenance of cultural diversity in architecture is as crucial to humanity as ecological or biological diversity?”[72]

Martin, Casault, and students have been incorporating the knowledge of the Innu and Innuit to help offer homes that can withstand the harsh living conditions the Innu and Innuits live in. These communities have had to live in and deal with inadequate housing that is designed in areas of Quebec where they do not understand the uniquely harsh living conditions and instead are planned according to Southern Quebec suburban models.[73] From the two images we can clearly see specific needs of the community being met. In figure 7 we see a communal space for the surrounding multifamily housing with a shared woodshop next to the communal space. In figure 8 we can see spaces to

[72] Tania Martin and André Casault, "Thinking the Other," *Journal of Architectural Education* 59, no. 1 (2005): 3, doi:10.1111/j.1531-314x.2005.00001.x.

[73] Social Sciences and Humanities Research Council of Canada – Partnership, *Living in Northern Québec: Mobilizing, Understanding, Imagining Project summary*, (Quebec, Canada: Université Laval – École d’architecture, 2015).

accommodate motor vehicles that then leads to a transitional space from outside to indoors that community members need.

The locals found the suburban model unacceptable and insufficient. The homes do not cater to their practices, representations, and aspirations. The revised model contributes to the development of social, familial and health problems.[74] Through partnership, management, and governance the project implements a participative, interdisciplinary framework for Innu and Inuit communities. This framework helps to combine Native knowledge with that of other fields related to design and planning.[75]

Figure 7: Conceptual design for homes in Northern Quebec

Figure 8: Conceptual design for homes in Northern Quebec

[74] Social Sciences and Humanities Research Council of Canada – Partnership, "Living in Northern Quebec."
[75] Battiste, "Global Doctor," 122.

Using Policy in Native Communities

Nicholas Zaferatos, a professor at Western Washington University is a great example of a professional who is trying to assist in breaking habits of the past. “Indian reservation planning is among the most poorly understood. Until quite recently, the profession has ignored tribal conditions, thereby failing to assist them in their quest for advancement.”[76] He argues that Indian reservation planning and development have been impaired by a series of federal policies that have ultimately disrupted the stability of Indian societies through programs that once attempted to both assimilate and terminate tribes. When looking at reservation communities he implores professionals to “understand that Native American communities are not just cultural minority groups; they exist as independent political nations within a larger nation.”[77] Being an independent nation means that reservation communities can do whatever they see fit to help their communities. Problems with this, however, do exist. These problems facing tribal governments today can be attributed to the laws of the past.[78] Also in Native American reservation communities the tribe’s authority to regulate its own reservation is not always clear and depends on each individual reservation and the states in which they exist. A tribe’s planning authority is established under its own constitutional powers of self-governance,

[76] Nicholas C. Zaferatos, "Planning in Native American Reservation Communities: Sovereignty, Conflict, and Political Pluralism," in *Cities and the Politics of Difference: Multiculturalism and Diversity in Urban Planning*, ed. Michael A Burayidi (Toronto: University of Toronto Press, 2015), 159.
[77] Zaferatos, "Planning in Native American Reservation Communities," 159.
[78] Ibid., 161.

but its authority to do so is often challenged by non-tribal governments.[79] The Allotment Act of 1887 in many cases has divided reservation land so that it makes any new meaningful interactions extremely hard to achieve. There are times where there are more than 300 people who have interest in a parcel of land no bigger than 500 square feet. The Allotment Act also allowed non-natives to buy land within reservations and some of these owners disregard Native law.

Native communities look to preserve what they have, especially water sources and water quality, though surrounding non-native communities and non-native community members do not have the same sentiment and often have a significant impact on native resources. To combat the Allotment Act and the attitudes of surrounding communities Zaferatos suggests six things that can be learned from by including surrounding governments into an overall scheme that should be included into every tribal plan: regional cooperation that is cognizant of historic circumstance; the capacity to address emerging issues through continuous consultation; removal of longstanding institutional communication barriers; commitment from elected officials and planning staff; the dedication to education and development of skills; and constant monitoring to maintain transparency between all groups involved.[80] We will later see a tribe that is fighting the remnants of the Allotment Act by implementing parts of this six step model and working

[79] Ibid., 161.

[80] Nicholas C. Zaferatos, "Tribal Nations, Local Governments, and Regional Pluralism in Washington State: The Swinomish Approach in the Skagit Valley," *Journal of the American Planning Association* 70, no. 1 (Winter 2004): 93, doi:10.1080/01944360408976340.

with surrounding governments in their own extensive tribal plan.

Battiste warns that breaking from a Eurocentric view will be no easy task. “Eurocentrism is not just an opinion or attitude that can be changed by some multicultural or cross-cultural exercise, for eurocentrism is an integral foundation of all dominant scholarship, opinion, and law. As an imaginative and institutional context, eurocentrism is the dominant consciousness and order of contemporary life.”[81] However, planners and designers have been trying to break the mold in their practice with Native communities. We as a profession continue to ask questions about design and planning intents in Native communities. It is our job to interpret and confirm Indigenous knowledge and understanding of Indigenous consciousness, language and order, within their respective communities.

[81] Battiste, "Global Doctor," 124.

Chapter 4: 3 Case Studies of Hazard-Sensitive Design in Washington's Native Coastal Communities

Introduction

This chapter will include three Washington State tribal communities that are dealing with either a tsunami or rising sea level threat. What links these three communities is by trying to provide solutions to a physical problem each community can combat the problems that stem from historical trauma. The Makah and Quileute communities both took part in Project Safe Haven, along with the Quinault. All three communities had different design needs that needed to address the effects of historical trauma.

Figure 9: Context map for Western Washington Tribes

Project Safe Haven was a community driven, public process that took place on the

Washington Coast. Various institutions collaborated with communities up and down the Washington coast to help identify areas for evacuation structures. The project's mission was to develop a responsive strategy with the coastal communities. There were five Native communities that participated in the project, the Makah in Neah Bay, the Quileute in La Push, the Quinault in Taholah, and the Tokeland in Shoalwater Bay. I picked the first two cases because I am familiar with them. I was a research assistant on Project Safe Haven, which is a tsunami vertical evacuation project for the Makah and Quileute communities of the Washington Coast. I was also a part of a separate design studio project that took place in Neah Bay.

Makah Community members struggled with the possibility of having to relocate their own homes, though they were on board with moving critical community infrastructure to the surrounding hill developments because of the importance of the services that they provided and the need to protect them. The community of La Push however was waiting to find out whether they would be a part of a land swap with the Washington Congress for land that was much higher in elevation and that was close to already built housing.

For my third case study, I selected the Swinomish Nation because a larger non-tribal population surrounds them, mainly farmers, who are in constant dispute with the Swinomish Tribe over the tribe's pursuit of restoring salmon habitat.[82] The Government of the Swinomish has put together an articulate action plan to help combat a rising sea

[82] Sara J. Breslow, "Tribal Science and Farmers' Resistance: A Political Ecology of Salmon Habitat Restoration in the American Northwest," *Anthropological Quarterly* 87, no. 3 (Summer 2014): 729, doi:10.1353/anq.2014.0045.

level and the ongoing feuding communities that surround them. They are using cultural knowledge, scientific knowledge supported by the University of Washington, and other environmental science groups, with coordination between all interests to help facilitate productive and progressive information exchange.[83]

Case 1: The Makah Tribe, Neah Bay, Washington

The Makah Nation found on the northern tip of the Washington Peninsula is a community that is planning for the inevitable tsunami it will one day face. The community is already vulnerable to isolation, and lack of accessible resources in the face of catastrophe, due to landslides that block the only way in or out of Neah Bay. For thousands of years the Makah Tribe have lived at the edge of the Olympic Peninsula and derive much of their heritage, culture, values and livelihood from the abundant resources of the Pacific Ocean. The Makah historically settled in low, flat areas on the waterfront, giving them easy access to the ocean.[84] The population is now mostly concentrated in the shallow crescent of land that borders Neah Bay on the northern side of the peninsula. The lower village has the Strait of Juan de Fuca part of the Salish Sea to the north and Cougar Hill to the south. The lower village also contains the village center, the commercial core, the school, community center for tribal elders, the police department, the Makah Cultural and Research Museum and all health and human

[83] Breslow, "Tribal Science and Farmers' Resistance," 730.

[84] University of Washington, *Project Safe Haven: Tsunami Vertical Evacuation on the Washington Coast*, (Seattle: University of Washington School of Urban Design and Planning, 2012).

services. There are hills on both sides of the lower village where tribal members have formed small residential clusters. Settlement patterns and location close to the Cascadia subduction zone leave the tribe extremely vulnerable to tsunamis that could threaten the lives, homes, strong traditions, customs and culture of the Makah Tribe.[85]

By allowing outside professionals to come into their community the Makah not only addressed the tsunami threat, but were able to create solutions to problems that have been a result of historical trauma. The community had issues with the Allotment Act that complicated planning for the core village. The economic vitality was of concern and the community needed solutions that accommodated the divided land. The chance to work with professionals also granted the community agency that it currently lacked allowing them to come together as a whole to discuss the needs of the future for the Makah Reservation.

Figure 10: Neah Bay Context Map

[85] University of Washington, “Project Safe Haven.”

Two solutions were worked on during meetings that took course over four days that included World Café style group discussions, two days of a design charrette, and a final evaluation meeting with the community members of Neah Bay. The first solution was a vertical evacuation structure. The two structures that we covered were berms and towers. A berm is an engineered artificial high ground that can withstand an earthquake or a tsunami, which typically has ramps that give easy access for individuals with limited mobility. A tower is an elevated structure that has either a ramp and/or stairs that lead to a platform that again can withstand an earthquake and resulting tsunami wave. Both structures have their advantages as illustrated below:

Berm

A Ramp provides wider access to accommodate more people quickly and is easier to access than stairs for populations with limited mobility. A berm allows people to follow the natural instinct to evacuate to high ground. While the open design eases fear of entering a structure that may not be safe. A berm accommodates multifunctional designs.

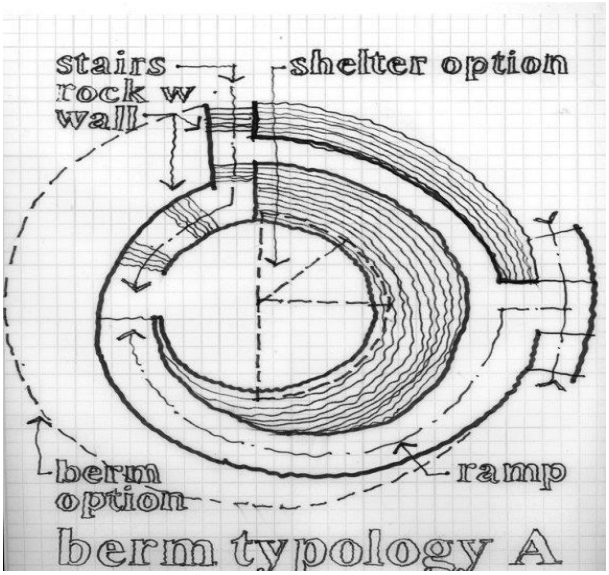


Figure 11: Plan view of a Berm

Tower

Vertical evacuation towers tend to cost less than other evacuation structures. Since towers cost less, they can be placed in more locations in the community. Towers provide a smaller footprint on the land and allow for multifunctionality.

Figure 12: Photo of an evacuation tover

With the visual help of a map of the community and walking circles that showed what a 15-minute walk would look like, the community decided that it was best to locate a structure next to the school because it was the children that were of main concern. The second solution was to relocate critical infrastructure such as medical facilities, police (emergency management) and schools to a clear-cut section called Cougar Hill, located south of the lower village. An urban design studio led by Daniel Abramson had his students also assess Neah Bay. The studio team looked to integrate various

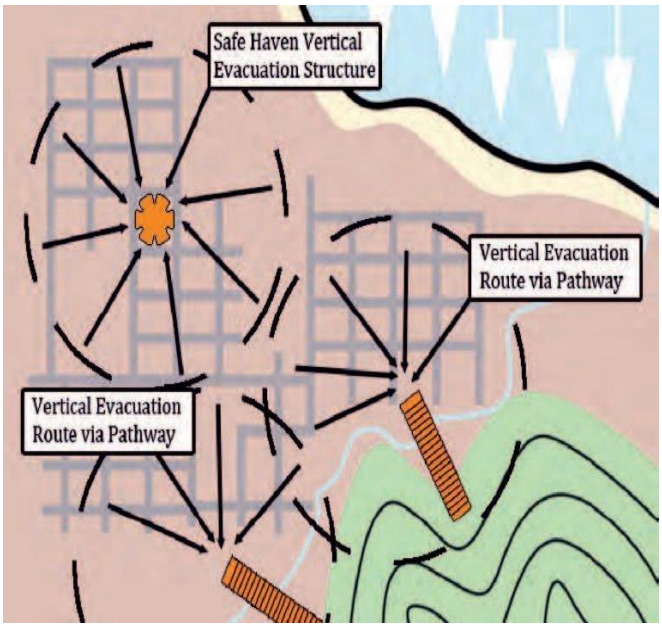


Figure 13: Map of walking circles

methodologies to manage the complexity of the design challenges that were within the Makah Reservation. To do this the team conducted preliminary research on the Makah Tribe along with the history of Neah Bay. The group then identified strategies to facilitate community engagement to encourage community development, promote sustainable ecosystems and economic growth, and imbed tribal culture and values. Methods introduced keyed in on two specific populations: youth and tribal elders. The creation of four focus areas happened next: waterfront development of the lower village, uphill development for projected relocation, evacuation pathways, and resilient water systems. With four teams the studio aimed to develop a framework that engaged the community and create diverse, multi-generational values by working with tribal officials that ranged from the tribal council, the school, the elder center and emergency management staff.

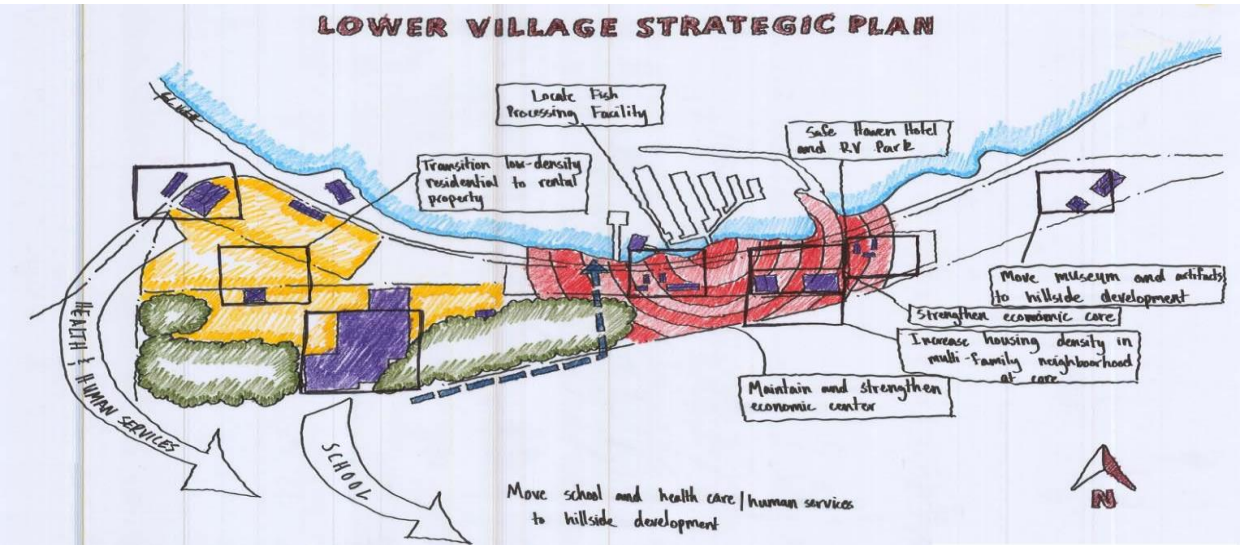


Figure 14: Neah Bay Lower Village Strategic Plan

With economic vitality being important to the community of Neah Bay, the Waterfront Development team looked at the current spatial and cultural relationships in the lower village to reconcile contradictions to maintain a vibrant economic and community core in the lower village and minimize the safety threats that an earthquake and tsunami would have.

The waterfront proposal effectively divided the lower village in half. As the western edge slowly fades and residents use of the area diminishes, the economic core at the waterfront would intensify. However, the recommendation would mean that any new structures in the inundation zone would be at risk. Conversely, enrolling in the National Flood Insurance Program might mitigate the financial risk and support an important, traditional relationship between the Makah Tribe and the Pacific Ocean.[86]

The Uphill Development team created a phasing strategy to help develop a residential village on Cougar Hill to remove the populations that

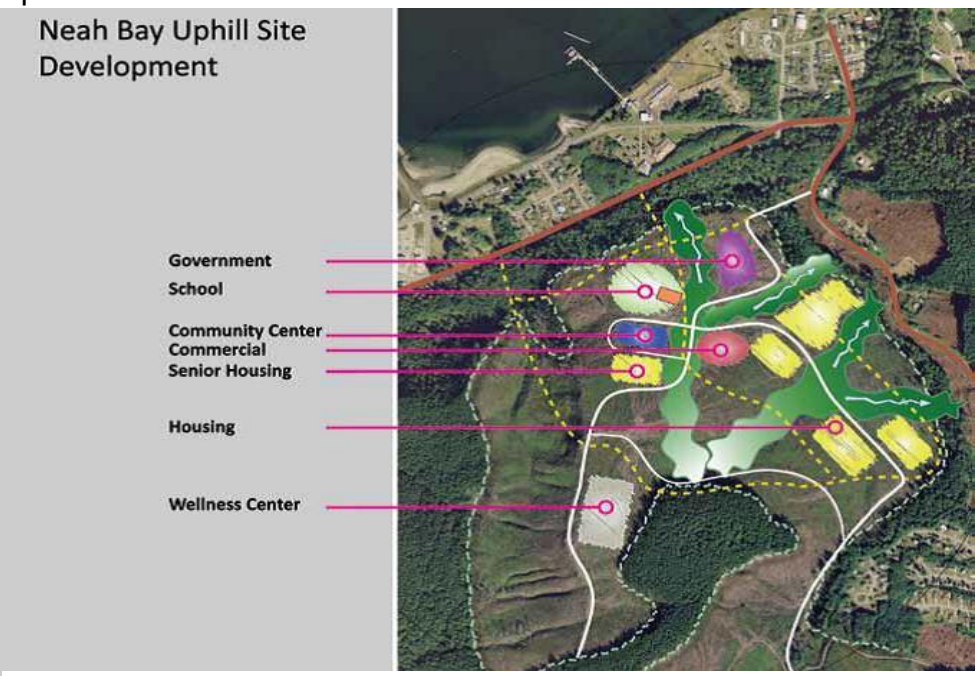
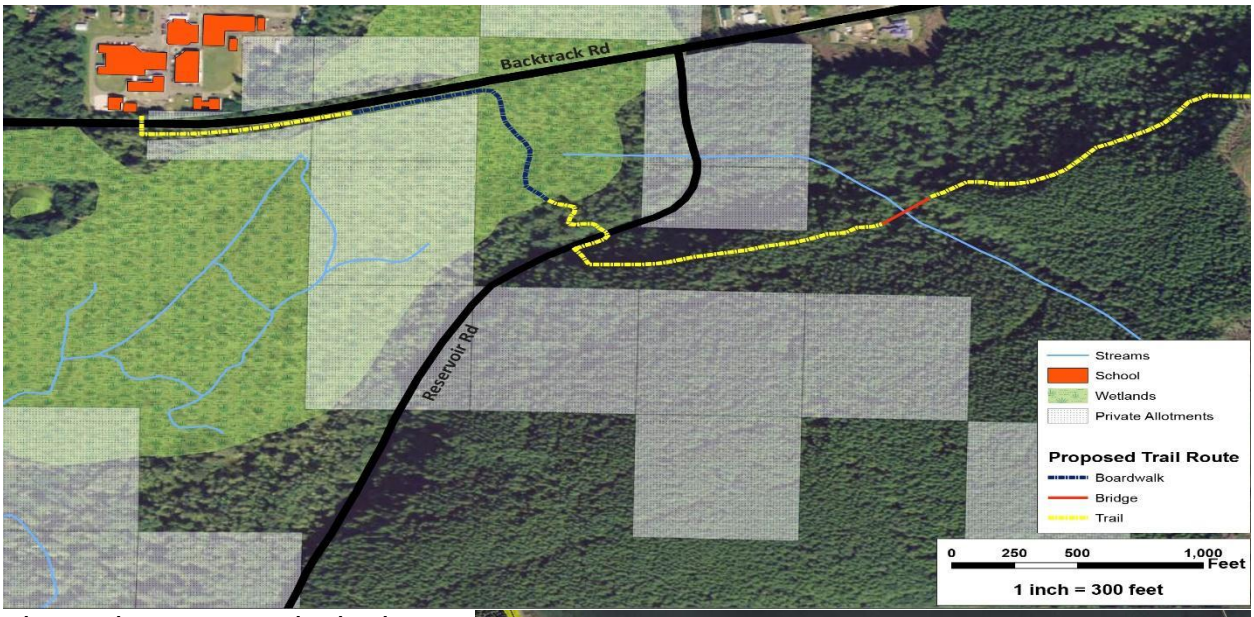


Figure 15: Neah Bay proposed uphill development

[86]Dan Abramson et al., "Urban Design and Planning Neah Bay Studio Report," last modified 2011,

were in the vulnerable inundation zone. The plan sought to relocate essential services of the tribal government, medical services, and elder services along with the residential homes. A network of pathways was designed to connect the lower and proposed upper village to keep the strong traditional connection to the water.



The Pathways team looked at ways to create a system of pathways that go through a wetland area that allows access between the lower village and the proposed upper village. The pathways would also serve as evacuation routes for community members that

Figure 16 and 17: Maps that show the proposed trail network and conflicting land ownership

reside in the lower village area. The trail system would also be an evacuation route for the school, an important planning priority for the community. The system could also have a use for environmental education purposes like recreation and tourism. However, for the design to work permission would be needed from the owners of the private land that the trail network would have to go through, making this plan extremely difficult to carry out due to the many owners and their differing wants and needs.

The Water systems team looked at three strategies to maintain the important relationship between the residents of Neah Bay and the water. The strategies created were to respond to threats, recognize inherent value, and to reinforce water systems services. Together all three strategies would promote conservation, sustainability and rehabilitation of the local ecosystem.[87] The plan looked at design that ensured water and environmental quality. To eliminate the dependence on conventional water infrastructure including centralized wastewater treatment and drinking water reservoirs, the team proposed a more decentralized rainwater collection and waste treatment system. This means using green infrastructure to collect water on site where it can be treated through bioremediation to help recharge groundwater and to collect rain water using cisterns, all of which are strategies for low impact development.

Overall each of the four teams developed strategies that preserved the current culture and promoted design that would strengthen the connection between residents and the water. Legacy was an important concept to incorporate for the studio and was

[87]Abramson. "Neah Bay Studio Report."

encouraged by the community members of Neah Bay. Elders and the youth were a priority because of the suggestions proposed by the community. The school was a central focus along with the Elder Center. Thus, the trail network was created along with a berm structure that would be incorporated into the football field bleachers that were located next to the school and would serve as a common area that the entire community would use. The clinic and Elder Center along with housing was to be relocated in the proposed uphill development.

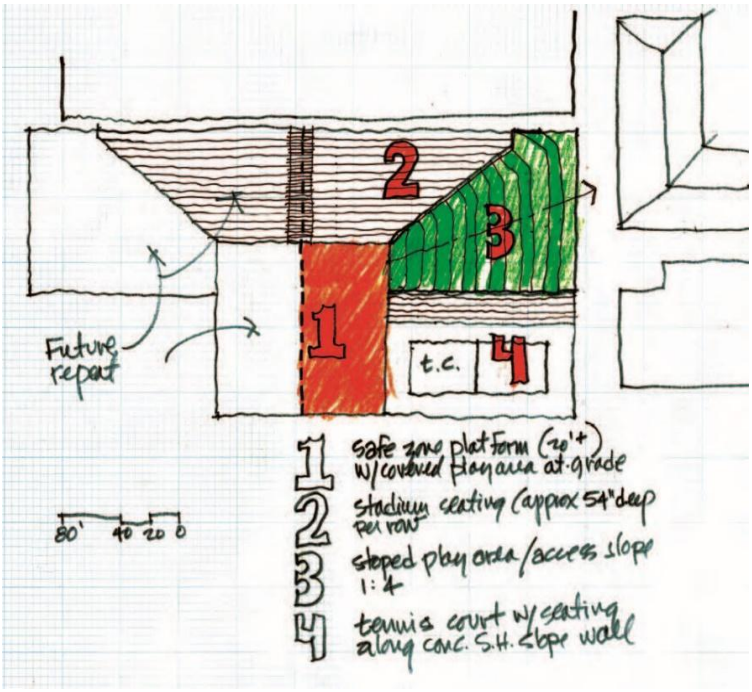


Figure 18: Neah Bay proposed berm structure located in the lower village

Another workshop was held in Neah Bay by Federal Emergency Management Agency (FEMA) to better help identify where to strengthen their own risk assessment tools. This workshop showed how more resilient the community of Neah Bay was when compared to the cities of Redmond and Everett, Washington. The community members of Neah Bay viewed a tsunami event as an opportunity to use traditional ways of living with the land.[88] The FEMA workshop showed how important the role of “social capital is in

[88] Robert C. Freitag et al., "Whole Community Resilience: An Asset-Based Approach to Enhancing Adaptive Capacity

enhancing a community's adaptive capacity."[89] Neah Bay has a strong social network that allows the community members to rely on each other rather than outside help. The design solutions for a physical threat of a tsunami provided by outside professionals allowed the community of Neah Bay to come together and address the legacy that was left behind by historical trauma. The community was provided solutions to help create a stronger vibrant community that had been impacted by the regulatory laws of the past.

Case 2: The Quileute Nation, La Push, Washington

The Quileute Nation is in the middle of a relocation named the "Move to Higher Ground" project in La Push, WA on the Quileute Reservation. North of the Taholah Village, La Push is a small coastal community that is home to the Quileute Tribe. La Push is facing a similar tsunami scenario that the Village of Taholah is planning for. La Push is smaller than Taholah with roughly 400 residents, making it an easier task to plan for the people of La Push. In 2012 the "Move to Higher Ground" project began when United States Congress made it even easier for the Quileute Nation by transferring 785 acres of land to the Quileute Tribe located at higher elevation than that of the lower village of La Push.[90] The Army Corps of Engineers since then, has conducted an environmental

Before a Disruption," *Journal of the American Planning Association* 80, no. 4 (January/February 2014): 332, doi:10.1080/01944363.2014.990480.

[89] Freitag, "Whole Community Resilience," 333.

[90] Peninsula Daily News, "First to Move out of Tsunami/flood Zone in La Push Will Be School -- Port Angeles Port Townsend Sequim Forks Jefferson County Clallam County Olympic Peninsula Daily NEWS," Peninsula Daily News, last modified March 30, 2013, http://archive.peninsuladailynews.com/article/20150331/NEWS/303319995.

impact assessment for new development on the new section of land. The area that was swapped to the Quileute is a heavily wooded area at a much higher elevation that would keep new infrastructure out of harm's way from a tsunami.

Figure 19: Map of inundation zone for La Push

Like the Makah, the Quileute face issues regarding land ownership because of the Allotment Act. The community of Quileute were ahead of the Makah in regards to economic vitality because of a resort that they have off the coast. Public meetings and planning sessions held by the Quileute Tribe discussed how to move the Quileute Tribal School, the tribe's senior center, tribal administration and other important community infrastructure and facilities into new buildings at a safe elevation.[91] With the placement of the school on the new site the tribe has planned to use the utilities and infrastructure to extend opportunity for future development of main arterials, housing, administration and cultural buildings. While the full build out of the site could house the entire

[91] Peninsula Daily News, "First Move Out."

community, priority is given to the households that are now in the inundation area.[92]

First to be built out will be housing most at risk, meeting the most urgent housing needs of the community in the inundation zone. This housing will be in the northwest corner of the site, linking up to existing residential area. The site will have four districts (the first phase of housing, school, government buildings and the second phase of housing) divided by streams and wetland areas. The existing wetlands and topography determined the layout of the site. The master plan sets up residential districts, as well as a cluster of cultural facilities along with tribal government, medical

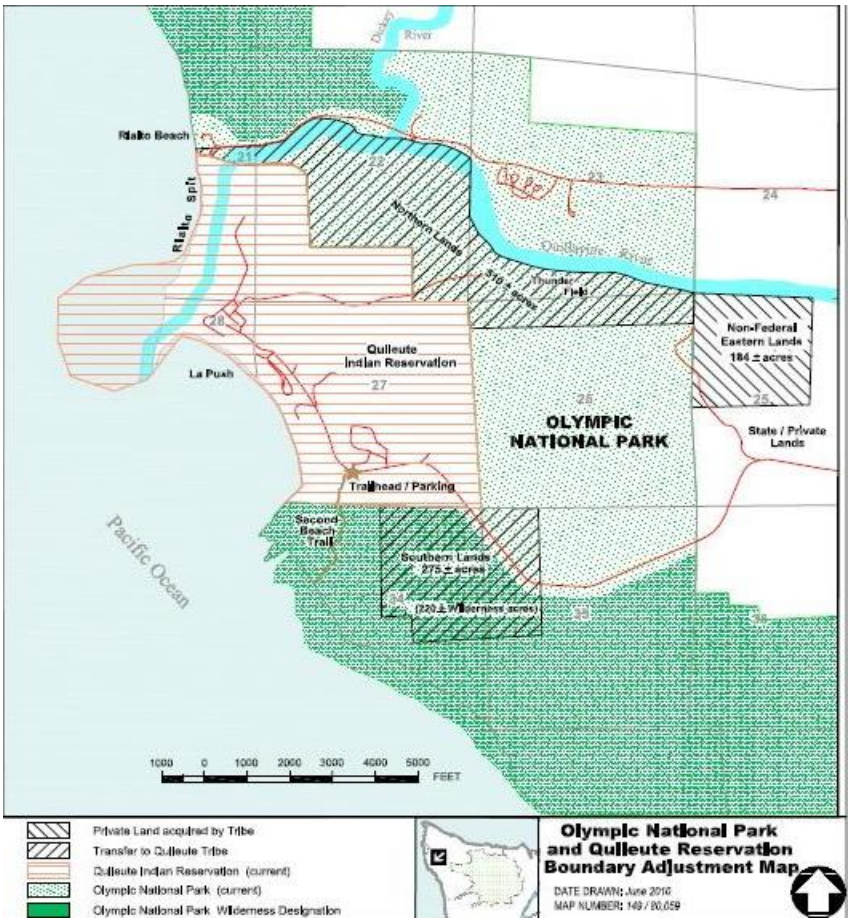


Figure 20: Map of La Push Land Swap

[92] Colin Poff, "Relocation and Resilience: Exploring Co-Benefits in Aberdeen, WA," (master's thesis, University of Washington, 2016), 34.

buildings, and a school.

Figure 21: Preliminary Master Plan for the Quileute relocation process

The opportunity of the land swap has allowed the Quileute community to focus on the development of the new upper village. It is through these actions that the community has gained agency that was lost because of the effects of historical trauma to help protect their future and create a community that will benefit from the positive changes that they assisted in creating.

Case 3: The Swinomish Tribe, Fidalgo Island/LaConner, Washington

The Swinomish Indian Reservation is located on the southeastern peninsula of Fidalgo Island, west of the Swinomish Channel and adjacent to the vast agricultural land of

western Skagit County, in western Washington. The Reservation encompasses an approximate total of 10,350 acres, 7,450 upland acres and approximately 2,900 acres of tidelands.[93] Roughly 4,700 acres are forested uplands with interspersed rural development and surrounding urban development. Approximately 7,675 acres are held by the tribe or tribal members, with the remaining 2,675 acres held by private non-tribal ownership. Tribal headquarters are located in the historic Swinomish Village in the southeast region of the peninsula, across the channel from the Town of La Conner. Tribal enterprises including a casino, gas station, and RV park, are located on the north end of the Reservation, adjacent to SR20, a state highway crossing the Reservation. There are upwards of 1,300 homes on the Reservation, and total Reservation population is over 3,000.[94]

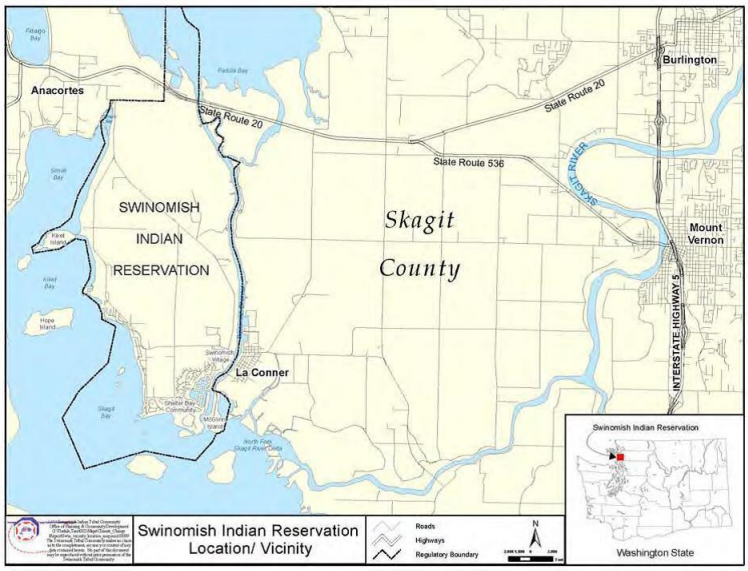


Figure 22: Swinomish context map

There were two events that provoked a Climate Adaptation Action Plan by the Swinomish: A storm surge in February 2006, that pushed tidal levels several feet above

[93] Office of Planning and Community Development, *Swinomish Climate Change Initiative Climate Adaptation Action Plan*, (LaConner, Washington: Office of Planning and Community Development, 2010).
[94] Office of Planning and Community Development, "Swinomish Climate Change Initiative."

normal along shoreline areas of the Reservation and Town of La Conner; and a strong winter storm in November 2006, that downed trees and power lines across the Reservation, isolating the Reservation community for three days and prompting plans for evacuation of residents to the local Tribal gymnasium.[95]

Because of these two events, the Swinomish Indian Tribal Community started in the fall of 2008 to participate and work on a two-initiative to study the impacts of climate change on the resources, assets, and community of the Swinomish Indian Reservation. They also began to develop strategies discussing actions needed to adapt to the projected impacts of climate change on their community. Many of the adaptations were to help provide solutions to the effects of the Allotment Act and the division of the land within the reservation. All of the divided interests within the reservation made it difficult for the community to work together as a whole.

The tribe was aided during the two-year duration of this project by the University of Washington's Climate Impacts Group, who provided guidance with analysis and interpretation of climate data and models to help the community understand the problem at hand. Gaining a great understanding of the problem that enveloped inter-jurisdictional issues, the tribe gained the aid of a strategy advisory group that included representatives of Skagit County, the town of La Conner, and the Shelter Bay community. In addition to outside assistance, project staff worked with a tribal community interest group, led by a communications and outreach facilitator, to

[95] Ibid.

communicate information on significant potential impacts to tribal traditions and practices, and to ask for feedback on concerns and issues. Working with these partners and groups, project staff evaluated a broad range of potential strategy options for the targeting of various climate impacts and developed a comprehensive list of recommendations for actions required to address specific impacts.

Through analysis the group found four areas of focus for the plan: coastal resources, upland resources, physical health, and community infrastructure and services. To protect coastal resources the plan focused on the impact of inundation from sea level rise and storm surge, specifically looking at shoreline areas. The actions that the strategy proposed are to use shoreline controls that would include identifying risk zones, using setbacks, rolling easements and restrictions. Physical controls would be to remove bulkheads for shoreward migration, extending and raising dikes, armoring of shorelines, raising or hardening structures, habitat enhancement, and land acquisition. To protect upland resources the plan looked to decrease wildfire risk through adopting and maintaining firewise standards and buffer, use enhanced training and support for wildfire response and improve forest management policies and practices. For physical health, the plan considered three main impacts: heat related illness, increased respiratory disease, and toxic seafood contamination. The plan proposed a learning/emergency center the community could use for hot weather, a need to strengthen health services, and to strengthen traditional roles for food safety. The last area of focus was community infrastructure and services. The plan discussed five

impacts: Inundation of low-lying roads; road closures due to storm and tidal surge; decreasing potable water; contaminated water due to flooding; and service disruption of communication and energy systems. The actions taken to mitigate impacts are to raise and build new dikes, raise road levels and find alternate routes, restrict the construction of new roads in risk zones, complete and use a water management plan, identify and protect vulnerable areas and facilities, and to develop alternate energy systems.

Where the Swinomish tribe excelled while creating this detailed and extensive plan was in their decision to incorporate the surrounding non-native communities in the entire process. They acknowledged that the cooperation, participation, and understanding of the surrounding non-native communities were key to their success.[96] This was the first step in developing a meaningful dialogue which is imperative in establishing a commitment for and from the surrounding communities to learn about interests and values that exist within the Swinomish Reservation.[97] The Swinomish Tribe understand necessity of cooperation and understanding which needed to be addressed to move forward successfully. What we can take from this is that "regional cooperation in land use between tribes and counties becomes possible when they employ a multi-party, government-to-government approach, aware of the historic circumstances that first created conflicts."[98] The Swinomish tribe gained agency through policy that they helped

[96] Nicholas C. Zaferatos, "Tribal Nations, Local Governments, and Regional Pluralism in Washington State: The Swinomish Approach in the Skagit Valley," *Journal of the American Planning Association* 70, no. 1 (Winter 2004): 85, doi:10.1080/01944360408976340.
[97] Nicholas C. Zaferatos. "Tribal Nations." 81.
[98] Ibiid. 93.

create with a group of professionals that understood the risks associated with rising sea levels.

Chapter 5: The Quinault Nation a Design Intervention

Now to examine the Quinault Reservation. As we have gathered, from the earlier three cases, each reservation has different issues they are addressing in regards to planning for their community. The Makah had concerns about the legacy of their people and environment which were reflected in design and planning strategies recommended for the community. The Quileute prioritized relocation of services in addition to homes in their upper development plan, while the Swinomish have created a comprehensive plan to help mitigate sea level rise and the conflicting interests in and around their reservation. All three case studies also had to work with the legacy of historical trauma by addressing the division of their land. By analyzing the unique concerns of these three communities the Quinault can apply similar strategies to help resolve their own community needs.

Site Analysis

The village of Taholah, just over 50 miles Northwest of Aberdeen on the coast of Washington, overlooks the Pacific Ocean. It should be known that Taholah is the most populous village of the Quinault Indian Nation that has experienced flooding from storm surges and coastal erosion. Thus, there is a seawall protecting the lower village from inundation. Taholah has a population of 800 people approximately 700 of those residents live in the lower village which is at risk of inundation from a storm surge or a

disaster such as a tsunami. The people and assets at risk in Taholah include 100 elders, 150 children, 175 homes, a K–12 school, business enterprises, police, fire, health, community facilities, administrative offices, and infrastructure for water, sanitation, communications, and transportation.[99] The Pacific Ocean borders the west side of Taholah and the Quinault River borders the north of the village. It is no mistake that the village has remained in this location for hundreds of years; majority of the population fish as a main source of income and subsistence for their families. The risk factors for relocation are real and quite serious. There are aspects of cultural significance that cannot be easily brushed aside, making the possibility of relocation sensitive and difficult.

An important factor to include about the Quinault Indian Nation is that there are two governing bodies within the Nation, one is a business committee where all the members must reside within the reservation. It is the business committee that makes the decisions on what to do for the community. The other governing body is a general council where the members do not have to live on the reservation and come from all over once a year for a meeting that can last days to discuss all issues regarding the Nation's affairs. Members of the general council are elected on a yearly basis.[100]

[99] National Oceanic and Atmospheric Administration, "U.S. Climate Resilience Toolkit: Quinault Indian Nation Plans for Village Relocation," National Oceanic and Atmospheric Administration, last modified December 2, 2016, https://toolkit.climate.gov/case-studies/quinault-indian-nation-plans-village-relocation.

[100] Charles Warsinske, Personal interview, Taholah, Washington November 4, 2016.

Planning Process and Products for Relocation

Not only has the risk of a tsunami been a constant source of worry for Taholah, the village has already encountered flooding of its lower areas making relocation a topic of discussion since the 1930s.[101] In 2013 Taholah received a grant to pursue a master plan of an entire relocation for the lower village. A community design process was started within Taholah by a master planning team headed by Charles Warsinske. Charles is the Nation's Director of Community Development and Planning, who continues to hold meetings regarding the design. Within the first couple of community meetings regarding the relocation of the lower Taholah village the community came up with elements that they want incorporated in the overall design. The Community's vision is as follows: family friendly village where children are safe; parks and homes reflecting cultural awareness and pride; cedar, salmon, and berries in paintings, poles, canoes and signage; pedestrian-friendly but auto-accessible with safe, lighted, wide sidewalks, and interconnected trails; organic farm where we produce our own vegetables, fruit, potatoes, corn, and other good food; we also see green spaces with plants traditionally used by community members providing a connection to our heritage and nature.

The community design process began with creating an information workshop among community leaders. What resulted was communication that facilitated a discussion maintained by community members and required them to talk openly about what they

[101] National Oceanic and Atmospheric Administration, "Quinault Indian Nation Plans."

may want as an end result. Charles and his team started by creating a basis of knowledge by using inundation maps that residents could also see and use. The

Figure 23: Quinault Plan for Upper village relocation

discussion began with immediate goals, such as stockpiling emergency foods and visions for future planning. In every case children and elders are prioritized. A design

workshop also came up with what they want to include in the new upper village development. The design will include a neighborhood multi-functional community center, new school, community center, businesses, and a bank. The buildings and surrounding infrastructure will have up-to-date stormwater management techniques such as low impact development design. The new development will include self-sufficient infrastructure such as backup power. The development will have a trail network system for connectivity along with green space found next to the school, which will also serve as storm-water basins. Right now, there are 300 lots planned to be built for the residential housing which is roughly 60 lots more than they would need to provide for the entire lower village.[102] Charles Warsinske is impressed by the participation from the community and their involvement throughout the entire process. He says that the community is pushing their government council to make important decisions to keep the design process rolling.[103]

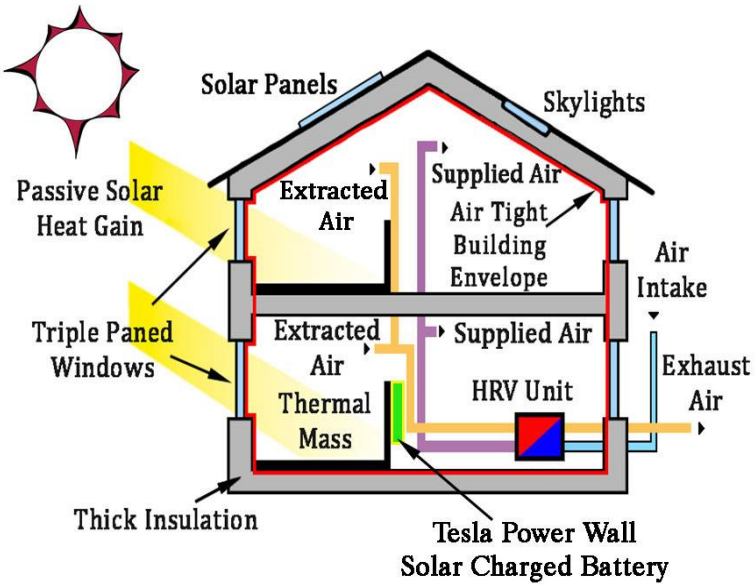


Figure 24: New House will come with new technology compared to what the community has now

[102] Charles Warsinske, Personal Interview.
[103] Ibid.

Community Views

There have been issues however, coming up with the overall design and process that will be implemented. People do not want to leave the land in the lower village that has had the same families in it for generations. Residents do not want to move because once they do, they would owe a mortgage with a purchase of a new home in the upper development. Currently, there is not a financing plan for the community members who want to relocate. Another issue is that there are many different interests involved in the planning of the new uphill development and the many different government services are making the planning and decision process difficult and prolonged. The interests that are involved include the Quinault Planning Authority, Quinault Housing Authority, Quinault Indian Nation, Indian Health Services, Bureau of Indian Affairs, Quinault Department of Natural Resources, timber companies, and individual land owners.[104] As one can see, with so many different interests organizing the relocation, it is an exceedingly difficult task. The Housing Authority may conflict with the Planning Authority over design or basic layout. The Nation have contracts with timber companies and the timber resources in or near the relocation area, which may raise concern with the Department of Natural Resources. It is important to iterate that this is just speculation; the actual problems were not specified because of confidentiality. The complexities involved with so many interests are overwhelming. Charles also believes that the land on the Taholah

[104] Ibid.

Reservation is one of the most divided reservations in the United States because of the Allotment Act. This state of extreme division in land ownership makes it difficult to acquire land for the new upper development due to the multiple people that have interests in the land considered for the new uphill development.

Design Critique

Figure 25: Picture of White male looking at a map of Bath, England

A main issue that I have is with the first slide of the presentation that was shown during a community meeting. It shows a white male with children overlooking a map of Bath, England. This leads to the Eurocentric ideals that I brought up in chapter 3. I feel that this is an inappropriate image to use when discussing design within a small Native community. There needs to be images that are more culturally appropriate.

With the initial design, we can see in plain view a form of cluster development that looks to include all the needs of the village. The plan itself is limited to the space that the tribe has been able to purchase. The new development centers around green space and the

school which implies that access to green space and the school was important for the community. The energy park shows that the community is looking to be less dependent on outside power which will make the community more resilient when they may be cut off from outside power due to an earthquake and tsunami. Even though there is green space in the plan there is no indication of a community garden/farm that the community expressed they wanted. Space was also a main concern of the community in regards to lot size; the lot size will complement the community member's needs. However, I feel that due to large lot size the initial design could include more shared space for several clusters within the proposed development. With the auto-oriented cluster development there needs to be more land easements within all the clusters to improve walkability and safety of children with clear indicators of crosswalks.

Figure 26: Plan view of conceptual cottage development

Figure 27: Birds eye view of shared space

Design Considerations

From the first design from the planning department of Taholah I would like to see design geared more towards culture. There is a multicultural center, but what is lacking are the gardens and farms the community wanted in their initial meetings. There needs to be spaces for a large community garden or gardens that everyone can work in and learn from. Community gardens would have a great impact throughout the community and would benefit all.

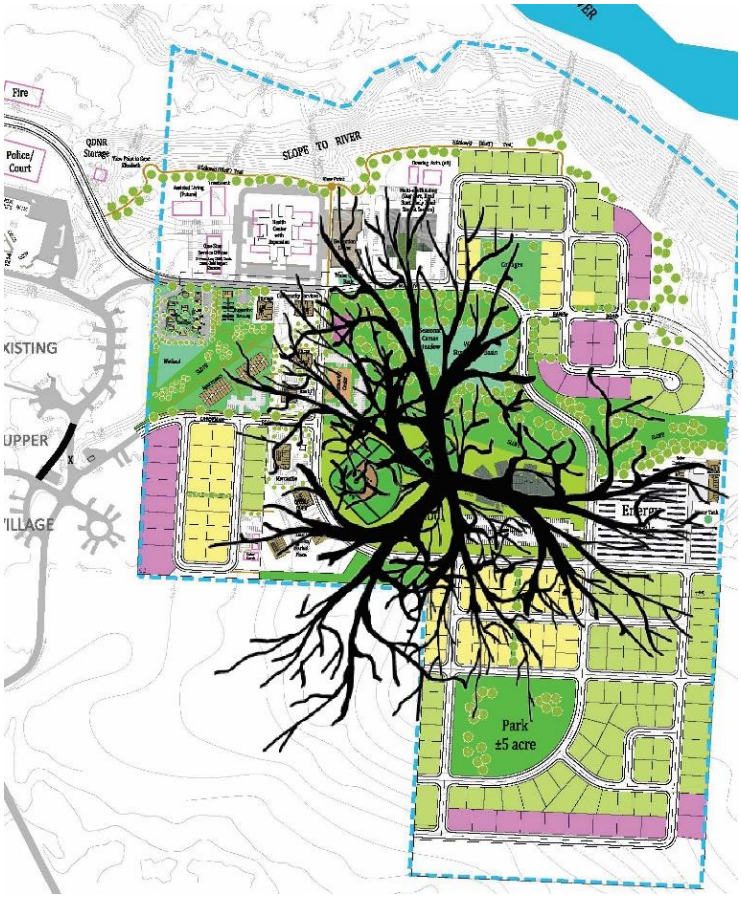


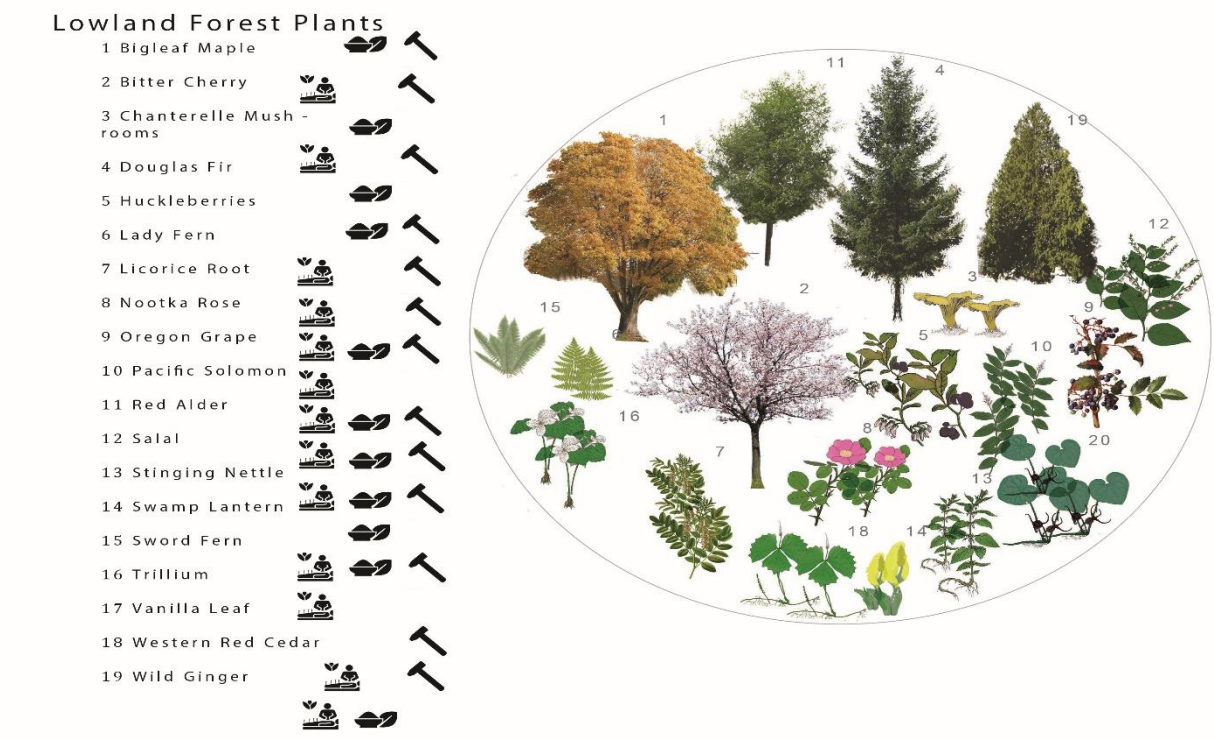
Figure 28: Community garden concept

A concept that can apply to the community can be “tree of life.” The Western Red Cedar (Thuja plicata) is the tree of life to the Quinault people.[105] The tree can also stand for physical healing and wellbeing within the community when linked with community gardens. The gardens will offer traditional food and

[105] Quinault Indian Nation, "People of the Quinault," Official Site of Quinault Indian Nation, accessed October 6, 2016, http://www.quinaultindiannation.com/. (Archived by WebCite® at http://www.webcitation.org/6nZML3cgT)

materials along with education and culture for the community members. The center of this tree is the school and the roots would extend out into the community. Walking paths can stand for the roots of the tree to different community gardens. Rebecca Christy, a former master's student of landscape architecture, has produced graphics showing low land forest, wetland and prairie vegetation that may have cultural significance to the Quinault community with her work with the Swinomish Tribe. Along with community gardens, a community space for woodworking where groups of children can learn how to carve would also be beneficial to the community since celebrations with canoes are frequent and have huge cultural significance for the entire community.

Figure 29: Community garden concept with paths and gardens



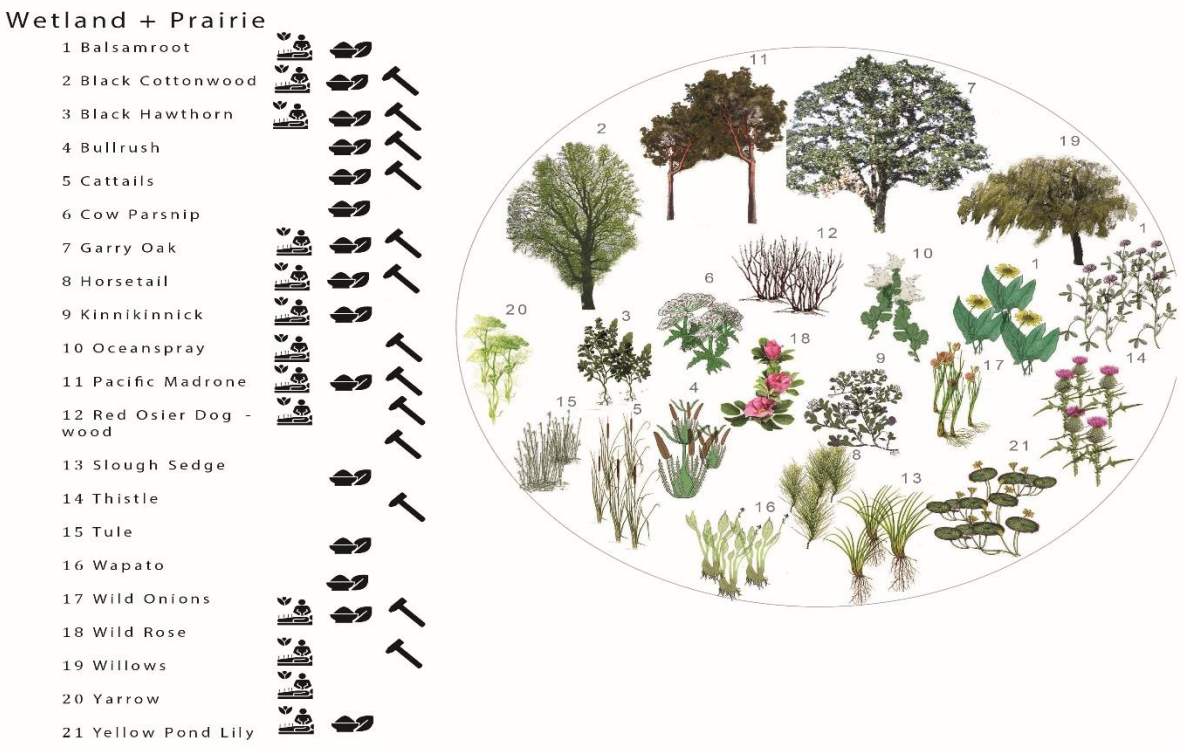


Figure 30 and 31: Diagrams of vegetation and their uses

The business committee of the Quinault Indian Nation along with the planning department should go back and look at the current development plan and the language in the plan to make sure that there is transparency to assist in better collaboration amongst the many interests that are involved in the relocation. An example of transparency is the Swinomish and their comprehensive plan, which is an excellent example of involving all parties in the process, including those in dispute with one another. The plan needs more details on how individuals of the Taholah community will be able to finance their houses. The business committee has important choices to make and may ultimately have to rework how they conduct their meetings with different parties who have interest in the relocation. Exclusion of parties in different phases of the planning process may have to occur to have productive meetings. As Libbey Porter showed some minor exclusion held a benefit in collaboration amongst the Indigenous community she researched.[106]

Another factor to consider is what to do with the lower village once it has vacated. Many opportunities could be presented on the subject. One choice could be that they remove the armoring away from the river bank and let the river naturally take shape again turning the rest of the lower village into a wetland. Another choice could be for the lower village to turn into a recreation park for tourism. This could have potential to help the entire community. Whatever the route the community takes, one thing will be for sure, it

[106] Porter, "Unlearning One's Privilege," 108.

will be on their own terms.

Chapter 6: Reflections and Discussion

Lessons That Can Be Applied to Native Communities

This paper has shown hardships Native American communities continue to face as a result of historical trauma. I have shown that historical trauma hinders effective design and planning today in Native American communities especially with the Allotment Act that harmed Native American community and culture. The residual effects of such trauma are still prevalent today.

Historical trauma becomes an important topic when discussing planning and design in Native communities who are facing environmental hazards. What historical trauma has effectively done is take away a native community's capacity to adapt to a physical threat. Whereas if a native community faced a natural threat before European influence they were better able to adapt and survive. By placing Native American communities on reservations and enactment of laws such as the Allotment Act, thereby fragmenting their communities, providing better living environments through design and planning is a challenging task. Add to this a professional's intent, whose education was informed by eurocentric teachings, looking to help a Native community in need could possibly hurt the community by promoting culturally inappropriate design.

I have provided suggestions on how professionals must look at Native communities. We must first understand the trauma that the community has gone through to understand

the loss of culture on any reservation. The loss of culture in the context of this paper is the inability to adapt to current and future changes within their community. By being post-colonial in our thinking, as professionals, we can help deconstruct past eurocentric ideals and biases to ease historical trauma. By incorporating transformative action through design and planning, Native communities gain agency through their own knowledge and culture to develop design and planning that will help their communities.

André Casault and his students have shown that this is possible with their work in Northern Quebec.[107] By listening to the Innu and Innuit people's needs on housing, they have been able to provide a service for communities that live in harsh conditions. Through transformative action Casuult and his students have provided needed agency for the Innu and Innuit peoples. The design of the houses is based on people's needs and knowledge and not based on a design of a house that was never created for harsh conditions.

The three case studies in Western Washington have shown us how these coastal communities are embracing the opportunity to redevelop their communities through design and planning. All three communities are experiencing difficulties with divided land caused by the Allotment Act. The Makah seek to relocate critical infrastructure to higher ground and use the lower village as a new economic opportunity for development. The Quileute have swapped land with the government and will build a

[107] Social Sciences and Humanities Research Council of Canada – Partnership, "Living in Northern Quebec."

new uphill development without the complications of working with individual owners of land allotments. The Swinomish have created a transparent comprehensive plan that has allowed the community to develop new strategies to combat sea level rise while keeping all interests informed and involved.

The Quinault Indian Nation is going through a long and arduous task of relocating their lower village due to a tsunami threat and the legacy of the Allotment Act dividing land interests which is making it difficult to plan for their lower village relocation. The Quinault community has provided professionals with knowledge about how their culture can be established and kept through a community workshop. It is now up to the planning and design staff and the Board of the Quinault Indian Nation to take that information and provide the community with an upper village that reflects the community and their needs. Work still needs to be done with the initial plan to fully represent the community's needs. The Quinault Indian Nation can learn and adapt surrounding communities design and planning to fit their own needs.

As a result of producing this thesis, in regards to working with Native American communities, I feel that we have to use "landscape as an agent of producing and enriching culture."[108] It is our job as designers to make sure that this stimulation can occur because "design is not simply a reflection of culture but more an active instrument in shaping of modern culture"[109] I have come to understand this even more through this

[108] James Corner, *Recovering Landscape* (New York, NY: Princeton Architectural Press, 2003), 5.
[109] Corner, *short title*, 2.

work, especially because of the loss of culture that Native Americans have endured due to historical trauma. It is because of Native Americans' resiliency and the remaining indigenous knowledge that is generationally passed down, that they are able to preserve most of their culture throughout time. What has not survived through history is the agency that Native communities once had to adapt. "Our individual agency is mediated by past and present power relations and symbol systems that are laid down, over time, in the ordinary everyday landscape and in more rarefied and more conscious ways."[110] It is important to understand the loss of agency when working in Native communities because of historical trauma. Agency within Native communities has suffered due to the laws and policies that were created long ago to disrupt cultural continuity.

It is our job as designers and planners to recognize the important underlying problems Native communities face that derive from troubled pasts and provide these communities the tools they lack to help produce the collaborative leadership, innovation, and sense of agency they have lost. Since these historical traumas are still effecting Native communities we need to tackle the root problems that stem from eurocentric ideals and education, including the inherently detrimental policies that still exist, and find new, creative, and intuitive ways to combat them in our planning and designs.

[110] Alexandru Calcatinge, *Critical Spaces: Contemporary Perspectives in Urban, Spatial and Landscape Studies* (2014), 250.

Bibliography

Abramson, Dan, Easton Branam, Cameron Duncan, Pam Emerson, Tim Lehman, Joel McMillan, David Smolker, Lisa Sturdivant, and Josh Vitulli. "Urban Design and Planning Neah Bay Studio Report." Last modified 2011.

Barnes, Patricia M., Patricia F. Adams, and Eve Powell-Griner. *Health Characteristics of the American Indian or Alaska Native Adult Population: United States, 2004–2008*. Division of Health Interview Statistics, 2010.

Battiste, Marie. "Post-colonial Remedies for Protecting Indigenous Knowledge and Heritage." In *Teaching As Activism Equity Meets Environmentalism*, edited by Peggy Tripp and Linda June Muzzin, 224-232. Montréal: McGill-Queen's University Press, 2005.

Battiste, Marie. "You Can't Be the Global Doctor If You're the Colonial Disease." In *Teaching As Activism: Equity Meets Environmentalism*, edited by Peggy Tripp and Linda June Muzzin, 121-133. Montréal: McGill-Queen's University Press, 2005.

Brave Heart, Maria Y., Josephine Chase, Jennifer Elkins, and Deborah B. Altschul. "Historical Trauma Among Indigenous Peoples of the Americas: Concepts, Research, and Clinical Considerations." *Journal of Psychoactive Drugs* 43, no. 4 (2011), 282-290. doi:10.1080/02791072.2011.628913.

Brave Heart, Maria Y., and Lemyra M. DeBruyn. "The American Indian Holocaust: Healing Historical Unresolved Grief." *American Indian and Alaska Native Mental Health Research* 8, no. 2 (1998), 60-82. doi:10.5820/aian.0802.1998.60.

Calcatinge, Alexandru. *Critical Spaces: Contemporary Perspectives in Urban, Spatial and Landscape Studies*. 2014.

Centers for Disease Control. *Suicide at a Glance 2015*. National Center for Injury Prevention and Control Division of Violence Prevention, 2015.

Corner, James. *Recovering Landscape*. New York, NY: Princeton Architectural Press, 2003.

Denny, Clark H., Deborah Holtzman, R. T. Goins, and Janet B. Croft. "Disparities in Chronic Disease Risk Factors and Health Status Between American Indian/Alaska Native and White Elders: Findings From a Telephone Survey,

2001 and 2002." *American Journal of Public Health* 95, no. 5 (2005), 825-827. doi:10.2105/ajph.2004.043489.

Dunbar-Ortiz, Roxanne. "History News Network | Yes, Native Americans Were the Victims of Genocide." History News Network. Last modified May 12, 2016. http://historynewsnetwork.org/article/162804. (Archived by WebCite® at http://www.webcitation.org/6nfYxICuo)

Eide, Phyllis, and Carol B. Allen. "Recruiting Transcultural Qualitative Research Participants: A Conceptual Model." International Journal of Qualitative Methods 4, no. 2 (2005), 44-56. doi/10.1177/160940690500400204.

Findlay, John M. "Lesson Seven: The Changing World of Pacific Northwest Indians." Presentation, History of Washington State and the Pacific Northwest, University of Washington, Seattle, n.d.

Freitag, Robert C., Daniel B. Abramson, Manish Chalana, and Maximilian Dixon. "Whole Community Resilience: An Asset-Based Approach to Enhancing Adaptive Capacity Before a Disruption." Journal of the American Planning Association 80, no. 4 (January/February 2014), 324-335. doi:10.1080/01944363.2014.990480.

Guillory, Raphael M., and Mimi. Wolverton. "It's About Family: Native American Student Persistence in Higher Education." *The Journal of Higher Education* 79, no. 1 (2008), 58-87. doi:10.1353/jhe.2008.0001.

Howit, Richard, Kim Doohan, Sandi Suchet-Pearson, Gaim Lunkapis, Samntha Muller, Rebecca Lawrence, Sarah Prout, Siri Veland, and Sherrie Cross. "Capacity Deficits at Cultural Interfaces of Land and Sea Goverance." In *Reclaiming Indigenous Planning*, edited by David C. Natcher, Ryan Christopher Walker, and Theodore S. Jojola, 312-338. London: McGill-Queens University Press, 2013.

Indian Health Service. Disparities Fact Sheets. U. S. Department of Health and Human Services, 2016.

Lane, M. B. "Doing It for Themselves: Transformative Planning by Indigenous Peoples." *Journal of Planning Education and Research* 25, no. 2 (2005), 172-184. doi:10.1177/0739456x05278983.

Library of Congress. "Indian Removal Act: Primary Documents in American History (Virtual Programs & Services, Library of Congress)." Library of Congress. Last modified November 5, 2015.

https://www.loc.gov/rr/program/bib/ourdocs/Indian.html.
(Archived by WebCite® at http://www.webcitation.org/6nfZ7jSGe)

Ludwin, R. S., R. Dennis, D. Carver, A. D. McMillan, R. Losey, J. Clague, C. Jonientz-Trisler, J. Bowechop, J. Wray, and K. James. "Dating the 1700 Cascadia Earthquake: Great Coastal Earthquakes in Native Stories." *Seismological Research Letters* 76, no. 2 (2005), 140-148. doi:10.1785/gssrl.76.2.140.

Martin, Tania, and André; Casault. "Thinking the Other." *Journal of Architectural Education* 59, no. 1 (2005), 3-16. doi:10.1111/j.1531-314x.2005.00001.x.

Mohatt, Nathaniel V., Azure B. Thompson, Nghi D. Thai, and Jacob K. Tebes. "Historical trauma as public narrative: A conceptual review of how history impacts present-day health." Social Science & Medicine 106 (2014), 128-136. doi:10.1016/j.socscimed.2014.01.043.

National Oceanic and Atmospheric Administration. "U.S. Climate Resilience Toolkit: Quinault Indian Nation Plans for Village Relocation." National Oceanic and Atmospheric Administration. Last modified December 2, 2016. https://toolkit.climate.gov/case-studies/quinault-indian-nation-plans-village-relocation. (Archived by WebCite® at http://www.webcitation.org/6nfZCA0Nl)

National Public Radio. "American Indian Boarding Schools Haunt Many: NPR." NPR.org. Last modified May 12, 2008. http://www.npr.org/templates/story/story.php?storyId=16516865. (Archived by WebCite® at http://www.webcitation.org/6nfZMuCJA)

Office of Planning and Community Development. *Swinomish Climate Change Initiative Climate Adaptation Action Plan*. LaConner, Washington: Office of Planning and Community Development, 2010.

Pacific Northwest Seismic Network. "Cascadia Subduction Zone." Pacific Northwest Seismic Network. Accessed October 26, 2016. https://www.pnsn.org/outreach/earthquakesources/csz. (Archived by WebCite® at http://www.webcitation.org/6nZML3cgT)

Peninsula Daily News. "First to Move out of Tsunami/flood Zone in LaPush Will Be School -- Port Angeles Port Townsend Sequim Forks Jefferson County Clallam County Olympic Peninsula Daily NEWS." Peninsula Daily News. Last modified March 30, 2013. http://archive.peninsuladailynews.com/article/20150331/NEWS/303319995.

(Archived by WebCite® at http://www.webcitation.org/6nfZX3NOa)

Plous, Scott. *Understanding Prejudice and Discrimination*. Boston: McGraw-Hill, 2003.

Poff, Colin. "Relocation and Resilience: Exploring Co-Benefits in Aberdeen, WA." Master's thesis, University of Washington, 2016.

Porter, Libby. "Unlearning one's privilege: reflections on cross-cultural research with indigenous peoples in South-East Australia." *Planning Theory & Practice* 5, no. 1 (March 2004), 104-109. doi:10.1080/1464935042000204222.

Quinault Indian Nation Planning Department. Taholah Tsunami Zone. Taholah, Washington: Quinault Indian Nation Planning Department, 2010.

Quinault Indian Nation. "People of the Quinault." Official Site of Quinault Indian Nation. Accessed October 6, 2016. http://www.quinaultindiannation.com/. (Archived by WebCite® at http://www.webcitation.org/6nZML3cgT)

Rodriguez, Carlos L., Craig S. Galbraith, and Curt H. Stiles. "American Indian Collectivism Past Myth, Present Reality." *Property and Environmental Research Center* 24, no. 2 (Summer 2006). http://www.perc.org/articles/american-indian-collectivism. (Archived by WebCite® at http://www.webcitation.org/6nfZgT4YJ)

Social Sciences and Humanities Research Council of Canada – Partnership. Living in Northern Québec: Mobilizing, Understanding, Imagining Project summary. Quebec, Canada: Université Laval – École d'architecture, 2015,

Sotero, Michelle M. "A Conceptual Model of Historical Trauma: Implications for Public Health Practice and Research." *Journal of Health Disparities Research and Practice* 1, no. 1 (Fall 2006), 93-108.

Storm, Jacqueline M., Pauline K. Capoeman, and David H. Chance. Land of the Quinault. Taholah, Wash: Quinault Indian Nation, 1990.

Stumpf, Linda M. The Last Stand: the Quinault Indian Nation's Path to Sovereignty and the Case of Tribal Forestry. Olympia, Washington: Evergreen State College, 2008. http://nativecases.evergreen.edu/collection/cases/last-stand-quinault.html.

Trusty, Jerry, Eugenie Joan Looby, and Daya Singh Sandhu. *Multicultural Counseling: Context, Theory and Practice, and Competence*. Huntington, N.Y.: Nova Science Publishers, 2002.

University of Washington. Project Safe Haven: Tsunami Vertical Evacuation on the Washington Coast. Seattle: University of Washington School of Urban Design and Planning, 2012.

Warsinske, Charles. Personal interview. Taholah, Washington. November 4, 2016.

Wildcat, Daniel R. *Red Alert!: Saving the Planet with Indigenous Knowledge*. Golden, Colo: Fulcrum, 2009. EBL.

Zaferatos, Nicholas C. "Planning in Native American Reservation Communities: Sovereignty, Conflict, and Political Pluralism." In Cities and the Politics of Difference: Multiculturalism and Diversity in Urban Planning, edited by Michael A Burayidi, 159-189. Toronto: University of Toronto Press, 2015.

Zaferatos, Nicholas C. "Tribal Nations, Local Governments, and Regional Pluralism in Washington State: The Swinomish Approach in the Skagit Valley." Journal of the American Planning Association 70, no. 1 (Winter 2004), 81-96. doi:10.1080/01944360408976340.

Zaferatos, Nicholas C. "Tribal Nations, Local Governments, and Regional Pluralism in Washington State: The Swinomish Approach in the Skagit Valley." Journal of the American Planning Association 70, no. 1 (Winter 2004), 81-96. doi:10.1080/01944360408976340.