

Exploring Cultural Barriers and TEK Connections of Kānaka Maoli Students in Academia

by
Julia Rankin

A THESIS

submitted to
Oregon State University
Honors College

in partial fulfillment of
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degree of

Honors Baccalaureate of Science in Environmental Science
(Honors Scholar)

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Ashley D'Antonio

Traditional Ecological Knowledge (TEK) is a Knowledge-belief-practice system acquired through intergenerational direct and indirect observations representing past and current understandings of environments and integrates Indigenous value systems. TEK has become a popular topic recently as Indigenous stewarded lands contain more biodiversity and are more adaptable. It is critical for Indigenous Peoples to maintain their TEK, even in diaspora. This thesis addresses the challenges and barriers that Kānaka Maoli (Native Hawaiian) students face as they attend university away from their communities and addresses Oregon State University by exploring the land grant institution legacy and proposing changes to OSU. It is important to understand how TEK is impacted as students leave their communities; however, TEK is community-specific and cannot be applied across communities because of the subjective nature of how Indigenous Peoples honor, carry, and pass on their Knowledges between and within communities. OSU's land grant institution legacy makes it a potent place for settler colonialism, and with mindful work, can become a better place for Kānaka Maoli students and their Knowledges to survive and thrive. By following the recommendations and acknowledging this is not the only work to be done, OSU can take the first step in the right direction.

Keywords: Traditional Ecological Knowledge, Kānaka Maoli, Academia

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I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

Julia Rankin, Author

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Positionality Statement

I, Julia Rankin, am an Oregon State University (OSU) student of European descent. I am the child of a third-generation cattle rancher on land that was stolen under the Homestead Act of 1862 from multiple Indigenous Peoples, including the Siksikaitstapi (Blackfoot), the Cayuse, the Umatilla, the Walla Walla, the Métis, and multiple bands of the Assiniboine and the Sioux. I am a product of settler-colonialism, genocide, and theft and continue to exist in this system with the privilege of being a settler. As a non-Indigenous person, I cannot create, hold, or expand on Traditional Ecological Knowledge (TEK), or any other forms of Indigenous Knowledges. However, through my work, I can center and privilege Indigenous voices, Kānaka Maoli (Native Hawaiian) students, and their work. Historically, non-Indigenous voices have been centered in the field of TEK, leading to misinformation and wrongful presumptions about intricate Indigenous Knowledges and sacred processes; however, Indigenous voices should be centered in all discussions relating to Traditional Ecological Knowledge (Jacobs et al., *in press b*).

Indigenous communities face the continuing impacts of the oppressive system of settler colonialism—colonization—which is characterized by the removal and continued displacement of Indigenous Peoples from their lands for the permanent settlement of non-Indigenous people (Stein, 2022). Some of the continuing impacts of settler colonialism are land grabs and dispossessions, higher rates of violence, alterations to biodiversity of Native lands through climate change and direct actions of oppressors, discrimination, and silencing of Indigenous activists' voices

(International Work Group for Indigenous Affairs, 2014; United Nations, 2019; Rosay, 2016; United States Environmental Protection Agency, 2022).

As a student attending OSU, I recognize that I am an uninvited settler now living on the Ampinefu Band of Kalapuya's lands. These Peoples and lands hold similar but distinct histories of genocide and forced removals. Therefore, it is critical to honor their Peoples' histories, current realities, and futures, while respecting their lands and Peoples. Since time immemorial, the Ampinefu Band of Kalapuya lived in good relations with and stewarded the lands where OSU now illegally resides. Their lands were stolen through the Oregon Land Donation Act of 1850, and subsequently, the Kalapuya Peoples were forcibly removed by the Willamette Valley Treaty of 1855. Created through the Morrill Act of 1862, genocide, and settler colonialism, OSU continues to benefit at the expense of Kalapuya Peoples' dispossessions. Living descendants of Kalapuya who were illegally and forcibly removed from their lands are today part of the Confederated Tribes of the Grand Ronde Community of Oregon and the Confederated Tribes of the Siletz Indians.

Prioritizing Kānaka Maoli Terms

I use the term Kānaka Maoli to refer to Native Hawaiians, or its singular form, Kanaka Maoli. There are other terms used in 'Ōlelo Hawai'i (the Hawaiian language) such as Kanaka 'Ōiwi, Kānaka, or 'Ōiwi that also refer to Native Hawaiians. These terms are for the Indigenous Peoples of the Hawaiian Kingdom and should not be used for settlers living or born in Hawai'i nor those without Indigenous Hawaiian lineage (Trask, 1999; Wilson-Hokowhitu, 2019). The first written documentation of the term Kanaka Maoli occurred in Hawaiian language newspapers in 1834 ('Āina

Momona, 2021; “KA OLELO KUPAA a KA POE ALII MOKU KAHIKI E KINALAI AI I KA INU RAMA MA HAWAII NEI,” 1834). Using Kanaka Maoli terminology is crucial to furthering the efforts of decolonization to push back against the ideology of assimilation that comes from using terms like “Hawaiian” to describe those without Hawaiian ancestry. This is especially important as the dominant society places the burden on Indigenous Peoples to find appropriate language and explanations for their existence that “makes sense to the people who are violating their rights and dignity to begin with” (Turner, 2020). Twila Baker, an Indigenous (Mandan-Hidatsa) scholar and president of Nueta Hidatsa Sahnish College, together with other Indigenous People created a term for all of this, translation exhaustion.

She writes that translation exhaustion is “[t]he idea that Indigenous [P]eople (or any marginalized person/group) engaging with the larger population on a given subject or topic related to bias, must first set the stage in terms of historical context all the way to current day state of affairs, before even addressing said topic of bias - over and over again - due to the lack of education/background the listener has. A direct impact of erasure of true Indigenous history beyond the cursory mention in our school systems” (Baker, 2021).

The impacts of translation exhaustion are incredibly damaging. Before having to explain their needs, ideas or goals, Indigenous People first must teach, often about deeply harmful and emotional histories. The amount of energy it takes to continually carry the burden of translation exhaustion means that energy can’t be spent in other places. If you are given two minutes for an elevator pitch, but you must use the first minute translating and teaching, you don’t have much time to get to your main point.

It also means continually having to fight for acknowledgement and understanding, proving your existence and right to survival, and is a continuing barrier that Indigenous People and Kānaka Maoli face daily.

Thesis Framework

As of today, there is no literature that has been found that depicts how and if TEK is impacted as Indigenous students leave their communities to attend university. This thesis focuses on Kānaka Maoli (Native Hawaiians) specifically as TEK is community specific (meaning it cannot be applied across communities) and because of the subjective nature, there are many ways different Indigenous communities honor, carry, and pass on their Knowledges between and within communities. Kānaka Maoli are not allowed to apply for specific Indigenous scholarships, grants and fellowships as the United States colonial government will not recognize the Hawaiian Kingdom as a sovereign Indigenous Nation. This exclusion along with the refusal of the United States to recognize the Hawaiian Kingdom, and the fact that Kānaka Maoli students in Hawai‘i have to make such a drastic move if they want to study elsewhere is the reason why they are the focus of this thesis. Starting with a literature review that define TEK, the importance of Indigenous Land Stewardship, specific context for Hawai‘i and Kānaka Maoli scholars, a base understanding of Knowledges, barriers and impacts is provided. From there, I discuss the gaps and needs in research and within institutional settings that are points of resilience that Kānaka Maoli students need to overcome the barriers they are facing in academia. Following this, I propose some solutions, as well as questions that lead in the same direction, allowing for

understanding to be made about Kānaka Maoli students, their TEK and academic settings. The aim of this thesis is to provide a basic understanding of the resilience needed by Kānaka Maoli students to attend university while trying to maintain their Knowledges, and helping to illuminate barriers that they may face.

Traditional Ecological Knowledge

Traditional Ecological Knowledge (TEK) is difficult to define as there isn't consensus around a singular definition (Jacobs et al., *in press a*). One of the reasons for this lack of a singular definition is that the term TEK was created by non-Indigenous academics (settler scientists), and in academic literature, there are multiple definitions making consensus on a definition for the term difficult (Whyte, 2013). Though there are many definitions of TEK that exist, it is important to shed light on areas where disagreements, conflict, and privilege exist in defining this term.

One of the reasons for conflict and disagreements is that those who study TEK are the ones who have control over definitions, what is studied, and what is ignored (Luckey, 1995; Simpson, 1999). As the roots of the term TEK were created by settler scientists and not Indigenous Peoples, this means that control has been historically in the hands of non-Indigenous people. Between academic and policy publications there are also distinct definitions (Whyte, 2013). This creates conflict and controversy in choosing “‘whose’ definition of TEK gets privileged, who is counted as having expert authority over environmental governance issues, and how TEK should be factored into policy processes”, which shows implied differences and preferences created by western science (Whyte, 2013, p.1). As an act of resistance against settler definitions

of Indigenous Knowledge systems, I empower Indigenous Peoples by using only Indigenous voices to define this term throughout this thesis.

Kyle Whyte, a Potawatomi scientist, and philosopher, argues “that the concept of TEK should be understood as a collaborative concept” to continue learning about stewardship of ecosystems centered around mutual respect for differing knowledge sources (Whyte, 2013, p.2; McGregor, 2005). Typically, in the western colonial academy, TEK is understood as a Knowledge-belief-practice system cultivated by relationships with beings and the environment and passed down generationally via cultural transmission processes (Reo & Whyte, 2012). Nlaka’pamux scholar Jennifer Grenz and Nicholas Reo, a Citizen of the Sault Ste. Marie Tribe of Chippewa Indians, underline how TEK is dynamic, constantly changing over time with cultural and ecological shifts (Jacobs et al., *in press a*; Grenz 2020 and Reo 2012). These Knowledge-belief-practice systems are not a closed or completed system, they are continuing processes that are not separable by “either practical daily life or cosmological understandings” (Nelson, 2014, p.196). Robin Wall Kimmerer, a Potawatomi botanist and scholar, describes TEK as being formed through continual deep intimacies with local resources and landscapes, developed and passed down through generational processes, and arising from where people are fully (materially, socially, and spiritually) integrated with their homelands (Kimmerer, 2002). Kimmerer's definition emphasizes the characteristics of TEK as being relational to place and beings, connected to multiple generations of Indigenous Peoples, and place-based systems.

Because TEK observations are usually qualitative and continued over long periods of time, they create records of observations for specific areas or a diachronic database (Kimmerer, 2002). TEK is an important and distinct Indigenous form of science that can inform western science and western scientific paradigms, especially those related to multiple ecology-based fields. However, for most of history, Indigenous Peoples and their Knowledges have been cast aside and not believed to be true, and it wasn't until recently that TEK and other Indigenous Knowledges were considered as valid by western colonial science (Jacobs et al., *in press b*; Kimmerer, 2002).

There is great division though between those who are academics and study TEK and Indigenous Peoples who live according to TEK and its teachings and ethics (McGregor, 2005). TEK is not just descriptive learnings about the environment and experience, it provides ethical and values-embedded relations as well as a descriptive Knowledge about how to interact with local environments (McGregor, 2018). Western science claims an impartial stance, superior truth, and power over other forms of knowledge, and is readily seen in university settings and is derived from colonialism (Nelson, 2014). The objectivity and dominance that western science demands are not found in TEK, where ethics and values like reciprocity, respect, and relations between human and more-than-human kin exist (Kimmerer, 2002). The integration of Indigenous value systems is usually missing from TEK in colonial or academic settings, where TEK is used in western science (Jacobs et al., *in press a*).

As Indigenous Peoples are distinct and different across land masses and oceans, Indigenous value systems and TEK cannot be viewed as monolithic (Jacobs

et al., *in press a*). While there are general values that are shared, one cannot think of these values as defined or used in precisely the same way across cultures (Jacobs et al., *in press a*). TEK is interconnected to all facets of Indigenous Peoples' cultures, spirituality, cosmologies (ways of creation and worldviews), ontologies (ways of being), epistemologies (ways of Knowing), and axiologies (value systems; Jacobs et al., *in press a*).

Anishnabe scholar Deborah McGregor states that more detailed explanations of Indigenous conceptions are required for non-Indigenous Peoples to understand ideas originating from Indigenous worldviews (McGregor, 2005). Indigenous concepts also require Indigenous languages, as language connects, holds, and communicates epistemologies, ontologies, axiologies and cosmologies. However, TEK continues to be researched by mainly non-Indigenous people and those who claim expertise in the field of TEK are typically non-Indigenous as well, which leads to misuse, misunderstandings, and misrepresentations of TEK (McGregor, 2005). This is why conversations and projects that focus on TEK should center Indigenous voices and why it is crucial to acknowledge that because Indigenous Peoples are not a homogenized group, the languages, terms, and Indigenous Knowledge systems also differ sometimes between and within Indigenous communities. Lara Jacobs, Citizen of Muscogee (Creek) Nation and scholar states the following about language usage:

“For example, MVSKOKVLKE [Muscogee Peoples] have no phrases or words to describe our specific Knowledges about local environments. We do not have a word for ‘ecology’ or any words to describe Indigenous Science. We refer to these as simply

KERRETV—Knowledge or to know, and HÓPOREN’KV—wisdom.

Furthermore, TEK is not often a term recognized by our Elders and other members of our Indigenous communities that exist beyond those with academic and governmental involvements. It is not a term many Indigenous Peoples use at all: it is mainly used by academic, governmental, and nonprofit entities” (Jacobs, *in press a*).

Indigenous Land Stewardship

As TEK is a Knowledge-belief-practice system, TEK is used in how Indigenous People steward land. Land held or managed by Indigenous Peoples, on average, has less human disturbance (e.g., altered biogeochemical cycles, landscape changes, etc.; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019). In fact, Indigenous Peoples represent approximately 5% of the global human population, however, they collectively steward and protect 80% of the world’s biodiversity (Garnett et al., 2018; Sobrevila, 2008; Nitah, 2021). It is not surprising that global conservation efforts require Indigenous People’s governance to be successful (Artelle et al., 2019). Steven Nitah, an activist and former lead negotiator for Łutsël K’e Dene First Nation, helped to establish Thaidene Nënë (meaning land of the ancestors), which is located in the Canadian Northwest Territories and is one of the largest protected areas in North America. This Indigenous protected area (with some sections as national or territorial parks and wildlife conservation areas) will be co-managed by the Łutsël K’e Dene First Nation with the Ni hat’ni Dene Guardians, who are extensively trained in both Indigenous and western science (Nitah, 2021).

Despite successes for stewardship like this, Indigenous rights, leadership, and responsibilities have been limited, challenged, and ignored at national and global levels. However, mounting evidence reinforces the crucial importance that Indigenous communities play in protecting biodiversity and fighting climate change (Nitah, 2021). Therefore, Indigenous Nations and communities and their TEK must be protected, stewarded, and revered, while being protected by data sovereignty (the recognizing and assertion that Indigenous Peoples have the right to control the collection, application and ownership of their data and idea; Jacobs, *in press a*). This sovereignty has been recognized in the United Nations Declaration on the Rights of Indigenous Peoples which states that “Indigenous [P]eoples have the right to self-determination” and by exercising that, they have the right to autonomy and self-governance in their affairs and can chose when and how to participate in life of the State (meaning the nation that colonized them; UN General Assembly, 2007, p.8-9). The importance of data sovereignty goes back to idea that TEK in the hands and research of settlers creates misuse and harm as only looking at the epistemology, or Knowledge system takes off the belief and practice systems (i.e., TEK is a Knowledge-belief-practice system). When TEK is thought of without the belief and practice systems, we are effectively removing and erasing the cultural aspects that inform the ways of knowing.

Traditional Ecological Knowledge, Hawai‘i, and Biodiversity

The literature discussed above about TEK and Indigenous stewardship is mainly from Indigenous scholars from Turtle Island (North America); however, TEK

is a deeply embedded aspect of Kānaka Maoli culture. However, before we discuss TEK in Hawai‘i, we need a basic understanding of TEK, and why Indigenous land stewardship is so important, so this section discusses both of these factors.

This section incorporates the voices of Kānaka Maoli students and their work as an act of resistance against colonial forces and western science because as TEK observers, they steward the resources; whereas, in western science, those who observe science are typically a small group of elite professionals (Kimmerer, 2002).

Challenging deeply held conceptions of Knowledges and meaning making across disciplines, generations, and institutions is the process of decolonizing minds and methodologies (Smith et al., 2016). This process is incredibly important, especially considering the history of Hawai‘i, which is currently under illegal occupation by America due to the unlawful actions of white colonizers following the overthrow of the Hawaiian Kingdom by citizens and military of the United States of America in 1893 (Trask, 1999). This has led to pervasive settler colonialism by white and Asian settlers in Hawai‘i, which has continuing impacts of “cultural appropriation of Hawaiian identities, erasure of Kanaka voices, and militarization of [the] islands” (Okamoto, 2022, p.8; Wright & Balutski, 2015; Reyes, 2018; Cristobal, 2018).

One Kanaka Maoli OSU graduate and scholar, Na La‘akea Low, connects TEK to ‘ike kupuna (ancestral [K]nowledge) in ‘Ōlelo Hawai‘i, centering the importance of Kānaka Maoli in responsibly stewarding natural resources (land, sky and water; Low, 2020). Low also states that ‘ike kupuna is the root behind creating a more sustainable Nation thus changing the politics of natural resource stewardship and centering Indigenous Knowledges (2020). Low writes “[i]n applying TEK to

[natural resource management] in Hawai‘i, strategies grounded in ‘IK – ‘ike kupuna, ancestral [K]nowledge – are likely best-suited to usher in more sustainable futures. After all, it is ‘Ōiwi who have sustainably engineered and fostered some of the world’s most advanced agroforestry, agriculture, and aquaculture systems in Hawai‘i for millennia” (Low, 2020, p.6).

While human activities have modified almost every part of the planet (e.g., by spreading invasive species and the extinction of others, landscape transformation, climate change, and altered, biogeochemical patterns), Hawai‘i has been one of the most impacted areas and has been deemed an “extinction capital” (qtd. in Kurashima et al., 2017). Because of the isolation of the Hawaiian archipelago’s extremes, the ecosystems and organisms are incredibly sensitive to changes as they evolved in relatively less competitive ecosystems. Islands are sensitive systems due to this isolation and high rates of endemism. This is especially prevalent in Hawai‘i, where about 90% of vascular plants found here exist nowhere else on Earth. For this reason, Hawai‘i is also known as the Endangered Species Capital of the World (Hawaii Department of Land and Natural Resources, 2022). “In Hawai‘i, management strategies that restore [P]eople to lands through access, cultural practices, and [K]nowledge is the only way to truly restore these human-dominated landscapes and ensure the sustainability of restoration into the future” (Kurashima et al., 2017, p.453). Part of this strategy equates to doing biocultural restoration, integrating Kānaka Maoli and local communities, and their leadership. Another part is understanding interactions between Peoples and landscapes over time (a historical

ecological approach), something that Kānaka Maoli carry as part of TEK (Kurashima et al., 2017).

Such practices lead to better restoration of biodiversity and create approaches that allow for deepening direct relations between communities' 'āina by providing access to lands and enabling both physical access to lands. Additionally, these practices encourage sharing and restoring the stories, names, and histories of a place. This is important because, for Kānaka Maoli, TEK is alive and stored in mo'olelo (stories), mele (songs and chants), and names of places (Kurashima et al., 2017). Hōlualoa, Kona resident, Kamuela Meheula, who is a volunteer at a restoration site in Kūāhewa states:

“Our [P]eople have been threatened by abuse — physical, mental, social, for generations. Our land has been abused — development, large-scale agriculture, pasture, invasive species, fire, for generations. And we continue the cycle of abuse both on the land and to ourselves as [P]eople. We have a kuleana [responsibility] to restore these Hawaiian landscapes to not only heal the land, but to heal ourselves, families, and ultimately our communities for future generations.”

(Kurashima et al., 2017, p.453)

As the health of ecosystems and lands are intertwined to the health and well-being of the people who steward it, ecosystem restoration and cultural restoration are also reciprocally connected (Kimmerer 2011). Kimmerer describes biocultural restoration as “the mutually reinforcing restoration of land and culture such that repair of ecosystem services contributes to cultural revitalization, and renewal of culture

promotes restoration of ecological integrity” (2011, p.259). TEK can restore ecological landscapes, and by reconnecting People with beliefs, practices, and Knowledges, it can strengthen TEK. TEK is vital for adaptation to changing environments especially for Indigenous and rural communities and is tied to resiliency. In Hawai‘i, communities where TEK is practiced and followed are identified as more resilient and adaptive (McMillen et al., 2016).

The Context of Academia

While TEK and western science have been discussed, academia and specifically the university system in the United States are also topics worthy of investigation because academia is a colonial system and is deeply rooted in structures of settler colonialism, especially land grant institutions like OSU (Stein, 2022). Colonialism is a settler system that tried to destroy Indigenous ways of life, so if we are to look at how TEK and Kānaka Maoli are impacted by attending university, we must discuss the colonial context of academia. Examining the legacy and continuing impacts of settler colonialism in higher education settings in the United States, specifically at land-grant institutions, is a conversation that is just beginning. In fact, Sharon Stein, author of *Unsettling the University*, wrote a conference paper about this topic in 2014 and was told that while the topic seemed interesting, it wasn’t applicable to present-day contexts (Stein, 2022). This example emphasizes an unwillingness in higher education systems to address histories that are shadowed with violence. The unwillingness is especially present when people with privilege have their voices upheld and say that things are already equal, that current problems have

been addressed, and that the march of progress has healed these wounds. However, when someone is admitted to the hospital after being stabbed, you do not listen to the person holding the weapon to administer pain medication, you listen to the wounded individual.

When Indigenous Peoples' voices are uplifted and heard, especially in the context of how they have and are currently being harmed and silenced, instead of privileging the voices of communities who have harmed them, then we see that this is not the case. Land has not been given back and harm done by higher education systems, land grant institutions, and the governments that established them are still ongoing. Therefore, it is important to listen to Indigenous Peoples about what harms they are experiencing, so these issues can be addressed.

Land grant institutions were largely created by the Morrill Act of 1862, signed into law by President Abraham Lincoln, who also signed off on the hanging of 38 Dakota men in the largest one-day mass execution in US history (Native Hope, 2022). Though a few public land grants provided higher education before this, the Morrill Act established land grant institutions across the United States. This legislation granted each state 30,000 acres of federal public lands for each senator and representative of a state, where the sale of said land would be used to fund at least one college where the leading objective was to teach subjects relating to agriculture and machinery (Stein, 2022). The lands that weren't built on by the land grant institutions were to be sold to fund stock purchases to create continuous profitability (Stein, 2022). In today's economy, the 10.7 million acres of granted land would be worth more than 500 million dollars, and these sales are still on the ledgers of these

institutions, and Indigenous People were never compensated for the theft (Stein, 2022). It is also important to note that while later legislation would add onto this funding and also include Black land grant and Tribal land grant institutions, to this day, these institutions are incredibly underfunded when compared to the 1862 historically white land grant institutions (Stein, 2022).

One of the prevailing stories of land grant institutions is that they were created for the public good, to meet the rapidly growing educational needs of the American people, furthering democratization, and today are still held up as an antithesis to the neoliberal privatization of education (Stein, 2022). This story does not include the role of reformers of both education and business, who also pushed for the Morrill Act, because of concerns of low national productivity levels and economic and international competitiveness. So, the Morrill Act was not done for just the people, but for economic and political gain, promoting national development (Stein, 2022). Higher education was seen as the new way to have social mobility, and opportunities to gain a higher socioeconomic status, which is strongly associated with meritocracy, the idea that those with the most talent, grit, and the hardest workers rightfully get the most rewards. Sharon Stein asks the question that if the land grants were founded on this promise of upward social mobility, who gets the fulfillment of this promise, and who must pay for it (Stein, 2022)?

Land grant institutions like OSU only exist due to the ongoing displacement and dispossession of Indigenous Peoples. The United States' claims of land came from the Doctrine of Discovery, which "authorized European Christian colonization of non-European, non-Christian lands and peoples" (Stein, 2022, p.143). This

doctrine, despite not having any legal basis, was put into US law later via Supreme Court cases that ruled against Indigenous Peoples and their rights in the Marshall Trilogy court cases (respective years: 1823, 1831, and 1832), which still are much of the legal structure of federal and Indigenous relations. These cases created rulings that declared European “discovery” as supreme, providing land ownership then to settlers, and only legal occupancy to Indigenous People and Nations (Stein, 2022; *Marshall Trilogy / Tribal Governance*, n.d.). This narrative dismissed Indigenous Peoples’ rights, including sovereignty and cultural autonomy, self-affirming the belief that the United States could claim territories because of the diminishment of Indigenous Peoples (Stein, 2022). Then, through broken treaties and promises, and government acts (e.g., the Oregon Land Donation Act of 1850 and the Homestead Act of 1862) settlers took land from Indigenous Peoples.

Settler colonialism as shown is not based on racism alone, but also warrants territorial conquest, the denial of Indigenous Peoples’ existence and rights (especially as sovereign Nations), and the assertion of colonial ownership of Indigenous lands (Byrd, 2011). Today, the Morrill Act funding is minimal when compared to the substantial budgets of land grant institutions; however, it is still the beginning of the land grant legacy in the United States, and for the first one hundred years, roughly one-third of institutions were still fully funded by the Morrill Act endowment: only in the last sixty years has this changed. Therefore, the violent legacy lives on.

TEK in Academia

The previous context of land-grant institutions sets up a situation that makes attempting to study TEK in academia and the conflicts that come with it especially troublesome due to the extra layer of land theft and cultural destruction that came with settler colonialism. Conflicts in studying TEK in academia center on data sovereignty, intellectual property rights, terminology, the self-exclusion of Indigenous Peoples, and a refusal to value TEK, especially as those who created the original academic conversations around TEK weren't Indigenous Peoples (McGregor, 2005). Most of these conflicts occur as this research isn't decolonized and indigenized, meaning in simple terms control and power aren't in Indigenous hands and don't use Indigenous value systems. Indigenous Peoples aren't given control over their data and Knowledges in academia. Historically research has been done on and to Indigenous Peoples instead of with and for them, and their Knowledges and data have been published and used without regard or consent. Expertise typically means obtaining a university education and degrees in western academia. Indigenous experts and scholars without such degrees aren't considered valid as Indigenous expertise; however, Indigenous expertise is a term only Indigenous communities can define (Jacobs et al., *in press b*).

As rapid anthropogenic changes occur to lands and ecosystems, there is growing interest and discussion of TEK. This is demonstrated by the prolific number of colleges that are creating classes about or including TEK and how many times TEK has been a talking point at international summits or forums (e.g., the National Climate Adaptation Science Centers hosted a webinar series in the summer of 2023 entitled "Incorporating Indigenous Knowledges into Federal Research and

Management", and the American Meteorological Society has planned a conference entitled "Convergence Science: Indigenous Weather, Water and Climate Knowledge Systems, Practices and Communities" during their 104th annual meeting in 2024). Indigenous leadership of these conversations and processes has been a critically missing piece (Jacobs et al., *in press a*). Furthermore, creating campuses where TEK is acknowledged and respected would create an environment in which settler and Indigenous students could understand its benefits more productively (Jacobs et al., *in press b*). However, the inclusion of TEK necessitates Indigenous leadership, which can guide the specific Indigenous lenses through which these classes are created and instructed; thereby emphasizing the cultural connections of TEK as a Knowledge-belief-practice system, while ensuring that it is discussed in culturally appropriate and responsible ways that only Indigenous Peoples can do. Additionally, adding Indigenous leadership and responsibility to classroom settings and curricula-building would create possibilities to reconnect students to their cultures if they have moved away from their communities as part of a physical transition to college, or were disconnected through diaspora (the spread of people from their original homelands) or other methods due to the deep histories of genocide towards Indigenous cultures and Peoples. This is a challenge though, as college campuses today are still built and structured in ways that are oppressive to Indigenous Peoples (Minthorn & Nelson, 2018).

In particular, Oregon was founded in racial exclusion, and even once non-white people were allowed to exist in Oregon without corporal punishment, there were still annual taxes specifically for Kānaka Maoli, Black, and Chinese peoples.

This favored white people economically and served as another barrier for the simple existence of non-white people in Oregon. Despite OSU's founding being 155 years ago and some addressment of Oregon's racialized past, there is still deep harm done to Indigenous students as they still suffer the effects of colonialism and white supremacy (*National and Oregon Chronology of Events*, n.d., Trask, 1999).

Kānaka Maoli and Academia

While all Indigenous Peoples continue to face erasure and continue to not be seen, heard, nor respected, and face conflict with their TEK in academia, Kānaka Maoli specifically struggle with facing Indigenous erasure and silencing by being aggregated into demographic categories like Asian Pacific Islander, or API (Hall, 2015). Since the creation of the term API, Kānaka Maoli have protested against it, because even in social awareness settings, Pacific Islanders represent such a small portion of the Asian Pacific Island category that they are dismissed or not even included, and if they are, it is in such a homogenized way that it does no benefit to any API demographic (Hall, 2015, Machado, 2023). Even being part of the API demographic creates additional challenges for Kānaka Maoli students in other areas. For example, even the Udall Foundation, which touts its work toward strengthening Native Nations, doesn't allow for Kānaka Maoli students to apply for any of their Indigenous programs, despite having prestigious scholarships for Indigenous students who participate in "cultural activities and [serve their] community" (Udall Foundation, n.d.). Further problematic is that because the colonial government will not recognize the Hawaiian Kingdom as a sovereign Indigenous Nation, this

disallows Kānaka Maoli from being able to apply for specific Indigenous scholarships, grants, and fellowships that fund students' academic endeavors.

Even in research contexts, Kānaka Maoli are often aggregated with other Pacific Islanders and into API categories, where their voices are homogenized instead of emphasized as sovereign communities. Though this proves problematic for reasons previously discussed, most of the literature that exists on Kānaka Maoli experiences in higher education follows these aggregated categorizations. However, some of these studies still provide useful information that can apply to Kānaka Maoli students. For example, research emphasizes that Pacific Islander students (which include Kānaka Maoli) struggle in and with higher education for more reasons than just financial concerns (Bonus, 2021). Students reported that much of their schooling was bound to white supremacy, privilege, imperialism, and colonialism, and despite universities talking about inclusion and the importance of diversity, curricula remain white-centric and dominant culture continues to hold power (Bonus 2021). For example, one student reported about the impacts of academic culture and forced assimilation they experience while in college:

“I think it makes it seem like money is all there is to solve the problem of college drop-outs. It is, I think, but it is not all, I think. Even if we have resources, I think being in college is also like being in a place where we're forced to do things that are not from our own culture. It's like being in a [Native American] boarding school, you know. Like, you're forced to be like the white man. You go to classes that talk about cultures that are not your own. Like, you learn about everybody

else, and nothing about your own culture! There are no teachers who are experts on your history and your culture, there are very few or no students who look like you in the classroom, and you're ... like ... expected to succeed? Yeah, it's like you're colonized over and over again, like your ancestors!" (Bonus, 2011, p.189)

Another contributor to isolation and struggle within higher education for Pasifika students (which includes Kānaka Maoli) was the lack of representation in the faculty and administration (Bonus, 2021). Even when students found staff who understood or were in fields that they identified with, these faculty were often underfunded, and students were aware of their negative treatment by the institution (Bonus, 2021). Underfunding can lead to greater workload for staff, meaning less time for students, mentorship, and connection, as well as students knowing they are valued less in academia as there is financial proof of this. Pacific Islander students face the dissonance between wanting an education and the pain of isolation and struggle, fighting inequalities socially and academically (Bonus, 2021). With added stress and isolation, degree completion and graduation are much harder to reach without proper support; of the Kānaka Maoli students attending university, 50% left without a degree (Teranishi et al., 2020). Fewer Kānaka Maoli graduating means fewer Kānaka Maoli professors or instructors, as degrees are typically needed for these positions due to that being the metric that western academia uses to determine expertise (Jacobs et al., *in press b*). This idea of expertise and how it is obtained can conflict with Indigenous expertise, which includes Indigenous communities' value systems and norms (Jacobs et al., *in press b*).

There is nascent research about Pasifika students and specifically about Kānaka Maoli; however, it is currently growing. Haley K.M. Okamoto is a Kanaka Maoli OSU graduate and now the Assistant Director of the Native Resource Center at South Dakota State University. While at OSU, Okamoto discussed the systemic and social barriers facing Kānaka Maoli students and the cultural wealth that Kānaka Maoli possess that would better university systems, including their incredible methodologies that were created from their Knowledge systems (Okamoto, 2022). She wrote “[t]he history of the Pasifika community in higher education is a story that has yet to gain traction. Similar to our island nations, our stories are small but will continue to erupt and grow” (Okamoto, 2022, p.10). Okamoto works to ensure that TEK can revolutionize how dominant cultures handle climate change and social inequities (Okamoto, 2022).

Because TEK is a sacred Knowledge-belief-practice system that can influence global biodiversity and studies have shown an intergenerational decrease in TEK, it is crucial for Indigenous Peoples to maintain their TEK, even when they must leave their communities for extended periods (e.g., while pursuing higher education degrees; Hanazaki et al., 2013). However, as of today, a search of scholarly literature resulted in no findings for publications that depict how and if TEK is impacted when Indigenous students leave their communities. This gap in the literature is worthy of exploration to further understand how TEK is passed down through community and family generational transmission processes, and to investigate what happens to such Knowledge-belief-practice systems when Indigenous students are relocated into diaspora at university and college campuses. However, it is just as important to

conduct such studies with the understanding that one form of TEK cannot be applied across communities because of the subjective nature of how Indigenous Peoples honor, carry, and pass on their Knowledges between and within communities.

This specificity of TEK is why the focus of this thesis is on Kānaka Maoli students. Kānaka Maoli unlike other Indigenous Peoples of Turtle Island (North America) are often aggerated into other populations during research and have been settled by both Asian and American people. Kānaka Maoli face similar yet very unique challenges and struggles compared to other Indigenous Peoples surrounding their TEK. The following sections address where gaps and needs exist as well as some proposed institutional changes that can take this uniqueness into account. However, this is just the start, as Kānaka Maoli students should be included, centered, and looked to for addressing these issues.

Needs, Gaps, and Importance

Centering the literature on Indigenous and Kānaka Maoli scholars means that the gaps and needs to address cultural barriers and TEK connections were already being thought about by these voices, making it easier to expand on here. One of the largest gaps seen in this literature review is that we need more information about what happens to TEK as students (in this case, specifically Kānaka Maoli students, however this gap exists across other Indigenous communities as well) move into diaspora to traverse college degree programs. Settler colonialism has negative impacts on Kānaka Maoli culture and populations, and university systems in the United States are deeply rooted in colonialism and western science. However, extrapolating that Kānaka Maoli students and their TEK are harmed in western

university institutions is speculative, as this is an assumption without research to corroborate it. Without more research, the specifics that could present possible paths forward are unknown.

Discussions around land grant institutions and reconciling with their settler colonial histories are just starting to occur as well, but not to levels that are producing faithful actions to address past and current harms. Therefore, a need exists for more community-based work around this idea, where policies, actions, belief systems, and events can be examined and questioned. We need to ask how does “the ongoing displacement and dispossession of Indigenous Peoples underpin the existence of all US higher education institutions, both public and private” (Stein, 2022, p.127)? Continuing the same theme, above a question was asked about the public good and who it is for in terms of college institutions. This is also a thread that needs to be pulled because it seems that the public good is only for a certain kind of person, and Indigenous Peoples aren’t it. Without these ideas being addressed, how can academic barriers be dismantled? How do we navigate the ongoing displacement and dispossession of Indigenous Peoples in and by academic institutions? Another big gap is in the responsibilities of institutions. How do academic institutions hold responsibility to Indigenous Peoples, and has this ever been investigated or explored past individual committees by universities? What would it look like to come up with a model for this inside classrooms and across an institution? These are important questions to ask because without reckoning with the past, futures cannot be trauma-informed and supportive of all people.

Research and exploration of colonial systems like university institutions is important and hasn't been fully addressed, and hand-in-hand with that, there is a need for valuing people and different ways of knowing. The typical stories of Hawai'i are ones of a paradise destination, an idea, and reality created by settlers. I push back on this though and ask why do we need a paradise destination to escape to? What are people escaping from? Without educating the general public, Kānaka Maoli will continue to have to deal with translation exhaustion, and overcompensating for the lack of respect and dignity they and their Knowledges deserve. Indigenous Peoples and their Knowledges deserve to have and hold respect. It really comes down to one need, which is bettering the experiences of Kānaka Maoli students in academic settings, so that they can continue their TEK. This is especially important because TEK and Indigenous-led stewardship and care of environments will lead to better outcomes in the ongoing climate crisis.

Recommendations and Actions for Academic Institutions

I propose a four-pronged approach to address the gaps and needs mentioned above. **First, an ethnographic study with Kānaka Maoli students should be done to understand if impacts to Kānaka Maoli students and their TEK when moving to college and what these impacts are.** This study should be completed using semi-structured interviews with open-ended questions and the initial questions should be drafted by Kānaka Maoli students. During this thesis process, work was done to develop questions to be asked during the interviews and can be found in Appendix A. These questions have been pre-tested on an individual with great results which show that college major and campus connections will have an impact on responses to how

moving to attend OSU has impacted cultural connections and TEK practices. The results from the pre-test also allude to a difference between Kānaka Maoli student responses who were raised on Hawai‘i versus away from the islands, and that for those raised outside of Hawai‘i, OSU could be a place to strengthen students’ TEK and cultural connections.

Transcripts of the interview should then be coded (using a coding design by a Kanaka Maoli) to identify patterns and themes between participants, which will be provided back to participants in a focus group in which the themes are analyzed by the students for culturally relevant topics. By having the student participants do the analysis, and by also providing them the ability to redact or add to their interview transcription prior to coding, it ensures that those who are holding and expanding on TEK are Indigenous, honoring the fact that TEK is more than just a Knowledge system. Students then should be provided the opportunity to take what was explored in the focus group and create, organize, or act, so that it doesn’t just end with a conversation, but instead furthering Kānaka Maoli students and understanding if and how themselves and their TEK are harmed in western university institutions.

In institutions that may have stolen their lands or other Indigenous Peoples’ lands and spaces, it can often feel like Indigenous Peoples must choose between their identities and the complex issues and demands to assimilate to the colonial system. **This is why the second prong of addressment should be focusing resources on Kānaka Maoli students.** As shown through the literature review above, Kānaka Maoli students face huge education barriers in university settings and have a high non-completion rate. Academic success should be reframed from earning high GPA’s

to including well-being from cultural and Knowledge connections. Space should also be provided by colleges and across the university where organizing can occur to help Kānaka Maoli students and faculty develop action plans to meet their own needs, not the needs that the institution establishes. In testing the ethnographic study questions mentioned above, spaces on campus like cultural centers were found to be extremely valuable for cultural connection, as were student clubs and organizations. These spaces should be for more than just a physical location, they also need to provide support of Indigenous identities, meaning that it also must be threaded through the other actions below.

Accessibility is another necessary component of this prong. On campus, Kānaka Maoli literature should be readily available. At OSU, a majority of books from Kānaka Maoli scholars that I needed for my thesis had to be borrowed from other institutions. While the collaboration between institutions is appreciated, these materials should be widely accessible as Kānaka Maoli frameworks, methodologies, and scholarly advancements continue to be important bodies of work that shape understanding. To more broadly include other Indigenous Peoples' literature would be an extension of this, creating an Indigenous library on campus, like the University of British Columbia has.

Third, the institution as a whole, or individual colleges should create more incentives and initiatives to hire Kānaka Maoli and Indigenous faculty.

This would allow for students to have representation, to find mentors who share in identity, and to help break down some of the institutional barriers facing Kānaka Maoli students. One way this could be done is through cluster hiring, where multiple

faculty are hired at the same time around the same focus area, start at the same time and can support each other. The idea of cluster hiring with a focus on Diversity, Equity, and Inclusion (DEI) has a lot of underlying complexities as “hiring diverse bodies does not equate to change within the organizational culture” (Muñoz et al., 2017, p.1). However, with true effort and work, these complexities can be met with resilience leading to success, especially if learnings and recommendations from research and experience are used (Muñoz et al., 2017).

Fourth, besides including Kānaka Maoli literature on campus, Kānaka Maoli scholars and Knowledges should be celebrated and uplifted. Their work should be taught across departments, and more classes should be offered, especially about TEK. The difficult task with inclusion of Kānaka Maoli scholars and Knowledges is that if this is done incorrectly, it will lead to further erasure and colonization of Indigeneity, as integration of Kānaka Maoli scholars and TEK into western frameworks doesn't work towards Indigenous Peoples' liberation and instead continues toward colonial and western science objectives through being extractive and exploitive (by using Indigenous Knowledges as only a Knowledge-based system, and doing things to and on Indigenous Peoples and their Knowledges instead of for and with; Jacobs et al., *in press b*).

Instead, teaching should occur from a standpoint of bridging divides. One step forward in this direction is to have materials created by Kānaka Maoli scholars or taught by them and looking to Elders and cultural practitioners for their expertise. It must also be included here that expertise is defined by individual Indigenous (in this case Kānaka Maoli) communities and their value systems and norms, not by degrees

or colonial merits. This difference in defining expertise needs to be considered, for instance peer-reviewed publications are used to measure academic expertise, however peer-reviewed publication totals may not measure expertise of Kānaka Maoli scholars. An incentive to Kānaka Maoli scholars to become faculty could include flexibility in publishing, and even connecting with their communities to recognize their expertise, so it does not have to be proven via western academic standards and metrics.

Another point to this approach is the inclusion of current professors and faculty in educating about the impacts colonization has had on Kānaka Maoli students. However, there are hidden barriers in doing this that can go unseen and are unknown by most people. Some colleges cannot require already-hired faculty to attend workshops or learning events but can establish new requirements for new faculty that are being hired. When the already-tenured faculty and people in power (who are predominantly white, and in many cases, cisgender heteronormative, settler, men) do not have to do these things -- how does that help? The optional workshops are also typically only attended by those who are already invested in DEI objectives, so the audience that really needs to hear these issues is mostly missing from the learning spectrum.

Therefore, I strongly suggest that universities like OSU should make institution-level policy changes, creating space, time, and resources for the continued education of faculty where tenure or other statuses do not create opt-out abilities. One policy that would be incredibly beneficial is the creation of evaluations where faculty are evaluated on their contributions to DEI, inclusive teaching etc. This policy would

mean that while faculty would not be mandated to attend teaching workshops, they would be required to do professional development around the topics of DEI broadly. To support faculty in this policy change, there could be a list of options to fulfill this evaluation requirement (e.g., including trainings around colonization and current lesser-seen impacts of it). While I do not have a solution to fully address these challenges without an institutional level policy change, I have spoken out before in class when unknowingly ignorant things have been said about Kānaka Maoli by professors. Through my personal relationships with previous professors, I have been able to create a space where learning occurs, even with professors who have been at OSU for over 30 years.

Students should not have to be relied on to do this work, though. If OSU does not create a policy of continued education for faculty, then individual colleges, and professors must hold these responsibilities. This would look like creating department materials for teaching and education about Kānaka Maoli and TEK and having support systems in place for questions and conversations. These materials should not be created under non-Native leadership though, as TEK needs to be centered on and through Indigenous voices as discussed in this literature review. To help steward the development of these educational materials, honorariums should be made available for Kānaka Maoli students or faculty who participate in educational material creation. These honorariums should also be available if Kānaka Maoli students or faculty decide to participate in DEI committees or other forms of institutional review and accountability, as these individuals already face more barriers than their counterparts,

so participation is more taxing despite being needed as their frames of reference and viewpoints highlight what more privileged people cannot see or understand.

As land grant institutions and colleges as a whole are a product of colonialism and western ideology, there is forced assimilation that occurs to Indigenous students as discussed above in the Kānaka Maoli and Academia section. Kānaka Maoli students face deep conflict in the ideas between wanting an education and the isolation, struggle, and academic and social inequities that come with attending college. One way to address this would be the creation of a position at OSU (or multiple positions, perhaps a few per college) where the role of the faculty is to examine how colonialism is still active and to find ways to dismantle it, allowing for assimilation to be combated. The hope of this position would be to be able to help Indigenous students stay more connected to their TEK and make academia a more welcoming and supportive environment by removing some of the dissonance students face while attending college. This position should not be filled by a person who has a dominant position in our settler state, meaning that they should be Indigenous, as it is much harder for people existing in the privilege that comes from settler colonialism to see the full extent of its' reach.

Resilience

While most of this paper has discussed the negative impacts of settler colonialism on Indigenous communities (specifically Kānaka Maoli) and their Knowledge-belief-practice system of TEK, there is an underlying current of resilience that I wanted to address outright. Even with these harms, some people make it through them, which emphasizes the strength of Indigenous Peoples to overcome

systems of oppression (while highlighting the barriers they had to overcome in that process). There isn't much in the literature about how Indigenous resilience works to help Indigenous Peoples overcome and succeed in these systems while it doesn't work for others.

Conclusion

The experiences of Kānaka Maoli students at Oregon State University and any impacts they encounter in maintaining their TEK while navigating university systems need to be explored, especially as these students face unique challenges and barriers attending higher education. While this thesis has addressed some of the challenges and barriers that Kānaka Maoli students face, it is important to note that this work is just beginning, and for it to be meaningful, Kānaka Maoli voices must be centered and leading these discussions and projects. Oregon State University and its' land grant institution legacy make it a potent place for settler colonialism, and with mindful work, can become a better place for Kānaka Maoli students and their Knowledges to survive and even thrive. By following the four-pronged recommendation approach provided in this thesis; centering Kānaka Maoli students with an ethnographic study, focusing resources on Kānaka Maoli students, creating incentives and initiatives to hire Kānaka Maoli and Indigenous faculty, and celebrating and uplifting Kānaka Maoli scholars and Knowledges on campus, OSU can take the first step in the right direction.

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Appendix A

Questions:

1. In what place(s) did you grow up?
2. What areas do you consider as your homelands?
3. Did you grow up in your Traditional Native Hawaiian community?
4. When did you move to attend Oregon State University?
5. How long do you think you will be in the Oregon State University area?
6. Do you plan on going back to your community or childhood home once you finish your studies at OSU?
7. Has the process of leaving your homelands or your childhood home altered any of your Traditional Ecological Knowledge or other forms of cultural practices?
8. Do you travel back to your homelands or area where you grew up? If so, how often?
9. Can you describe how important your TEK and cultural practices are in your life?
10. Has moving to attend Oregon State University in any way impacted (positively or negatively) your connections to your culture and your TEK practices?
11. Has moving to attend Oregon State University altered how much time you spend with your cultural practices? If yes, please explain how the time has been altered.

12. Has moving to attend Oregon State University altered any of the Traditional activities you did when you were growing up? If so, please explain.
13. Has moving to attend Oregon State University altered the availability for you to find, harvest, or use any of your Traditional medicines or other items needed for your cultural practices?
14. Please explain any barriers you have experienced in practicing your TEK at Oregon State University compared to when you are in your homelands.
15. Have there been any barriers between your ability to access your cultural teachers while you are away from home? If yes, please describe how.
16. What types of similarities exist between the ways that you practice TEK and other cultural practices while at Oregon State University and when you are home?
17. Has your education at Oregon State University provided any influences to the ways in which you think about or practice TEK or other cultural practices? If so, please describe how.

