TE WHARE WĀNANGA O
AWANUIĀRANGI

INDIGENOUS KNOWLEDGE ORGANIZATION ACCESSING KANAKA EPISTEMOLOGIES

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.
This thesis contains no material that I have submitted towards the award of any other degree or diploma in any other university or other institution.

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Abstract

As Hawai‘i continues to revitalize our culture and language, libraries and archives have an important role in preserving and providing access to ‘ike. However, current forms of access to ‘ike in libraries remains inadequate and inappropriate for Hawai‘i. To improve intellectual access to ‘ike and better represent Hawaiian knowledge in libraries, this study examines Hawaiian epistemologies, and the cultural context of knowledge transmission, as informs knowledge organization.

The research is contextualized within the broader Indigenous context of struggle and reclamation of cultural knowledges and ways of being in the world. As such, it is necessary to acknowledge and address the ways in which libraries, as institutions, have upheld Western imperialism and colonization, and maintained the status quo, in ways that have resulted in inequities and injustices against Indigenous peoples, knowledges, and lands.

Centering the mo‘olelo, or stories and experiences, of kūpuna, and other Hawaiian cultural and language practitioners, this study contributes to the ongoing work to the decolonize and de-occupy Hawai‘i. Drawing from mo‘okū‘auhau and mo‘olelo, this study seeks to surface and empower ‘ike Hawai‘i and Kanaka methodologies of knowledge organization. It identifies a Hawaiian knowledge domain and framework that could serve as the foundation for a Hawaiian knowledge organization system. Such a system will improve access to the ‘ike Hawai‘i amassed in libraries. Focus groups and talk story sessions with Hawaiian scholars and experts provide insight about Hawaiian ways of categorizing, organizing, and transmitting knowledge. Using the frameworks provided through ‘āina, mo‘okū‘auhau, and mo‘olelo, this study invites readers to nānā i ke kumu, or look to the source, for enlightenment and consciousness.

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Chapter 1: Situating The Research

Landing in Research

The practice and products of research have negatively affected our communities as part of the colonial trauma and ongoing occupation of Hawai‘i. Much of the initial research pursued by foreigners to Hawai‘i over one hundred years ago with purported goals of “progress” and “salvation,” continue to dictate the systems that we operate in, and against, today. These systems – and, in the case of knowledge organization systems, these are quite *literal* systems – originate from or remain driven by many of those same researchers that created the publications that are oft referenced today, that fill libraries, and maintain influence and manipulation on the policies and procedures that are used within academia. I am choosing not to name or cite those works here as a purposeful choice not to further credit those authors or ideas, however, anyone educated in formal English-medium education systems need not do much to identify them.

The various academic disciplines which teach, perpetuate, and benefit from these policies, procedures, and systems then continue to carry out violence upon Indigenous communities, which persists whether that violence is perpetuated knowingly or not. Still, ironically, or perhaps as an intentional outcome of these structures and systems, one can remain ignorant to the violence, while others can normalize the violence by simply (and silently) watching under the pretext of neutrality. We could talk at length about the various ways that violence, committed in the name of research, happens on-the-ground, personally, collectively, and historically through to the time you’re reading this very page. Linda Tuhiwai Smith (2012) and many others have written extensively about the systemic, negative effects and ensuing connotations of research (Kovach, 2009; Trask, 1999; Wa Thiong’o, 1986). As referenced and deployed in Western education systems, research is yet another system not built for Indigenous peoples.

Research systems were built to support research *about* Indigenous peoples, not *for* us, much less *by* us. These systems continue to be maintained and extended to sanction research as it was intended by and for Western, foreign interests, governments and academia. The consequences of Western social structures and systems stemming from colonialism and imperialism continue to plague Indigenous peoples and exploit Indigenous knowledges and

lands. Research and education are not exempt and continue to hold prominent roles in upholding structures and systems of oppression, effectively functioning to the benefit of colonial governments, the institutions that have been licensed and endowed by colonialism, and privileged white populations who share the same Eurocentric values at the basis of colonialism. It is necessary to critique and interrogate the role of education and its structures in knowledge transmission and production.

Why open this thesis with an outline of the ways in which research is problematic? For one thing, this is the introduction to research that I was given, and my first experiences with the term and practice carried the weight that Smith (2012) describes as burdening a lot of Indigenous communities. So, I thought it fitting to share it here as part of positioning myself and my experience with research. Because of the nature of my topic, it is also important to share these encounters of research as it provides a foundation for understanding the choices made in regard to the topic and design of this study, as well as lays some groundwork from which to build upon within the field of Indigenous librarianship and the institutions of libraries generally.

This chapter continues to introduce the role of libraries, within Western education systems, as a vestige of colonialism. Acknowledging the origins and power of libraries, and the impacts Western research and libraries have had on Indigenous peoples, this chapter leads us to a fuller understanding of libraries. The false neutrality and assumed universality of libraries is problematized leading to a discussion of the systemic inequities perpetrated and perpetuated by these institutions, as is examined in more detail in chapter 3. More significantly, this chapter introduces libraries as experienced by our kūpuna and by us today, and provides a much-needed departure point for envisioning librarianship and libraries with Indigenous peoples, for future generations.

Approaching Libraries

Grounded by kuleana, or privileged responsibilities, to my kūpuna, ancestors past, present, and future, and animated by a passion for the reclamation and continued succession of ʻike Hawaiʻi, I introduce knowledge organization as a structure of knowledge transmission and a possible tool for decolonization and conscientization for Hawaiʻi. I recognize that libraries are not the only place where ʻike Hawaiʻi has been perpetuated and continues to exist, however because of the extent of ʻike Hawaiʻi within libraries, it is a site worthy of our

attention. Within education systems operationalized by the West, the institution of libraries have functioned as a principle site of knowledge dissemination and cultural transmission, thereby making libraries a vestige of colonialism. On the whole, libraries promote research and learning from predominantly Western worldviews and thereby threaten Indigenous peoples with the continued abuse, appropriation, and exploitation of our histories, knowledge, bodies, and the lands and waters we have relations with and that have sustained generations over millenia, prior to Western imperialism and colonization.

Recognizing the structures that perpetuate colonial and neo-colonial violence against Indigenous peoples and knowledges requires conscientization about research ethics and research processes, which are preserved in library collections and fostered by libraries as part of the auspices of knowledge production and dissemination. Addressing the violence of Western research, and by extension libraries as Western educational institutions, involves a critical review of the dominant structures that persist not just in the research itself but also within libraries. One of the principle structures that classify and legitimize knowledge in libraries is the knowledge organization system, most commonly experienced as a library catalog or database which librarians and researchers are essentially dependent on for the organization and management of knowledge, including the provision of access to knowledge. For these reasons, it is this structure for knowledge organization and dissemination that is the primary focus of this study.

Having previously determined that Western knowledge organization systems are inadequate for Indigenous peoples, including Kanaka, and deficient for representing and organizing Hawaiian knowledge (Matsuda, 2015), this study seeks to identify and empower Kanaka methodologies and knowledge systems that could inform a Hawaiian knowledge organization system. There remains a considerable collection of Hawaiian knowledge stored in and fragmented by libraries. The Hawaiian knowledge contained in libraries is vital for reclamation and decolonization in Hawai‘i.

This study focuses on cataloging, or more specifically, knowledge organization as a structural and systematic method of decolonizing libraries and meaningfully improving access for Indigenous peoples. As such, this study is situated in a concentrated area within the already specialized field of Indigenous librarianship. Establishing the basis of the physical organization of materials in libraries while serving as the core system for administration and

access to collections, knowledge organization holds power, and promises great potential for systemic change thus it should not be overlooked.

Indigenous Librarianship

The development of Indigenous librarianship is an emerging field. Burns et al. (2009) defines Indigenous librarianship as the following:

> Indigenous librarianship unites the discipline of librarianship with Indigenous approaches to knowledge, theory, and methodology. It emerged as a distinct field of practice and an arena for international scholarship in the late 20th century bolstered by a global recognition of the value and vulnerability of Indigenous knowledge systems, and of the right of Indigenous peoples to control them. (p. 2)

Indigenous librarianship is distinct from Western library services *to* Indigenous communities, as its focus is "to provide culturally relevant information services and collections for Indigenous communities, organizations, and individuals, as well as to apply Indigenous philosophies and values to professional practice and education" (Burns et al., 2009, p. 2).

Indigenous librarianship is not a practice actively pursued by all Indigenous information professionals, rather it is a conscious choice. Margaret Kovach (2009) explains, "simply because a researcher is Indigenous, it does not follow that she ought to, or will, conduct research via an Indigenous form of inquiry" (p. 175). Just as not all Indigenous researchers use Indigenous research methodologies, not all Indigenous information professionals apply Indigenous methodologies in their practice. Those who pursue it do so intentionally with purpose.

The level to which information professionals embrace and practice Indigenous librarianship differs depending on their comfort level. Other factors like location and institution can also play a role and further speaks to an individual's comfort in asserting their culture and themselves in different spaces; while at the same time, serving as indicators of society and the climate of the institution. Kovach (2009) notes:

> Not all academic researchers will embrace Indigenous knowledges if doing so is too far from their level of comfiort. However, this hesitancy, stemming from discomfort, should not translate into dismissing or objectifying Indigenous knowledges. Given the attention to this dynamic, it is shocking to see it continually replicated. This requires ongoing critical reflection. (p. 170)

To this point, it is important to acknowledge the history of Hawai‘i – the colonization and ongoing occupation of Hawai‘i, the ways in which these forces have impacted our people and ‘āina, and the continued threat to our lives and ways of living.

Deborah Lee (2019) asserts both Indigenous and non-Indigenous librarians supporting Indigenous researchers can practice Indigenous librarianship. This supports the idea that it is not only Hawaiian librarians that could practice Hawaiian librarianship, but that any non-Indigenous person, or non-Hawaiian for that matter, could practice a form of Hawaiian librarianship. The other part of Lee's assertion – that Indigenous librarianship serves Indigenous researchers – is key as it elevates the need for Hawaiian librarianship to support Hawaiian researchers and could be extended to the benefit of libraries in Hawai‘i generally. Nevertheless, it is of utmost importance that non-Indigenous peoples, other Indigenous peoples, and Hawaiians proceed respectfully in the practice of Hawaiian librarianship. Indigenous peoples should continue to hold prominent roles in leading Indigenous librarianship, lest we perpetrate the same violence and injustices that have happened time and time again upon Indigenous nations. In this particular case, Indigenous peoples would be further marginalized within, or erased from, the academic discipline and profession of information science, and our cultures and knowledges extracted solely for the benefit of the colonizer and their 'public good'.

Decolonization

Decolonizing is a verb signaling an active process and referring to the actions and intended outcome of a growing movement and related field of research concerning the wellbeing of Indigenous peoples and lands. Manulani Meyer (2008) writes about Indigenous epistemology as viewed by Native Hawaiians in her ‘ohana. Realizing the abundance/richness of subjectivity, Meyer (2008) asserts that "specificity leads to universality" (p. 217) where universal truths are not to be confused with uniformity. Meyer's (2008) research and life experiences have led her to recognize that "true intelligence is self knowledge":

> Self-inquiry helped shape my own understanding of knowing and put in the light bulbs on a path leading to wider application. It ends my feelings of inferiority and disconnection. It helps discern the glaring difference between uniformity and universality. (p. 224)

The intelligence she references has to do with what she refers to as the 'triangulation of meaning' between Body/Mind/Spirit, which is "an authentic leap into new ways of viewing

reality that will challenge current research paradigms based on Newtonian assumptions of space, time, and knowing. Indigenous and Authentic. Timeless and Timely" (Meyer, 2008, p. 217).

The Hawaiian Renaissance of the late 20th century was centered on the reclamation of sovereignty and ancestral, charactizered by the reawakening of cultural practices. Resisting land evictions, development, and further commodification of Hawaiian bodies and ʻāina in the tourism industry, Kanaka were focused on the body – the physical wellbeing of our people and ʻāina (Marshall, 2011):

> The movement for cultural revitalization was more widespread and diffuse and was clearly centered on the Hawaiian body. Feeding the body poi (mashed taro root), lau kalo (stewed taro leaf), and ʻopihi (limpet) in an effort to improve Hawaiian health via a return to traditional foods; adorning the body with tattoos in the form of Polynesian symbols; wearing kīhei (cape) and malo (loincloth) at protests and other Hawaiian cultural events; moving the body in the hula kahiko (traditional hula) in wa'a (canoes) and in ku'i a lua (traditional martial arts)—all of these were common expressions of Hawaiian cultural pride in the late twentieth century... An interest in health, healing, and the meaning of disease cut across these domains of the sovereignty and revitalization movements. The demand for health was connected to politics and power, to a return to culturally specific ways of eating, dressing, and performing, and to disputes over access to the land and water. (p. 9)

Body, in this case, doesn't only refer to human bodies but is inclusive of iwi kupuna (bones of the ancestors) and ʻāina. Calls for sovereignty were grounded in the significance of ʻāina in Hawaiian epistemologies – as a familial relation – and the need to restore reciprocal relationships between Kanaka and ʻāina. There is an ʻōlelo noʻeau, or proverb, that highlights our pilina, or relationship, to ʻāina – 'He aliʻi ka ʻāina, he kauwā ke kanaka', or 'the land is chief and people are its slaves'. This acknowledges the fundamental importance of ʻāina for survival, and emphasizes the kuleana we have to honour and mālama (care for) ʻāina, which will in turn nurture our wellbeing.

'I ka wā ma mua ka wā ma hope', or the future is in the past. Guided on the path by our ancestors, we set forth in the 21st century to reclaim and empower ancestral knowledge. Benefiting from the foresight and perseverance of the generations before us, we turn now to healing our minds. Decolonizing the mind, as a form of healing, contributes to the healing of the body and the spirit (mauli). It impacts the ways we sustain pilina with ʻāina and other living beings, and subsequenty come to know and understand within our universe. We are in a time of decolonizing the mind – recognizing the deep, intergenerational trauma caused by

colonization and re-asserting Indigenous knowledge and ways of knowing, as Wa Thiong'o instructed.

The goal of decolonization is not 'doing Hawaiian things' but rather about entering the space where "we are Hawaiians doing things" (Sing, Hunter, & Meyer, 1999, p. 12). According to Sing, Hunter, & Meyer (1999), "It's time for us to draw our pedagogy policies, and curriculum from our own epistemology and no longer compromise on the priorities that have been asked from us long ago" (p. 12). The healing and empowerment of Kanaka is an intended outcome of this study insofar as knowledge organization can be used as a tool for decolonization and consciousness, which in turn contributes to our mental, physical, and spiritual wellbeing. It is all connected – as Meyer (2008) explains, the body, mind, and spirit are intimately connected.

Decolonizing and consciousness is about reaching a point where we're able to shift from this period of resistance, and transition to ea. Wilson (2008) explains that, "This is the heart of the decolonization imperative of Indigenous literatures: the storied expression of continuity that encompasses resistance while moving beyond it to an active expression of the living relationship between the People and the world" (p. 352). We are ritualizing behaviors and intentions until it is no longer an external theory or reaction but embraces spirituality and knowing that "allows knowing to be an act of consciousness that reaches beyond the mundane into connection and alignment with an essence that finds its renewal throughout the generations" (Meyer, 2008, p. 219). Consciousness not only leads us to ea, but is a form of ea itself.

With this guiding notion, this study seeks to create a space for consciousness and empowerment. Use of Indigenous research methodologies serve as a way to animate Indigenous language, cultures, knowledge, and vision (Battiste, 2000). Kanahele (2005) reminds us:

> We have to pay attention to our Hawaiian native intelligence and experiences. We have to pay attention to them, define them - because nothing is lost. In fact, we still have a lot of knowledge that was left to us by our ancestors. It's still there; we just have to go and look for it. That's what we are all about - research. (p. 27).

As such, I enter into this study with the understanding that research is an activity that Kanaka have and will continue to partake in and, furthermore, that Kanaka research can be used as a tool for ao.

Noelani Goodyear-Kaʻōpua (2016) asserts that "one of the hallmarks of Hawaiian studies research is a commitment to ensuring the survivance of Kanaka Maoli as a lāhui, a people" (p. 6). I firmly agree with Goodyear-Kaʻōpua (2016) about the benefits that can come from research when done with a commitment to Kanaka survivance:

> Research can give us collective voice as Kanaka ʻŌiwi. It is not the ultimate source of our voice; the ultimate source of our voice is our ea – our breath, our life, our sovereignty. But research shapes and can give power to our ea. It can collect and help us make sense of otherwise unnoticed pieces of our collective experience. Meaningful Hawaiian studies research can project our ea in directions that affect our shared futures. (p. 13)

It is crucial for Kanaka to participate in and lead research that demonstrates, "shapes and can give power to our ea" (Goodyear-Kaʻōpua, 2016). As Leonie Pihama (2016) states:

> What is clear is that if research is not transformative, if it does not seek to create positive outcomes for Māori, if it does not seek to intervene in existing inequalities or provide knowledge and outcomes that inform us and answer the questions that we believe are important, then that research is of little consequence. Kaupapa Māori research is about transformation, creating change and supporting positive movement for Māori - and it is inherently empowering. (p. 110)

Pihama is focused on Kauapapa Māori research but this transformative nature is at the essence of Kanaka research as well. Kanaka research seeks transformation and positive movement for Kanaka, and empowers our moʻokūʻauhau and lāhui. In simple, and not so simple terms, the intention and purpose of Kanaka research is ea and ao.

Aim and Research Questions

I recognize the traumatic experiences Kanaka, like many other Indigenous peoples, have faced with research in recent history – since contact with the west – and the systemic challenges that persist still today (Smith, 2012). I seek to contribute to the transformation of research practices through critical analysis of one of the principal systems that we are reliant on for doing research within libraries – the knowledge organization system (KOS). As such, this thesis is a study of Kanaka methodologies for knowledge organization. It aims to empower ʻike Hawaiʻi, Hawaiian knowledge, and the cultural context of knowledge transmission in Hawaiʻi. Centering the moʻolelo, or stories and experiences, of kūpuna, and other Hawaiian cultural and language practitioners, this thesis is grounded in Kanaka methodologies. This study describes a Hawaiian knowledge domain that can serve as a basis

for a Hawaiian knowledge organization system. The principle questions this study seeks to answer are:

- How is ʻike conceptualized and transmitted by Hawaiian scholars and cultural experts?
- What elements, categories, and/or values inform a Hawaiian knowledge organization system?
- How can a knowledge organization system be developed to better support scholars and to provide a foundation for discovering cultural relationships and understandings?

This study used a mixture of methods to answer the research questions. To identify the best ways to create a Hawaiian knowledge organization system, I conducted focus groups and talk story sessions with Hawaiian scholars, educators, and cultural pracitioners to gather insight about Kanaka worldviews, focusing on Hawaiian ways of categorizing and organizing knowledge. In the sections that follow, I discuss the methods I employed in this study and explain how moʻolelo and moʻokūʻauhau served as the primary methodologies for this study.

A central goal of this study is to contribute to the decolonization and de-occupation of Hawaiʻi through an analysis of knowledge organization rooted in ʻike Hawaiʻi and nohona Hawaiʻi. As such, the research uses the frameworks provided through ʻāina, moʻokūʻauhau, and moʻolelo, and invites readers to nānā i ke kumu, or look to the source, for enlightenment and consciousness.

I draw from Indigenous research methodologies, primarily Kanaka methodologies, to support my analysis of knowledge organization (KO) and the considerations that need to be taken into account based on what we've learned about 'research' and Indigenous methodologies. Within this process, it is necessary to acknowledge early on, the presence of our ancestors as continuing to anchor and guide the present. In situating artworks within the Māori cosmos, Sidney Moko Mead stated:

> We treat our artworks as people because many of them represent our ancestors who for us are real persons… They are anchor points in our genealogies and in our history. Without them we have no position in society and we have no social reality. We form with them the social universe of Maoridom. (quoted in Kaeppler, 2008, p. 57)

Mead highlights the reverence and respect as necessary, and the complexity involved in understanding Indigenous artwork. The same is true for understanding moʻolelo Hawaiʻi and

any other representations of ʻike Hawaiʻi. Mead's statement underlines the importance of locating ʻike within a Kanaka universe, inclusive of kūpuna past, present, and future.

The past continues to guide us today. It is important that we orient ourselves as the connections to past and future generations – the past provides us guidance and mana and we, in turn, are the link between past and future generations. The concept of "present" is understood within the context of our past and future. A common ʻōlelo noʻeau states, 'I ka wa ma mua, ka wa ma hope'. Contained in this instance, the present is part of a cycle and locates us within a continuum not just of time but also of relationships to which we remain accountable. It is indeed important to know our ancestors and past in order to move forward. Kameʻeleihiwa (1992) explains:

> It is as if the Hawaiian stands firmly in the present, with his back to the future, and his eyes fixed upon the past, seeking historical answers for present-day dilemmas. Such an orientation is to the Hawaiian an eminently practical one, for the future is always unknown, whereas the past is rich in glory and knowledge. (p. 22)

The above ʻōlelo noʻeau and passage largely summarizes my approach to this study. Fundamentally, this study looks to ʻike kūpuna for insight and examples of frameworks and models that inform knowledge organization.

Hawaiʻi's culture is dynamic and has changed with time and with contact. Nevertheless, an understanding of our past and of ʻike kūpuna aids in distinguishing between symbols that may be "rooted in his ethnic soil; or they may be the product of imported cultural overlays" (Pukui et al., 2002b, p. 177), and provides a foundation for Hawaiian knowledge organization. Within this context, I sought to nānā i ke kumu, or look to the source. Pukui et al. (2002a) underscore the role of kupuna as kumu, or sources of knowledge:

> It is the *kupuna* who convey a sense of continuity in family structure and a knowledge of and pride in the Hawaiian cultural heritage. It is the grandmother who can provide a stable maternal presence for the child of a working mother.
>
> With the present, though overdue, revival of interest in Hawaii's past, the elder can make a great contribution to community as well as family. The old beliefs, arts and skills must be recorded and handed down. The *kupuna* is a needed *kumu* (source) of all this knowledge. (p. 131)

As noted above, the source usually being referred to in this ʻōlelo noʻeau are kūpuna. In addition to kūpuna, I have also included others from my community that continue to serve as

sources of knowledge including but not limited to language revitalization, the reclamation and perpetuation of cultural practices, storytelling, and education to uplift our lāhui.

Gathering the moʻolelo and methodologies that have been shared and performed by Kanaka storytellers and authors, as well as by my own kūpuna and one hānau (birthplace), I am able to stand on the shoulders of those who came before me to give back to the lāhui and to contribute to the fields of Indigenous Studies and library and information science. As shared earlier, I reviewed what is commonly referred to as the 'classic works' by Kanaka authors of the 19th century – Malo, Kamakau, Iʻi, Kepelino, etc. – which provide written documentation of Kanaka history from the dawn of time through to the arrival of the missionaries in Hawaiʻi and the deep-seated influence their religion had on the Kingdom of Hawaiʻi. Having taken Hawaiian Studies courses from Lilikala Kameʻeleihiwa, Haunani-Kay Trask, Jon Osorio, Carlos Andrade, April Drexel, and others, and familiarizing myself with their writings and kuanaʻike, I developed a clearer understanding of the moʻokūʻauhau of our lāhui (nation) and the moʻolelo of Hawaiʻi as continued to be told by Kanaka voices largely overshadowed by haole (foreign) authors and languages. Building upon the early 19th century writings, these and other leaders in the Hawaiian Renaissance raised the curtain on colonization in Hawaiʻi, reawakened our consciousness, and revitalized ʻōlelo Hawaiʻi along with cultural practices, like hoʻokele (voyaging), lua (martial arts), and hula. In conversation with these earlier works, I delved deeper into more recent works by Kapā Oliveira, Noelani Goodyear-Kaʻōpua, Noenoe Silva, Kamana Beamer, and other Kanaka in academia who, having benefited from the renaissance period, introduce us to ʻōiwi optics and agency in Kanaka narratives that seek de-occupation, decolonization, and transformation within their respective disciplines. It is within a time of hulihia, or transformation, that I am researching and writing and, like the aforementioned scholars and authors, I too seek to contribute to the revitalization of ʻike kūpuna and exercise of ea in, and for, Hawaiʻi. Drawing from my training in ʻike Hawaiʻi and in library and information science, I seek to clear a path for the realization of a Kanaka information science, with Kanaka communities and ʻike kūpuna at the core.

Overview of Thesis

As part of an Indigenous doctoral programme, I have elected to write in the first person at times in order to make the work more personable and more accessible to readers. It gives a greater connection between myself and the work, my readers and the work, and myself and

the reader. As will be emphasized throughout this thesis, relationships hold meaning and can lead to deeper understandings of the work and of ourselves in or related to the work as well as to each other. Accordingly, my rationale for writing in the first person is to help establish these pilina (relationships).

Whilst I understand it might not always be the preference to include large block quotes in a doctoral thesis, I've done so for a number of reasons. Firstly, the people I quote are considered key knowledge holders in our Hawaiian community and in the broader Native and Indigenous communities. While I do give analysis of what they share, it seemed more appropriate to convey their words, and to share the information from these knowledge holders more directly. Secondly, I am humbled by the work of key knowledge holders and want to make sure their knowledge will maintain the integrity in their own words. Elsewhere in the thesis, I utilize more fully my own voice and analysis of the work that has gone before. Still, I honor and acknowledge these well-respected kumu with each block quote and citation, adding my voice to those who came before me as part of continuing the conversation and learning intergenerationally.

Chapter Two situates the Indigenous research paradigm within which this study is located and affirms Kanaka worldviews and methodologies. The Kanaka methodologies applied in this study are discussed, namely Moʻokūʻauhau, the genealogies of relationships that inform the basis of consciousness and knowing, and Moʻolelo, 'narrative as framework'. To best answer the research questions, this study employed 'talk story' with kūpuna and focus groups, as well as photovoice, as its principal methods. Placement of this research methods chapter prior to the literature review was done intentionally in order to provide the reader with key information that indicates the lens through which the literature has been selected and utilised.

Chapter Three surveys the literature on Indigenous literacy and Indigenous knowledge as relates to the institution of libraries. The chapter summarizes the rise and decline of literacy in Hawaiʻi, and provides an overview of the role of literacy, within English-medium education, as complicit in colonization, and in the ongoing occupation of Hawaiʻi. With this historical understanding established, the chapter moves into an analysis of the ways in which libraries (and other Western institutions) have exercised ownership and control over Indigenous knowledge and helped to maintain the narrative of colonizers. The power entrenched in libraries to classify and regulate access to knowledge has resulted in a

multitude of historical and ongoing injustices, including the misrepresentation (and overt racism), misinformation, misconstruction and misappropriation of Indigenous cultures and knowledge. Among other things, these issues highlight the inadequacies of Western knowledge organization and library systems for Indigenous peoples.

Chapter Four further locates libraries and interrogates the "positional superiority" of Western knowledge. By providing an overview of Indigenous cultural protocols and methodologies, as well as concepts of warrant and authority, this chapter sets the framework for understanding the importance of Indigenous worldviews and approaches to knowledge organization. The central role and relevance of Indigenous languages, and the inadequacy of solely relying on English in systems of knowledge transmission and access, is also examined as this certainly affects knowledge organization for Indigenous knowledges and Indigenous peoples.

Chapter Five discusses ʻike as the domain of Hawaiian knowledge. ʻĀina is introduced as a primary source of ʻike, and is surveyed to reveal the ways in which performance cartographies that center ʻāina serve as systems of of knowledge transmission. Being as Hawaiian epistemologies are unique, Hawaiian research requires the distinctive protocols and systems that have been established and passed down for hundreds, if not thousands, of years. To assist libraries with identifying possible frameworks and models for a Hawaiian knowledge organization system, the chapter closes with a review of select Kanaka methodologies, such as Papakū Makawalu, and other methodologies for representing relationships and time.

Chapter Six highlights the moʻolelo and ideas shared by this study's twelve participants to inform the developments of a Hawaiian knowledge organization system. The findings are organized into three sections to maintain the conversations and context of each group, respectively. Within each section, the narratives are further grouped into four themes, which represent the patterns and relationships emphasized by participants, and surfaced as part of a thematic analysis: moʻokūʻauhau, moʻolelo, ʻāina, and kuleana. A lot of our conversations around these shared themes underlined similarities in the ways participants value and interpret ʻike. Still, some of our discussions revealed nuance and differences, as was anticipated. Partly for this reason, and because consensus was not among the aims of this study, oversimplification or generalisation of the selected themes as being exactly the same or of holding equal importance across groups has been intentionally resisted.

Chapter Seven presents examples of the facets generated by the focus groups themselves and those identified from an analysis of focus group data. These preliminary facets are offered for further consideration in the development of a Hawaiian knowledge organization system that could better meet the needs of Kanaka.

Chapter Eight provides a framework and metaphor for both the research process and the knowledge organization system. This Ao Framework centers upon consciousness as the goal or intended outcome of enlightenment. Represented by the concept of a rotating, oscilating sphere, the Ao Framework positions kuleana as the central driving force for research. Moʻokūʻauhau, ʻĀina, Moʻolelo, and ʻIke are identified as necessary components of research and knowldge organization and are located along the sphere to provide a visual representation of how these components interact and provide context for ao.

Chapter Nine discusses the implications of this research for current and future practice. This chapter also reports the challenges and limitations of this study and recommends areas for further research.

Throughout this thesis, I use the term ʻKanakaʼ to refer to the Indigenous people of the pae ʻāina commonly known as Hawaiʻi today. Kanaka literally means individual or human being. Kanaka is oftentimes used in conjunction with other terms, such as Kanaka Maoli (real people) or Kanaka ʻŌiwi (Native people), which differentiate Kanaka from foreigners; such terms likely arose around the time Captain Cook stumbled upon Hawaiʻiʼs shores (Oliveira, 2006, p. 2). There is spirited debate over the appropriate terminology to refer to the Indigenous people of Hawaiʻi, somewhat similar to the discourse concerning other peoples who may identify as Indigenous, native, Native, aboriginal, or First Nations. This is a key example of the significance of language and representation, which this thesis will explore, as well as an exemplar of the hindrances and divisions that are manufactured when non-Indigenous terms are employed to define or describe ourselves and our cultures.

With that said, the term ʻHawaiianʼ is used in this thesis as well. Hawaiian is used mostly in reference to materials and collections of ʻike Hawaiʻi (Hawaiian knowledge) – as these are commonly named and referred to as ʻHawaiian materialsʼ and ʻHawaiian collectionsʼ. ʻIke Hawaiʻi in libraries is commonly referred to under the umbrella of “Hawaiian Collections” today because of their being grouped together in library collections, oftentimes with other materials about or related to the geographic region of Hawaiʻi. I want to place an emphasis on

the ‘ike Hawai‘i represented within library collections and deriving from Hawai‘i and ‘ike kūpuna first and foremost, and de-emphasize these as mere ‘library collections’. The term Hawaiian is also used in regard to the ‘Hawaiian knowledge organization system’, which is being proposed here as a way to improve access to the afforementioned ‘ike. I acknowledge that use of these terms are problematic but, as I am writing in English and because these are the currently accepted terms for these collections of knowledge, I use these terms for the ease of readability – particularly for the librarians and information professionals who may be reading this to critically inform their work. Critical analysis of the terms and scope of ‘Hawaiian materials’ and ‘Hawaiian collections’ is needed, and while related to this work, it is not the focus of the current study.

Finally, the concepts and ideas throughout this thesis is immersed in the power of naming and language. Thus, it is necessary that I make a note about the language of this writing at the forefront to let you know that this was not a choice taken lightly. The population of ‘ōlelo Hawai‘i native speakers is increasing. Still, at the moment, a majority of Kanaka are English and/or Pidgin, or Hawaiian Creole English, speakers. Adding to this, the librarians and library administrators that will initially (hopefully) take up the kuleana identified in this research are likely to be primarily, if not excusively, English speakers. For these reasons, I have chosen to write this thesis in English; having a choice to do so is not something that should be overlooked, as this has not always been the case for Kanaka and other Indigenous peoples. However, as part of the normalization of native languages in academic texts, I use ‘ōlelo Hawai‘i terms and phrases throughout this thesis. Some of these ‘ōlelo Hawai‘i terms have entered the common vernacular in Hawai‘i, nevertheless a glossary of ‘ōlelo Hawai‘i terms is included to assist readers.

Chapter Summary

As this chapter discussed, this research seeks to surface and empower ‘ike Hawai‘i and Kanaka methodologies of knowledge organization and advance work toward the development of a Hawaiian knowledge organization system that will better facilitate access to the ‘ike Hawai‘i amassed in libraries. It presents a critique of libraries as institutions that have upheld colonization and maintained the status quo, resulting in inequities and injustices for Indigenous peoples, knowledges, and lands. It also proposed Indigenous librarianship as a pathway for reopening spaces where “we are Hawaiians doing things” (Sing, Hunter, &

Meyer, 1999). Finally, it invites librarians and libraries to uphold their kuleana to Indigenous peoples and knowledges, and the lands they are located on or have otherwise benefited from.

Chapter 2: Methodology

In this chapter, I build upon the discussion on Indigenous research methodologies and explain the particular methodology utilized in this study. Indigenous methodologies are applied in research on a wide range of areas, including climate change, resource management, health and medicine, geography, and education. It is long overdue that Indigenous methodologies be integrated in library and information science. By 'integration', I assert that Indigenous peoples and Indigenous methodologies serve as the first and foremost 'gatekeepers', and that information science and libraries be adapted and employed insofar as beneficial to the former.

One of my aims for this chapter is to honor, affirm, and promote Hawaiian perspectives and ways of knowing. The brilliance of ʻike kūpuna and Indigenous methodologies are well documented by Kanaka and other Indigenous peoples and does not require nor seek validation through Eurocentric academia (Nuʻuhiwa, 2020; Smith, 2012). While continuing to be questioned and challenged in academia, in government, and in other public spheres resulting from structural racism, Indigenous methodologies remain proven and relevant today (Goodyear-Kaʻōpua, 2015; Oliveira & Wright, 2016; Smith, 2012; Pihama et al., 2002).

After reviewing the literature on Kanaka and other Indigenous research methodologies, I sought to utilize an overarching methodology that served as the foundation for ʻike Hawaiʻi. My intention was for this methodology to be applied not just for this study but also in the development of a Hawaiian knowledge organization system. Having decided that a Kanaka methodology is multidimensional and multifaceted, I examined various methodologies for possible application in this study and concluded that moʻolelo and moʻokūʻauhau are foundational principles of a Hawaiian epistemology. Moʻokūʻauhau (genealogy) and moʻolelo (story, narrative) are particularly important methodologies for recognizing the location of this study, the participants within the study, and the stakeholders in this research. In the sections that follow, I provide an introduction to moʻokūʻauhau and moʻolelo as relates to the methodology used in this study.

Moʻokūʻauhau

Moʻokūʻauhau, or genealogical stories, are central to a Hawaiian epistemology. In establishing genealogical and familial relationships, moʻokūʻauhau forms the basis through

which we come to understand ourselves and the world around us. Lipe (2014) asserts, "[moʻokūʻauhau] is the thread that connects all the elements of the world through space and time" (p. 12). This is evidenced through our moʻolelo of creation which record our genealogies and therein our pilina to each other and to all living things.

Moʻokūʻauhau as worldview is essentially an epistemology of relationality. Thus, you may notice that I sometimes use the words 'moʻokūʻauhau' and 'pilina' interchangeably to emphasize relationships and relationality. We come to understand ourselves, our identities, and our place in the world through relationships with others – other humans, animals, and our island earth. Kumulipo is a well-known cosmogonic genealogy that tells the moʻokūʻauhau of Kanaka and the universe. Kikiloi (2012) explains:

> The Kumulipo genealogy (the 'source of deep darkness'), is widely recognized as the most comprehensive of all the mele koʻihonua encompassing most other ancient genealogies and stretching back farther to the beginning of the world, tracing Hawaiian genealogies from creation all the way into the seventh century to the chief ʻĪ-a-mamao. (p. 27)

Preserved orally for generations, the Kumulipo exemplifies the intelligence and skill of our kūpuna. It honours and locates Kanaka relations to place, to akua, and to all other living beings. Moʻolelo like the Kumulipo are important to a Hawaiian epistemology because they document our genealogies and our natural and social relationships to each other and the universe across space and time (Kikiloi, 2012; Saffery, 2016).

As it continues to be performed today, the Kumulipo remains both a testament to and an example of the substance and significance of moʻokūʻauhau for Kanaka. It is noteworthy that the Kumulipo is revisited multiple times throughout this thesis. This speaks to the multiplicity of ways we engage Kumulipo as moʻokūʻauhau, as moʻolelo, as methodology, and as embodying our worldview, for example. The focus of the Kumulipo in this section is to draw on the genealogical relationships we as Kanaka have with ʻāina and with all life, and forefront the ways in which this informs our mana, identities, positionality, and worldviews. Subsequently, this section emphasizes the resiliency embedded in and represented by the Kumulipo, and other moʻokūʻauhau, and the multifaceted functions genealogies continue to serve as individual and collective kuleana, as the preservation of names and ʻike, and as research methodologies.

Moʻokūʻauhau as Identity and Mana

If we come to know ourselves through relationality, mana is the essence or pulse of our relations. Mana is the energy that pushes and pulls and it is the guiding force that calls for respect in all relations. In that sense, mana is a central element that guides our relations and necessitates protocols for (access to) people, places and all life in the realms within which we're able to have relationships.

Understanding the ways in which moʻokūʻauhau informs our individual mana is important to forming identity and pilina. Mana is recognized elsewhere in Polynesia and has been studied at length by researchers as a "path into Polynesian worldview" (Shore, 1989, p. 151); as Shore (1989) observes, "It is not by chance that Western observers have so often sought the soul of Polynesia in the concept of mana" (p. 151). For the purposes of this study, it is necessary to recognize that moʻokūʻauhau and mana transmit values and guide our interactions and behaviours. Thus, mana is also an important consideration for the organization of information, especially if we're considering information about people and the things and places we (and, in particular, our mana) interact with. Mana is vital to conversations of moʻokūʻauhau.

Moʻokūʻauhau was and continues to be used as a political and social tool. In that moʻokūʻauhau carries mana and that mana is passed on through moʻokūʻauhau, it also translates to power. According to Crabbe (2017):

> moʻokūʻauhau were a way of ordering ancient Hawaiian society that spanned geography, people and family groups by clarifying relationships and kuleana (responsibilities)… genealogies and the mana they embodied were lived daily, and were foremost considerations in many aspects of ancient society. (p.26)

Hawaiian society was stratified based on distinctions of mana which could be acquired or inherited through moʻokūʻauhau (Crabbe, 2017; Kameʻeleihiwa, 1992). Aliʻi status and rank was based on lineage, which demonstrates the importance of mana and moʻokūʻauhau in a Hawaiian worldview.

Aliʻi trace their lineage to akua - the more pure their connection to akua, the greater the mana and the higher ranking the aliʻi. Strategically, aliʻi were able to increase their mana by adding to their moʻokūʻauhau (and the moʻokūʻauhau of their descendants), as the moʻokūʻauhau held mana and the capacity to transmit (or in some cases, decrease) mana. Consequently,

moʻokūʻauhau informed marital customs; particularly for aliʻi who were highly selective in the partnerships they formed in order to maintain or increase mana. Malo (1840/1951) explains the strict maintenance of mana in aliʻi lineages and the significance of their first union:

> Special care was taken in regard to the chiefs of high rank to secure from them noble offspring by not allowing them to form a first union with a woman of lower rank than themselves…
>
> To this end diligent search was first made by the genealogists into the pedigree of the woman, if it concerned a high born prince, or into the pedigree of the man, if it concerned a princess of high birth, to find a partner of unimpeachable pedigree; and only when such was found and the parentage and lines of ancestry clearly established, was the young man (or young woman) allowed to form his first union, in order that the offspring might be a great chief...
>
> This was the practice of the highest chiefs that their first born might be chiefs of the highest rank, fit to succeed to the throne.
>
> It was for this reason that the genealogies of the kings were always preserved by their descendants, that the ancestral lines of the great chiefs might not be forgotten; so that all the people might see clearly that the ancestors on the mother's side were all great chiefs, with no small names among them; also that the father's line was pure and direct. (pp. 54-55)

As such, the marriage practices of aliʻi, and to a lesser extent then of makaʻāinana, were directed by moʻokūʻauhau and the mana inherent in moʻokūʻauhau.

So too for makaʻāinana, moʻokūʻauhau provided a framework for social and economic structures in that it established a hierarchy of relationships and guided interactions with each other and the environment. As has been mentioned previously, moʻokūʻauhau show Kanaka that we are interrelated and, as such, it is important that our interactions remain pono to respect and maintain the hierarchical social structure. Ultimately then, mana establishes and orders relationships in Hawaiian society and serves as the principal criteria for authority. Moʻokūʻauhau offers the structure for supporting and communicating those relationships in continuity, enhanced by moʻolelo that further convey the mana of each individual and relationship. Taken together then, moʻokūʻauhau and moʻolelo are propelled by and have a reciprocal relationship with mana.

Moʻokūʻauhau as Resistance and Resiliency

It almost goes without saying that the memorization and performance of moʻokūʻauhau served to preserve knowledge of genealogies, however this should not be overlooked, especially in entirely oral societies (Crabbe, 2017; Kameʻeleihiwa, 1992; Oliveira, 2014). Moʻokūʻauhau functioned as mnemonic devices for documenting relationships and histories (Crabbe, 2017). As explained by Kameʻeleihiwa (1992):

> Hawaiian genealogies are the histories of our people. Through them we learn of the exploits and identities of our ancestors - their great deeds and their follies, their loves and their accomplishments, and their errors and defeats. Even though the great genealogies are of the *Aliʻi Nui* and not of the commoners, these *Aliʻi Nui* are the collective ancestors, and their *moʻolelo* (histories) are histories of all Hawaiians, too. (p. 19)

Embedded in the recounting of names and exploits of aliʻi are important life lessons and value systems that inform social structures and behaviours. Further, the recitation of a moʻokūʻauhau links us to our kūpuna and has the potential to transmit and enhance mana, which is one of the principle reasons that these moʻolelo were guarded.

Moʻokūʻauhau were crucial to the fabric of Hawaiian society and thus required its own attention. Experts in moʻokūʻauhau, the kūʻauhau, were responsible for preserving and safeguarding moʻokūʻauhau, mainly of aliʻi and certain ʻoihana (Crabbe, 2017, p. 29). Kūʻauhau also served as advisors to aliʻi on matters of importance, including selection of their first partner, as described above (Crabbe, 2017, p. 28). Kameʻeleihiwa (1992) notes that in their role as advisors to aliʻi, a kākāʻōlelo, or "an antiquarian and genealogist", would also "consider the issue and recount all the pertinent moʻolelo" to inform decision-making based on the actions and triumphs of their ancestors (p. 22). It is unclear if Kameʻeleihiwa (1992) considers the role of kūʻauhau as a type of kākāʻōlelo nonetheless she recognizes the function of moʻokūʻauhau in decision-making at the highest levels.

Even after Western contact, as there appeared to be a severed break from tradition and the Hawaiian race was predicted to end, moʻokūʻauhau remained ingrained in Hawaiian society and thinking. During the 1873 Mōʻī election between Emma and Kalākaua, and again after the illegal overthrow of Queen Liliʻuokalani in 1893, moʻokūʻauhau remained a deciding factor for leadership in the minds of Kanaka. In her discussion of the significance of moʻokūʻauhau in politics, Kameʻeleihiwa (1992) asserts:

> From the Western point of view, the real issue was who would make a better sovereign, with regard to the political views of the candidates. From the Hawaiian standpoint, it was genealogy that determined the quality of any proposed sovereign. (p. 20)

Even after Kalākaua won the election and served as Mōʻī, he continued to research and establish/institute/verify/authenticate moʻokūʻauhau to legitimize and sanctify his position as well as to empower the lāhui through this tradition (Silva, 2004).

Kalākaua is known for reinstituting the practice of hula, in public, and establishing the Hale Nauā to document traditional knowledge. What is less commonly known or at least not widely discussed is the Papa Kuʻāuhau o Nā Aliʻi Hawaiʻi (board of genealogy) was also established under Kalākaua. Silva (2004) translates the mission of the Papa Kuʻāuhau o Nā Aliʻi Hawaiʻi in the following way:

> In this era, the acknowledged members of the royal lines (Kamehameha and Kalākaua) were lacking in progeny, so it was necessary to determine other genealogical lines that could be verified as aliʻi nui. Those considered for high positions had to have genealogies that went back to the origin of the world; their genealogies thus were indistinguishable from traditional cosmologies.
>
> … The projects of interest here performed by the Papa Kūauhau Aliʻi were done for specific political reasons and not simply as knowledge for knowledge's sake. The reason for determining the aliʻi nui and re-affirming the sacred in tradition was to keep the rule of Hawaiʻi in Kanaka Maoli hands. The identification of aliʻi nui and transcription of mele and moʻokūʻauhau worked to define the nation as the lāhui Kanaka and began the development of national narratives. (pp. 94-95)

According to Silva (2004), the underlying purpose of the Papa Kuʻāuhau o Nā Aliʻi Hawaiʻi was to verify the moʻokūʻauhau of aliʻi nui who could then claim leadership roles in the Kingdom. This demonstrates how moʻokūʻauhau remained important to aliʻi and the leadership of Hawaiʻi throughout the Kingdom era – even warranting the establishment of an elite board to examine moʻokūʻauhau, along with accompanying moʻolelo and mele.

While knowledge of moʻokūʻauhau was reserved for and mainly called upon by aliʻi for political gains, today the research and recording of moʻokūʻauhau is a common and ongoing practice for Kanaka. Oliveira (2014) notes, "this desire to know one's roots has been exacerbated by detrimental practices that have severed the bonds between the people and the ʻāina." Through ancestry and relationships to place, we are able to honour the shoulders on which we stand and identify ourselves as Kanaka.

Moʻokūʻauhau maps our resiliency and continuity as a people in this pae ʻāina and across Oceania. According to Kameʻeleihiwa (1992), moʻokūʻauhau, like the Kumulipo, are "an unbroken chain that links those today to the primeval forces – to the *mana* (spiritual power) that first emerged with the beginning of the world" (p. 19-20). Our moʻokūʻauhau, as Kanaka, extends even beyond the first human to show us that we are descendants of akua and connect to the very creation of the universe.

Moʻokūʻauhau give us "the comforting illusion of continued existence," and perhaps more significantly, the inherited mana (Kameʻeleihiwa, 1992). Perkins (2019) explains that beyond the illusion, "mana, rather than lineage or continuity, constitutes the actual significance of moʻokūʻauhau" (p. 73). Within this continuity, moʻokūʻauhau represents our resistance – that we still exist despite widespread diseases (i.e. leprosy, diabetes, and addiction/substance abuse), ongoing systemic oppression stemming from colonialism, and the continued occupation of Hawaiʻi. Part of resistance involves recognition and focus on our strengths, not deficiencies (Kanaʻiaupuni, 2005). It involves an understanding of agency and what Beamer (2014) terms as "ʻŌiwi Optics."

If by nothing else but our very survival, we continue to resist. In a talk at the 2004 Research Conference on Hawaiian Well-Being, Dr. Pualani Kanahele (2004) shared advice for remaining grounded today:

1. Know the cycles and the rhythms of our universe, whether the sun, the moon, the winds, the ocean currents, the clouds, or the rains. These things are still the same, they have not changed, and they are not going to change.
2. Everything around us has a function.
3. Know your place as a human in this environment.
4. Survival is knowing that there is a hierarchy; There is something more powerful than you. Experience is knowing that you and I belong to this hierarchy. Our kūpuna taught this.
5. Hawaiian practitioners live comfortably in both worlds because they know who they are. They know *why* they are and they know *what* they are. And they know what they must continue to *be*.

She uses these five steps for maintaining sanity and acknowledges that these are not new ideas but lessons that have been passed down for generations. Kanahele's advice invites us into a Kanaka worldview and, among other things, underlines the importance of connecting with your environment and understanding your relationship and positionality. This advice is helpful, not just for resiliency, but in also maintaining pono, or finding balance, and thriving in the world.

Moʻokūʻauhau as Kuleana

Insofar as it sanctified the rank and rule of aliʻi, moʻokūʻauhau functions as a criterion for determining kuleana, leadership, and service. Understanding the importance of moʻokūʻauhau involves a recognition of the kuleana (ancestral responsibility and privilege) that are inherent in relationships. Crabbe (2017) explains:

> Like mana, concepts of pono and kuleana were not static, and there were socio-cultural factors that influenced their meaning and application throughout time… An individual had multiple and simultaneous kuleana to the land, to his or her family, to the community, and to the gods. Fulfilling kuleana by acting in pono ways was considered an important way for Native Hawaiians to maintain and enhance mana. (p. 38)

Kuleana are dynamic and dependent on a variety of factors, including age, gender, ʻoihana, and moʻokūʻauhau. All of these factors are interwoven but, for the purposes of this study, I primarily focus on moʻokūʻauhau. I briefly discuss how age, gender, and ʻoihana were considerations in regard to selection of research participants and results later in this chapter.

The kaikuaʻana (elder sibling) and kaikaina (younger sibling) relationship illustrates how a relational order and associated kuleana are established within moʻokūʻauhau. The kaikuaʻana and kaikaina relationship is exemplified in the moʻolelo of Hāloa, the first man. Hāloa is the kaikaina and kalo and ʻāina are the kaikuaʻana. Since all Kanaka descend from Hāloa, we too are kaikaina to ʻāina and thus have inherited both the privilege and responsibility to care for ʻāina as our kaikuaʻana. In this way, the kaikuaʻana-kaikaina relationship underlines the significance of interdependence within Hawaiian culture and the principle of mālama ʻāina.

In regard to birth order, Mary Kawena Pukui and E.S. Craighill Handy (1972) discuss the law of genealogical precedence and its role in Hawaiian society. While pointing to Lewis H. Morgan's incorrect interpretation of Hawaiian marital customs, Pukui and Handy (1972) explain a fundamental importance of moʻokūʻauhau:

> If it were unknown whether a woman's child was fathered by an elder or younger brother, how could the child be classed genealogically as of kuaʻana or kaina derivation? And yet, such classing of every child is universal, absolutely fundamental, and primary, not only in Hawaiʻi but throughout Polynesia, determining precedence, function, inheritance, etc. (p. 64)

It was indeed this genealogical precedence that was used as a tool for structuring society or at the very least, for ordering relationships within units of society (i.e. older sister vs. younger sister in a family). This in turn guides the creation and authority of rituals, ceremonies, and protocols. Put another way, moʻokūʻauhau is a determinant of kuleana and levels of access within different spaces and contexts.

The ʻike that you have kuleana to/for, or the knowledge you are permitted to access to, is sometimes based on your moʻokūʻauhau. Kamakau (1964) agrees, in discussing the kuleana maintained by akua and Kanaka, he states, "only through the blood lineage (koko i eweewe mai) of the ancestors does the kuleana come" (p. 66). If your moʻokūʻauhau confers the mana and subsequent kuleana to access something or some place, then you are permitted access from the present or past gatekeepers. Expanding on this belief, Crabbe (2017) writes:

> Like the aliʻi, makaʻāinana inherited mana and kuleana through their genealogies… Individuals were privy to specific knowledges, areas of learning and skills based on their genealogies… In this way, genealogies were primary determinants of learning systems within a family, and genealogies naturally sorted students into "classrooms." (p. 30)

Thus, moʻokūʻauhau serve as a criterion for access to information, learning, and knowledge. The ʻohana you belong to through hānau or hānai, or that you can otherwise link to (based on things like ʻoihana, one hānau, etc.) may warrant access. Other factors related to loina, like the particular knowledge domain or community concerned or the particular context in which you request access, certainly contribute to the level of access granted. Whether it be access to a particular moʻolelo, practice, person, or ʻāina, it is important to consider your intentions or reason(s) for requesting that access as this may also impact what is shared. So, while moʻokūʻauhau provides a foundation for access, it isn't the sole consideration and does not always warrant complete access to a community, place, knowledge domain, etc.

Moʻokūʻauhau as Methodology

Moʻokūʻauhau represent and guide Kanaka epistemology, and are therefore key to my approach in this study. Moʻokūʻauhau remain central to the relational dimensions of all exchanges and will guide protocols to ensure pono (proper, righteous) interactions and outcomes. Moʻokūʻauhau is commonly seen as a way for Kanaka to connect with ʻāina and other kūpuna. Baker (2015) explains that Kanaka "identity is constructed through

moʻokūʻauhau and the existing relationships with, and teachings of, our kūpuna" (p. 124). It follows that moʻokūʻauhau is not only an objective of our research but a methodology through which we gather and present information as well. Furthermore, moʻokūʻauhau are critical to decolonization and consciousness, which is one of the objectives of the research.

Moʻokūʻauhau are carried in mele, in practice, and in text. Early writings by Kamakau, ʻIʻi, and others exhibited a moʻokūʻauhau methodology (hoʻomanawanui, 2019, p. 58). Oliveira (2014) further asserts:

> In spite of their numerous inconsistencies, cosmogonic genealogies are useful for modern scholars in that they give us an idea of the sequence of events that occurred in ancestral times… Such histories enable us to better understand our ancestors' quest to live in harmony with nature, because dualism – including the balance between humans and nature, humans and gods, and men and women – is commonly reflected in cosmogonic genealogies. (pp. 23-24)

Oliveira's discussion explains and, at the same time is an example of, the significance of moʻokūʻauhau as history. Without question, Kanaka scholars maintain this tradition and continue to acknowledge moʻokūʻauhau as contributing to their position, research method, and overall scholarship. In the same way, I too sought to use moʻokūʻauhau as a methodology in this study.

Much to my excitement, just as I was writing this methodology section, an entire book dedicated to the use of moʻokūʻauhau in research was published with essays by Kanaka ʻŌiwi authors, titled *The Past Before Us: Moʻokūʻauhau as Methodology* (2019). In one of its chapters, hoʻomanawanui (2019) explains that "recognizing moʻokūʻauhau - establishing kuleana, making connections - and utilizing such an approach as methodology is to sail in the wake of our ancestors, to hoʻi i ka piko, return to the source, of our knowledge our inspiration" (p. 65). hoʻomanawanui (2019) asserts moʻokūʻauhau is a research methodology and it establishes the kuleana and kūlana of the researcher – "this is the cultural foundation of our intellectual history as ʻŌiwi scholars, or at least is something we should be striving toward" (p. 58). This study seeks to extend the use of moʻokūʻauhau in the discipline of library and information science and in the ways we organize, represent, and provide access to information in libraries and archives.

As discussed, moʻokūʻauhau imparts systems of order in a Kanaka worldview. In doing so, moʻokūʻauhau provides a lens for analysing and understanding within the context of a

hierarchy of relationships. A moʻokūʻauhau methodology then, usually includes analyses of parts to the whole, or a singular in relation to a collective (e.g. keiki – ʻohana, mōʻī – lāhui, loʻi – ahupuaʻa). After all, it is through relations that we connect and understand the mana and kuleana of Kanaka and other lifeforms.

Through a moʻokūʻauhau methodology, we also understand our role as researchers, and as librarians. We acknowledge our positionality and recognize necessary limitations to access within different spaces and contexts to maintain our relationships and achieve/realize pono (balance). Pono is sought in all exchanges throughout the research process, especially with places and communities who extend moʻolelo and expend/direct mana in shared spaces with researchers. According to Lilikala Kameʻeleihiwa (1992), "In Hawaiian, this perfect harmony [proper behaviour with land and the land's reciprocity] is known as *pono*, which is often translated in English as "righteous," but actually denotes a universe in perfect harmony (p. 25).

As exemplified by aliʻi marital traditions, like punalua and poʻolua practices, a moʻokūʻauhau methodology is accepting of a multiplicity of relationships (as opposed to one-to-one belongings only) and transforming kūlana (standings) within various social and professional structures (e.g. ʻohana, ʻoihana, lāhui, etc.). A researcher or, similarly, a participant may acknowledge multiple kūlana and accompanying kuleana but highlight specific instances depending on their purpose or whichever brings them the most appropriate leve of mana in that instance.

The significance of nature and environment is inherent in a moʻokūʻauhau methodology, as evidenced in the Kumulipo and numerous moʻolelo. The naming and attribution of elements to akua illustrates the deep ties and reverence for nature in a Kanaka worldview. From this, we learn that the sacred and secular cannot be separated in any research that aims to enhance understanding using a moʻokūʻauhau methodology. As challenging as it is to acknowledge and integrate spiritual experiences and understandings in academia, we cannot desegregate ourselves (or our research participants) from the spiritual and therefore should not do so in our research and writing either. Because Kanaka are genealogically tied to ʻāina, aloha ʻāina is inherent in a moʻokūʻauhau methodology. The underlying outcome or objective of using a moʻokūʻauhau methodology is to affirm ʻohana relationships and hoʻohanohano, or honour and give distinction to, ancestry and ʻāina – whether it is the topic of study itself or a place that you, or your topic, originate from or otherwise relate to.

Moʻolelo

Moʻolelo is a general term for a ʻnarrativeʼ and often translated as a ʻstoryʼ, but it can also be translated as "history, tradition, literature, legend… chronicle, record, article" (Pukui & Elbert, 1986). To help provide further context, Pukui and Elbert (1986) note that moʻolelo derives from two words – moʻo and ʻōlelo. Moʻo translates as "succession, series, especially a genealogical line, lineage" (Pukui & Elbert, 1986), and ʻōlelo translates as "language, speech, word, statement, utterance; to speak, say, converse" (Pukui & Elbert, 1986). So, moʻolelo literally translates to the "succession of talk" (Pukui & Elbert, 1986), and is a fundamental way of preserving and sharing history and culture (Baker, 2015).

Moʻolelo are used as a means of dissemination, and shared intergenerationally, moʻolelo serve as a means of knowledge transmission. As will be discussed further in chapter 5, there are various types, or genres of moʻolelo (hoʻomanawanui, 2017). Up until the mid-1800s, ʻŌlelo Hawaiʻi was an entirely oral language. A famous ʻōlelo noʻeau, or Hawaiian proverb, tells us "I ka ʻōlelo nō ke ola, i ka ʻōlelo nō ka make" which literally translates to "in speech there is life and in speech there is death" (Pukui, 1983, p. 129). The spoken word is thus understood to hold power, and orality is regarded as a prized skill for Kanaka. It is through the succession of moʻolelo that Kanaka maintain our history, culture, values, and livelihood. Lipe (2016) maintains, "The livelihood of the Hawaiian people – our entire knowledge system – depended on the continuity of moʻolelo as spoken and taught to the next generation" (p. 54). In this way, moʻolelo can be understood as a method for recording and retaining knowledge.

Moʻolelo are the hua (fruits, yields, offspring) that come from moʻokūʻauhau and the ʻike attained with each generation. Moʻolelo review ancient places and genealogies through to today, memorializing the lives of those that have come before us and imprinting information for those to come. According to Arista (2018):

> In accordance to the specific purposes for which a genealogy is to be used, its recitation often moves beyond a mere list of names and generations to embrace other historical genres (moʻolelo) relating to the lives of those same named persons and their place in society. The list (papa helu) comprising a genealogy (moʻokūʻauhau) is a mnemonic device meant to trigger a web of historical associations that is to serve as a set piece for broader conversations and contestations over social, religious, and political power, for which the technical conventions of written history are not well suited. (p. 437)

As such, moʻokūʻauhau document our ancestry, and moʻolelo animates that ancestry, documenting the "web of historical associations" and being performed to expound upon our experiences past and present. hoʻomanawanui (2017) reminds us that, "moʻolelo Hawaiʻi is not just geographically located in Hawaiʻi; it has genealogical roots to the wider oceanic space and cultures of Moana Nui" (p. 50). Thus, moʻolelo expound on our relationships not just within Hawaiʻi but throughout Moananuiākea as well.

An imposed classification has sometimes been made between moʻolelo and kaʻao – moʻolelo in this case referring to what is sometimes denoted as 'non-fiction', and kaʻao being associated with fables and mythology. According to Kanahele (1986):

> Traditionally, moʻolelo referred to a true narrative either about historical figures or about the gods, or both. Insofar as it tells of the akua, it is a sacred story - a true myth. However, the word was also used to refer to secular narratives dealing with folklore, such as legends and family stories. Although they were often based on historical and factual accounts, they were not holy or sacred. This dual use of the word suggests that perhaps the line between the secular story and the sacred story was not always clearly drawn. (pp. 52-53)

Within this thesis, I use moʻolelo as an umbrella term inclusive of moʻolelo and kaʻao. Being as other cultural expressions are often embedded in moʻolelo, I understand moʻolelo as containers that carry, or transfer, mele, oli, ʻōlelo noʻeau, inoa ʻāina, and moʻokūʻauhau. Whether to communicate factual events, or values or lessons, moʻolelo serve a purpose in knowledge transmission.

Moʻolelo as Identity and Mana

Kanaka identities are shaped by our worldviews, morality, values, origins and histories, all of which are infused and encapsulated within moʻolelo. Archibald et al. (2019) states, "Like all people, our stories were part of articulating our world, understanding our knowledge systems, naming our experiences, guiding our relationships, and most importantly, identifying ourselves" (p. 5). Oliveira (2006) further expands on the role of moʻolelo:

> Through moʻolelo, Kanaka Maoli were able to maintain a link to the past, describing the outstanding feats of one's ancestors, chronicling events that happened at a particular locale, explaining the meanings of place names, attributing the formation of certain land features to the gods, and the like. (p. 113)

As such, moʻolelo represent one of the key ways we come to know culture and, speaking

more generally, one of the principal ways we come to know as individuals, and collectively.

Moʻolelo are a product of culture and thus also representative of our culture and worldviews. Moʻolelo are shared about ʻāina and akua in order for us to better understand these places, elements, environments, and cycles. Moʻolelo are recalled to communicate events, interactions, and experiences of the past and present, and to make sense of these too. One of the principal examples of this is the Kumulipo, which tells the moʻolelo of creation and in so doing, names important places, elements, and life forms, and identifies existing relations within the lāhui Kanaka. As a moʻolelo, the Kumulipo tells us our relationship to all other forms of life, and places us within a moʻokūʻauhau of the universe. In the ways that moʻokūʻauhau like the Kumulipo are passed through generations, and sometimes beyond source communities, moʻolelo serve as a means to share experiences with others through temporal space and time.

Moʻolelo codify our values – providing examples of acceptable behaviors and warning of potential consequences of misconduct. Baker (2015) notes, "our traditional *moʻolelo maoli* 'indigenous stories' are filled with not only plots and characters, but also code of conduct in connection to general life and extending to high ceremony" (emphasis in original) (p. 123). Moʻolelo carry lessons and societal values that we can learn from – moʻolelo tell us about how our kūpuna constructed their lives and how we can pattern our lives, drawing from their mana and building upon the foundation they've laid for us. We, as Kanaka, are embodied in the characters themselves each time the story is told. We understand ourselves, as well as those before us, those around us, and those to come, within the frame of moʻolelo. Essentially, moʻolelo provide contexts for locating and understanding ourselves within this journey. It also reminds us that we are often not the first to walk along this path, or face obstacles, and that our kūpuna have been triumphant, as commemorated in moʻolelo. Moreover, moʻolelo inform us of the mana in our environment and the resources available to us, as well as how to care for resources and how they in turn nourish and sustain us. The continuity of moʻolelo also speaks to their significance for our communities – we continue to tell stories that hold relevance to us, for our identities, being, and continued survival.

Moʻolelo as Resistance and Resiliency

Moʻolelo not only tell about the resistance and resiliency of our ancestors but are also a representation of the resistance and resiliency of Kanaka. While moʻolelo were mainly shared

orally in ancient times, the tens of thousands of pages of Hawaiian language newspapers show how Kanaka embraced this new technology to preserve and perpetuate moʻolelo and ʻike Hawaiʻi in print (hoʻomanawanui, 2017; Nogelmeier, 2010). Notwithstanding foreign-introduced diseases which caused massive population collapse, and in spite of colonization, the pressures and policies of assimilation which seek to supplant our culture with that of mainstream U.S.A., and the ongoing occupation of Hawaiʻi, we persist and we continue to pass moʻolelo through generations today. Like our kūpuna before us, Kanaka continue to adopt technologies that perpetuate and propel our moʻolelo forward.

Pointing to the "system of power" and the ways in which we can keep it "in check," Kanalu Young (1998) states:

> The system of power that ultimately supports the term history as a Western academic discipline and concept is the same source that assumes terms like "precontact" and "prehistory" are necessary, even indispensable. That system of power is held in check with the use of the term *moʻolelo*. In this way, the work is for the Native scholar, removed from the foreign categories of ethnographic history or cultural history. To reiterate, there is no reason why such a work must be defined solely within the *pūʻolo* with other forms of *ʻike kūpuna*. This is the paradigm from which it came and it is where such knowledge should ultimately be maintained with *pono*. (p. 21)

Young's (1998) concern about the limitations placed on the term and concept of 'moʻolelo' within Western systems of power, exemplifies the issue with employing Western concepts for ʻike kūpuna. Taking the issue beyond the academic discipline of history, this study extends Young's assertion to the entirety of Western academia, especially as organized and represented in libraries – we must remove "foreign categories" and situate ʻike kūpuna within a Kanaka paradigm.

Young (1998) advocated for Native scholarship and for Native paradigms that uphold pono. To this end, Archibald et al. (2019) explain the healing work of moʻolelo and haʻi moʻolelo (storytellers), "Acutely aware of the way in which research as a tool of colonization has scripted our stories with encryptions of hegemonic oppression, Indigenous storywork seeks to rectify the damage and reclaim our ability to story-talk, story-listen, story-learn and story-teach" (p. 7). Thus, moʻolelo can be understood as yet another form of reclamation – not just of our stories themselves, but as part of reclaiming moʻolelo abilities and moʻolelo as a methodology.

Moʻolelo as Kuleana

Moʻolelo communicate the privilege and responsibility of kuleana. In the moʻolelo of Māui, for example, we come to understand that Māui's kuleana to his mother and community drives him to capture the Lā (sun), so that his mother's kapa can dry properly. The moʻolelo also imparts that it is because of Māui's actions and negotiations with the Lā that the seasons were created.

Moʻolelo also communicate the importance of experimentation and research for the betterment of our communities. In the moʻolelo of Māui where he discovers fire, Māui experimented with different materials until finally, the secret of fire was revealed to him. The moʻolelo tells of the trickster alae (red hen) but also highlights Māui's persistence, through which he is able to learn about fire with the eventual help of the alae.

As a method of knowledge transfer, moʻolelo represent a critical stage of the research process – that is, the dissemination of research. The way research is articulated and disseminated, and the audiences that are provided access to these moʻolelo, affect the impact. It is important to find ways to share research with Indigenous peoples and in medias appropriate to our communities, whether it be written or oral as moʻolelo in narrative form, mele, poetry, testimonies, doctoral theses, etc.

There was, and to some degree remains, the question of who has kuleana in moʻolelo. Authors publicly debated the printing of moʻolelo in nūpepa when the technology became available, and went back and forth about whose kuleana it was to document moʻolelo in written form and about how much to share openly. While the numerous articles and editorials by Kanaka from across Hawaiʻi demonstrate healthy debate, the discourse highlights the kuleana of Kanaka to continue to pass on moʻolelo intergenerationally, while also maintaining its integrity. hoʻomanawanui (2017) explains this kuleana, highlighting the skill involved:

> Practical knowledge related to daily life, such as planting crops, fishing, seafaring, healing arts, and so forth, were important to remember and pass on. It took particular kinds of logic, poetics, and skills of organization within a solely oral environment devoid of writing to remember, catalogue, and transfer ʻike (knowledge) successfully from person to person across the community, and across generations and time periods. (p. 60)

The techniques and protocols for sharing moʻolelo vary, sometimes depending on the type of ʻike, the intent and purpose of the moʻolelo and storyteller, or the moʻokūʻauau and kūlana of the storyteller or the audience, for example. As the quote above notes, our kūpuna were highly skilled in the organization of knowledge and transfer of knowledge, for generations and generations. It remains our kuleana, as Kanaka, to remember, access, reflect upon, and pass on moʻolelo, and the ʻike contained within them, as appropriate to the continuity, survivance, and wellbeing of our moʻokūʻauhau. Drawing from the techniques and protocols for knowledge organization that our kūpuna developed – that are documented for us in moʻolelo, and that we still employ in our communities – we can advance knowledge organization in libraries to allow for the appropriate care and succession of moʻolelo.

Moʻolelo as Methodology

Intriguingly, there can be multiple versions of a moʻolelo, oftentimes based on the place of origin, moʻokūʻauhau, or the storyteller, for example. Moʻolelo not only recount our relations but, consistent with Kanaka epistemologies, exhibit relationality as a methodology. Kovach (2009) notes, "As a form, it is no wonder that narrative is a primary means for passing knowledge within tribal traditions, for it suits the fluidity and interpretative nature of ancestral ways of knowing" (p. 94). This aptly applies to Hawaiʻi and underscores the diversity of perspectives within Kanaka communities and the multiplicity of moʻolelo in the versions spoken, performed, and written. Arista (2018) explains:

> Hawaiian pedagogy and history did not seek out a collection of facts to be synthesized into a singular truth. Instead, experts aimed to preserve multiple lines of history, as might be expected in an archipelagic context encompassing centuries of traditions, multiple chiefdoms, and various ruling families. (p. 432)

In the succession, moʻolelo may be "appended to one another" and "codified and marked for preservation" (Arista, 2018, p. 432). All versions are valid and true, depending on the person you're asking and the reason for its being told. Moreover, moʻolelo may have kaona that allow for metaphor and multiple interpretations for those able to access the layered meaning. Similar to how a moʻolelo may differ depending on the storyteller, research is also particular to the researcher. Vaughan (2019) explains:

> Natural science research is often suspicious of subjectivity, striving for replicability, where any research team that conducts the same study following the same procedures should get the same results. Let your research, like lei, be shaped by your hands, the changing environment from which you gathered

> your data, and the guidance of the community in which you work. This subjectivity, your unique perspective, is necessary, unavoidable, and a strength. (p. 33)

As Vaughan points out, it is not only unavoidable but a strength and, I would add, empowers the storyteller and the communities from which the story originates. In this way, moʻolelo can bring mana to, or highlight the mana of, the people, places, and practices that are featured in or that otherwise appear in moʻolelo. Oftentimes, the mana derives from the pilina exhibited within the moʻolelo itself – between any combination of akua, people, and ʻāina, for example. Moʻolelo also focus and transmit mana in the presentation or performance of the moʻolelo by the storyteller and for the various purposes that someone might be prompted to share the moʻolelo at a particular place and space, and with a particular audience.

With this in mind, my approach has been to reveal multiple truths rather than a universal truth. hoʻomanawanui (2019) asserts, "multiple versions and variants of moʻolelo are not just acceptable, but perhaps preferable, as it allows for an array of possibilities through the analysis of several perspectives and sources of knowledge in the telling and recording of story" (p. 53). The same is true of any system for knowledge transmission – whether moʻolelo or other knowledge organization systems – that is meant to serve the diversity of human experience. Representation of a range of perspectives and meta-narratives allows for increased entry points that connect and convey the differing perspectives and experiences of users.

As the oft referenced ʻōlelo noʻeau informs us, ʻaʻole pau ka ʻike i ka hālau hoʻokahi, or all knowledge is not learned in one school. This ʻōlelo noʻeau has been interpreted in various ways but I shall outline how it informs this study and underlines the need to engage moʻolelo and experiences of Kanaka communities. First, it is essential to recognize and respectfully engage those hālau, or schools of knowledge, that the knowledge organization system, and that the library, seeks to serve, in order to gather the moʻolelo, inclusive of values and protocols, that are important for each. Second, it is crucial to acknowledge the role that libraries serve as part of a particular hālau itself; while libraries may store various moʻolelo deriving from various hālau, libraries are not a universal but rather another type of hālau with its respective approach to ʻike. Last, and this builds on the second point, it is worthwhile to acknowledge which hālau and which moʻokūʻauhau are promoted by the system, especially where multiple perspectives stand, as this affords transparency, or perhaps more accurately, extends the mana from and for these hālau and moʻokūʻauhau. As part of this study, I sought

to engage Kanaka on the three areas outlined, with a focus on the Kanaka cultural context of knowledge organization.

With moʻolelo as a guiding methodology, I used a conversational, story work method to this research (Archibald, 2008). The ʻōlelo noʻeau, ʻmoʻolelo aku, moʻolelo mai', describes the use of moʻolelo as a method for the active sharing and receiving of moʻolelo (Lipe, 2016). As in other Indigenous paradigms, moʻolelo is a means of both co-creating and transmitting knowledge (Kovach, 2010; Archibald, 2008). A similar conversational method is found within other research paradigms. However, as Kovach (2010) explains, there are distinguishing characteristics within Indigenous methodologies:

> a) it is linked to a particular tribal epistemology (or knowledge) and situated within an Indigenous paradigm; b) it is relational; c) it is purposeful (most often involving a decolonizing aim); d) it involves particular protocol as determined by the epistemology and/or place; e) it involves an informality and flexibility; f) it is collaborative and dialogic; and g) it is reflexive. (p. 43)

This description aptly applies to moʻolelo as a Kanaka methodology and clarifies how the use of a conversational method in this study aligns with the significance of moʻolelo and orality within a Kanaka paradigm.

Methods

With an understanding that *how* we approach our research and work is as important as *what* we are called to research or do, this section describes the methods I used in this research – namely, focus groups and kūpuna talk story sessions. From the start, I wanted to approach research through Kanaka methodologies, however; at times, this was challenging as my research essentially surveyed the very thing I sought to emulate.

I conducted three focus groups and three talk story sessions. In total, this included sixteen participants. Further in this section of the thesis, I describe the selection of participants and rationale in more detail. Focus groups and kūpuna talk story sessions explored possible foundations for a Hawaiian knowledge domain and subsequently, the architecture of a knowledge organization system. The ʻtalk story' method was more appropriate to this study than interviews. As uncle Peter Hanohano explains:

> For us, the ceremony is about a story, and for all of those, you just have to let it flow, because it's built on relationships. And when you use a story, your own or others', it's claiming a voice and establishing a relationship. (cited in Wilson, 2008, p. 125)

In this way, unlike an interview or short-answer survey, the ‘talk story’ approach allowed for participants’ stories to emerge informally, and to weave narratives together in conversation. Moreover, Sidney Moko Mead (1990), whose influential writings on Māori art and culture and on the relations between Māori and museums, states:

> One way of recapturing one’s culture is to take control of the language of definitions and descriptions and to have members of the culture speak for themselves, present their culture such as their music, their dances and their various art forms in a manner they consider appropriate to them. (p. 165)

This aptly summarizes the importance of description and language, not just for museums but libraries as well. It further points to the community centered approach of this study, and the focus on co-creation with community. Working with community participants, we can identify frameworks, terminology, and definitions for the description and organization of ‘ike.

Put another way, because knowledge organization systems are meant to serve its community, it is important that we include community in its creation. Projects such as the Brian Deer Classification Scheme and the Ngā Ūpoko Tukutuku Māori Subject Headings, as discussed earlier, demonstrate the value of the inclusion and leadership of Indigenous peoples and their perspectives in the development of library systems. Participation of Indigenous peoples in decision-making roles is necessary to the project’s success. Māori educational researchers have been especially successful in demonstrating the importance of this, as articulated by the motto, ‘by Māori, in Māori, for Māori’ (Marshall & Martin, 2000). Furthermore, unlike Western initiatives or thinking, where innovation and research is often attributed to the individual, this is a Hawaiian initiative that is strengthened through our collective knowledge and experiences to benefit the entire lāhui or collective. Our collective thinking and process is an important part of our Indigenous methodologies.

In their study on Hawaiian leadership behaviors, Kaulukukui and Nāhoʻopiʻi (2008) suggest that:

> For a behavioral measurement instrument to be culturally significant, it must be (a) developed by someone who has a legitimate access to the information, (b) inclusive of the input of respected cultural experts, (c) worded in a way that reflects the richness of cultural values, (d) interpreted through a cultural filter, and (e) validated by cultural practitioners. (p. 101)

The same criteria can be applied to the development of a Hawaiian KOS. Oftentimes, the people who have access to the information are those with the moʻokūʻauhau and/or have established pilina with the source communities. To say that inclusion is ethical and appropriate is only part of the import. What this really offers is authority to the project – each expert contributes mana to the project and is invested because of the potential benefit to their communities, whether it be the project itself or the potential promise of the researcher(s). As such, the inclusion of respected cultural experts in the development process authenticates and brings credibility to both the process and product.

With this in mind, participants in this study were selected with consideration of their kuleana (responsibility), kūlana (role/rank), moʻokūʻauhau and pilina with myself and with each other. In the following sections, I provide further detail on these considerations – kuleana, kūlana, pilina – with an understanding that these are not mutually exclusive and are usually overlapping.

Kuleana

It can be viewed as mahaʻoi (impertinent, rude, or presumptuous) to go to other communities to gather their resources, especially when your own community is resource rich. In the same way, Mehana Blaich Vaughan (2019) explains that "it takes time to get to know a new community, its lands, people, and issues" and therefore recommends that researchers "consider whether you might be able to cultivate a research site in your own hometown, or in a place you have already been working, rather than going to another community" (p. 31). Essentially, it is important that researchers understand our respective kuleana (responsibility and privilege) in research and in communities.

Kamanaʻopono Crabbe (2017) states, "the process of fulfilling one's purpose is facilitated when they understand kuleana" (p. 194). Crabbe (2017) continues:

> kuleana includes leadership, power and authority, collective experience and responsibility, and skill… Connecting includes a tie or bond among and between the self, the ʻāina (land), akua (gods), kūpuna, ʻohana (family), others, and experiences. This connection is developed through relationships with one's ancestors, having discipline and practicing kapu (restrictions), gaining ʻike (true knowledge), and having faith and trust in something greater than the self that directs or creates opportunities. (p. 194)

With this in mind, I decided to prioritize kuleana in how focus groups were formed. Part of what informs kuleana comes from your pilina to places, environment, and people. Considering the kuleana of participants and how their respective kuleana – to specific ʻāina, to particular communities of practice, and to lāhui (nationhood) – might inform a knowledge organization system, I decided the focus groups would encompass the following, respectively:

- Cultural practitioners from a single hālau – a hālau hula composed of a kumu hula and select poʻe hula (dancers).
- Scholar-Practitioners – Kanaka living on Maui who are cultural practitioners and actively pursuing doctoral research; and,
- Kumu – Faculty members in the University of Hawaiʻi System who are of Hawaiian ancestry and have varied academic backgrounds.

Kūlana

> "Hawaiian practitioners live comfortably in both worlds because they know who they are. They know *why* they are and they know *what* they are. And they know what they must continue to *be*." (Kanahele, 2004, p. 29)

Due to time and budget constraints, I had to be selective in who I included in this study. Face-to-face gatherings were a requirement for the project and I didn't have the necessary funds to travel to each island. To ensure a variety of perspectives, I used a purposeful sample of cultural practitioners and scholars. Because the resulting knowledge organization system will need to serve our lāhui Hawaiʻi, it was important that focus groups represent a diversity of experiences and backgrounds, ʻoihana (cultural practices), and hālau (schools). Along these lines, one of the main criteria for selecting participants was kūlana (role/rank).

With the understanding that kūlana change depending on context, I selected participants who are recognized as experts in their communities of practice and in the broader community as well. This was especially the case when selecting kūpuna to participate – while some participants may not have a PhD or even a bachelor's degrees, they are held in high esteem as expert practitioners and leaders in our Hāna community. So, whereas some people might say 'be sure to check *this* and *that* book' if you're doing research on a particular topic, we are fortunate in Hāna that we can still refer to kūpuna and other loea who have acquired applied knowledge on a variety of topics from storytelling to fishing to agriculture.

Culturally, I knew that the level of expertise a person has attained may affect group dynamics. In Hawaiian protocol, it would be hugely disrespectful for an ʻōpio (youth, junior) to interject or question a kupuna while they're speaking. Similarly, it might be a sign of disrespect if a poʻe hula were to challenge their kumu hula in discussion. These are all important considerations when deciding how to organize the working groups. With these general parameters in mind, I brainstormed possible participants and performed a social network analysis to select participants to invite. So, kūlana was also a consideration for participant selection in terms of how this might affect the overall group dynamic.

Moʻokūʻauhau and Pilina

The kaikuaʻana-kaikaina relationship discussed earlier can be expanded beyond genealogical bloodlines to include distinctions in knowledge and experience (similar to the relationship between kumu and haumana) (Lipe, 2014). Saffery (2016) asserts, "one becomes a part of these many moʻokūʻauhau not only through familial ties but also through sustained practice, presence, and commitment to people, places, and causes" (p. 113). Thus, our understanding of moʻokūʻauhau can be expanded to include various genealogies in our personal, cultural, academic, and professional lives (hoʻomanawanui, 2019; Lipe, 2014; Saffery, 2016).

Hawaiian protocols show that it strengthens your research and practice when you have an established relationship with your research participants and impacted community. Kū Kahakalau (2019) explains that in the Māʻawe Pono methodology, a vital aspect of preparing for research is "establishing and/or solidifying personal relations… Making time and effort to establish amicable, familial relations among all research participants is crucial, because a lack of trust can tremendously limit the outcome of the research" (p. 19). The success of the research is dependent upon the relationships formed, maintained, and deepened.

Taking this further, success is not only dependent on relationships but measured by the strength of the relationships between researcher and participants (Lee, 2019). Kovach (2009) places this within the context of an Indigenous ethical framework which encompasses respect for relationships, purpose, sacred knowledge, and giving back. The health of the reciprocal relationship is of equal, if not greater, importance than all other outcomes of the research or partnership entered into by researcher and research participants.

Additionally, it was important that participants not only have a connection with me but also pilina with each other that would allow participants to feel comfortable enough to share and discuss together during working group gatherings. For this reason, I selected hui that already had an established pilina amongst themselves, and were already meeting together prior to and outside the scope of this study. In the case of the Practitioner-Scholar group, I had already formed professional and then personal relationships with the selected participants over the past three years at the University of Hawai‘i Maui College where we are all employed.

Having studied at the University of Hawai‘i (UH) during my undergraduate and graduate studies, and continuing to work within the UH System, I was able to form and develop a pilina with UH faculty member. In fact, the selected participants in the Hui Kumu were also some of the participants interviewed as part of my Master's thesis, *Toward a Hawaiian Knowledge Organization System* (2015), which began the formal examination that would continue to be developed in this doctoral thesis. Thus, including them here allowed us to continue those early conversations and build upon them – this time more collectively in group discussions.

In the case of the hālau hula group, I am not a po‘e hula however I was able to make a connection and be allowed access to this group through a close friend, colleague, and po‘e hula (who preferred to maintain anonymity). Use of "intermediaries" is a culturally appropriate way of approaching potential participants, as Wilson (2008) notes:

> One important Indigenous research practice is the use of family, relations or friends as intermediaries in order to garner contact with participants. This use of intermediaries has practical uses in establishing rapport with research participants and placing the researcher within a circle of relations. This in turn enforces the accountability of the researcher, as they are responsible not only to themselves but also to the circle of relations. (p. 129)

Without my own personal pilina with my friend, and hers in turn with her kumu hula and fellow po‘e hula, it would not have been possible to convene this group nor to achieve such a level of trust and comfort in discussion that we did.

Finally, the last consideration for participant selection was the way in which location – participants' one hānau (birthplace) and mo‘okūauhau – informs perspective. For this reason, I decided to include participants from two islands – Maui and O‘ahu. I selected Maui for obvious reasons, mainly this being my one hānau, where I live, and therefore where I have

not only pilina but kuleana as well. I selected Oʻahu because I had already established pilina there during my undergraduate and graduate studies. Being as each island is unique, I purposefully included participants who live on different islands to help capture variances in perspectives and experiences, and to survey local contexts, at least at the island level, which would not have been possible if study participants were to be limited to just one island.

Talk Story with Kūpuna

I've chosen to name this subsection "Talk Story with Kūpuna" because it better reflects the nature of the way that I engaged with my participants. 'Talk story' is more appropriate to the situation than the term "interview" for example. Several ʻōlelo noʻeau explain the importance of in-person 'talk story' –

ʻŌlelo Noʻeau	English Translation
Hoʻopili ka manaʻo i ke kūkākūkā	Discussion brings ideas together
Hili hewa kahi manaʻo ke ʻole ke kūkākūkā	Ideas run wild without discussion Discussion brings ideas together into a plan. (Pukui, 1983, p. 106)
He alo a he alo	Face to Face (Pukui, 1983, p. 21)

Lopes (2010) explains, "It is when our alo and the alo of our mentors are attentive to one another that the most effective teaching and learning opportunities occur. This type of experience is known as "he alo a he alo" (Face to face)." Expanding on the significance of face-to-face discussions, Lopes states:

> He alo a he alo" is the way in which relationships are built and the way knowledge is transmitted, communicated, and received. There is no other clearer way than to be in a relationship or in communion with another person "he alo a he alo. (p. 122)

Taking this into consideration, it was important to honor the pilina with kūpuna, and their moʻolelo, he alo a he alo.

Kūpuna commonly refers to grandparents or relatives, or close friends, of the grandparent's generation (Pukui & Elbert, 1986). Kūpuna can be used to refer to ancestors, both living or in the past. The term can also be translated as a "starting point, source; growing" (Pukui & Elbert, 1986). Taken literally, the term illustrates how kūpuna are held in high regard as

rooted springs of knowledge (Andrade, 2008). According to Andrade (2008), "kūpuna are living roots binding indigenous people firmly to island homelands and to more far-flung islands touched by distant ancestors over millennia" (p. 123).

Kūpuna are our genealogical connection to place. It is through 'talk story' with kupuna coupled with extended interactions with 'āina (also kupuna) that we gain access to our stories and build strong epistemological foundations. Andrade (2008) explains:

> When traveling through the land in the company of those kūpuna who live close to land and sea, one can see, hear, and learn about the character of Hā'ena. This often happens in the process of "talking story" while spending time with them. The stories kūpuna share link particular places or features of the 'āina to events or beings from the past, as well as to their own personal experiences of these places. As they pass through the land or venture out onto the sea, kūpuna are constantly reminded by everything surrounding them that the past lives in the present. This intimate, constant association between the aboriginal people and 'āina is the foundation for their physical, mental, and spiritual relationships with the world. (p. 3)

Therefore, to gather in-depth insight around Kanaka worldviews and knowledge, I visited and talked story with four kūpuna from Hāna, Maui who could speak to the values and mo'olelo of our community. Kūpuna were selected for this study because they are viewed highly by our community for their knowledge and cultural practices and because of the mentor and leadership roles they continue to serve in Hāna. Like our 'āina hānau, kūpuna continue to feed us, literally and figuratively through the stories, education, and direction they provide us. Acknowledging the preservation of mānaleo in archival collections, Oliveira (2004) highlights the importance of valuing kūpuna today and the knowledge they hold:

> While we are fortunate that these archival collections are accessible today, it is equally important for current generations to show an interest in the 'ike of today's kūpuna. Like their ancestors, many kūpuna today are in search of people worthy of being taught the knowledge they possess; however, displaying an interest in an ancestral practice does not guarantee that you will be selected as a haumāna. Masters of trades do not always have an open-door policy that allows anyone and everyone to study with them... It is important to Kanaka knowledge systems that we seek out and listen to respected cultural practitioners if we are to maintain our unique cultural identity as Kanaka. (p. 99)

As is usually the case with talk story sessions, each took place in-person and usually included food. Being the person requesting the visit, I went to meet each kūpuna at places of their choosing. I was excited when each of them asked to meet at places significant to their 'ohana and/or their cultural practice – not just because of the beauty of these places but because I

knew they'd be "in their element", making their stories all the more vibrant. For each visit, I brought food for them and their families as a makana, or gift, as is appropriate when visiting anyone, especially for the purposes of 'talk story' gatherings, and also symbolic of the ways their ʻike and moʻolelo feed me in return.

Each talk story session varied in length from approximately 1.5 hours to 4.5 hours. Admittedly, each could have gone on for much longer, with each kupuna having so much to share and I sitting eagerly trying to soak up the stories and ʻike being shared. To put kūpuna at ease, I did not audio-record these visits except when invited to and granted permission by them.

Later in my writing process, I was fortunate to speak with uncle Peter Hanohano about his PhD research and writing process. He had chosen to interview kūpuna as part of his research and shared about how he could not bring himself to ask those kūpuna to sign any forms because it could be seen as disrespectful and off-putting. Like uncle Peter, I already have relationships with the kūpuna that I chose to include in this study – in fact this was one of the primary reasons I wanted to include them. These community and genealogical relationships demand respect and accountability, similar to the requirements of a research ethics review or institutional review board but extending much further beyond the scope of the research. In that sense, a much deeper agreement is being made when a kūpuna decides to share with me, or with anyone – it is as if an unspoken contract that is more weighty and meaningful than a consent form, and that you are only invited to enter into if deemed worthy by kūpuna. Younging (2016) explains that "a central dimension of indigenous knowledge systems is that knowledge is shared according to developed rules and expectations for behaviour within frameworks that have been developed and practiced over millennia" (p. 73). These rules and expectations are sometimes more stringent and involved than any prescribed protocols set by an institutional review board and should be prioritized when working with Indigenous communities. Refreshingly, the ethical requirements within a wānanga, like Te Whāre Wānanga O Awanuiārangi, however do take account of Native and Indigenous priorities, protocols, and expectations when conducting research with our communities.

Because of the established relationship I have with these kūpuna and the connections between our ʻohana – each of them having close ties with my own kūpuna who are of the similar age – I did not ask them to sign a written consent form. I have been very fortunate to have been able to build pilina with kūpuna from a very young age while growing up in Hāna. My pilina

with them is elevated by the pilina that was already established by my grandparents and parents who either attended school and grew up with them and/or worked together previously. In addition to the conversations I had with these aunties and uncles as part of this study, I have had many more informal conversations and interactions with them and their families that were not recorded but that contributed to my thinking and also offered deeper meaning to the moʻolelo and lessons they shared with me. I did not include direct quotes from these kupuna because, with the exception of a four hour talk story with uncle Blondie and members of his high school graduating class, these talk story sessions were not recorded. Nevertheless, the moʻolelo and ʻike shared was no less valuable and are reflected in my research methodology, thinking, and writing.

I lament the fact that I haven't been able to include more about what I have learned from this part of my research more directly in this thesis, however this learning and mentorship was meant for me personally. This portion of my research enabled me to better recognize and understand my kuleana in this study as well as the ʻike shared with me throughout this study, and to also prioritize aspects of my research appropriately, as informed by the moʻolelo, insight, and research priorities (although this probably isn't how they would term it) of these kupuna at the time of our talk stories.

Focus Groups

In addition to kupuna talk story sessions, I held focus groups with Hawaiian scholars and practitioners. Three focus groups comprised of 3-6 individuals each were convened twice between May 10 – June 23, 2019. Focus groups were held at: University of Hawaiʻi Maui College; University of Hawaiʻi at Mānoa; Leeward Community College; and Moanalua Middle School. The focus groups were scheduled for 2 hours, however some groups opted to continue engaged discussions for up to 4 hours.

Initial contact was made with each focus group participant via email. An information sheet providing an overview of the research and the participants' rights was provided to all potential participants. Those willing to participate were asked to sign a consent form that included options 1) for the focus group meeting to be audio recorded, and 2) for participants to waive anonymity. After a very brief discussion, the Hui Kumu reached a consensus not to audio record our gatherings and also chose to keep their anonymity. The other two focus

groups, however, provided their permission to audio record each gathering and also opted to waive their anonymity.

Because the focus group questions and activities required considerable thought and time on the part of participants, activities were split into two sessions. This also allowed time to compile and analyse the data shared in our first gathering and share it back with them during our second gathering to check for accuracy and allow for further clarification where needed.

Session 1: Identify facets and cultural frameworks for a Hawaiian knowledge organization system. Drawing from the background, expertise and experiences of participants, the first meeting centred on identifying facets and cultural frameworks for a Hawaiian knowledge organization. Discussion was focused on examples of items commonly found in library and archival collections: Palapala ʻāina (map); Kiʻi pena (painting); Nūpepa (newspaper article); Wikiō (video); Mele (song). The variation in format was purposeful and the subject matter represented by each was carefully selected to initiate conversation around particular subject areas important to a Hawaiian KOS: ʻāina, moʻokūʻauhau, moʻolelo, akua, loina, and aloha ʻāina.

Table 1 - Items used in Focus Group activities

Item	**Description**
Palapala ʻāina (map)	Depicting the ahupuaʻa and/or moku of the group's meeting location
Kiʻi pena (painting)	A painting depicting an Mōʻī – Kamehameha or Liliʻuokalani
Nūpepa (newspaper)	Chose Paʻaluhi version as opposed to Hoʻoulumahiehie which is more widely told/known.
Wikiō (video)	A clip from Kahoʻolawe Aloha ʻĀina, a film produced by the Protect Kaho'olawe ʻOhana and directed by Nā Maka o ka ʻĀina, about the cultural, political, and military significance of the island of Kahoʻolawe. The film tells about the desecration by the U.S. military who had been using Kahoʻolawe for target practice since World War II. Being a story of aloha ʻāina however, the focus is on the group of Hawaiians who occupied the island, in the Hawaiian Renaissance of the 1970s, to protest the bombing and desecration of the island.

Mele (song)	Three versions of Kaulana Nā Pua, a mele synonymous with Hawaiian patriotism.
Puke (books)	A selection of books authored by contemporary Hawaiian Studies scholars.

Selected items were displayed at stations around the room and participants were asked to come up with terms and concepts for defining and identifying each. Each participant was instructed to visit each station individually, starting off at different stations and rotating every 3 minutes. Still, the focus groups had flexibility built in as part of a co-creation process that empowered participants to take authority in this space. With that said, the Hui Kumu decided not to proceed through activities individually but preferred to go through the stations together as a group.

Participants were encouraged to move around, touch, and pick-up items. They were asked to brainstorm keywords or phrases that they'd use to identify or describe the item and/or to search for the item if doing research related to it. They were able to view the terms that others had added at each station but, with limited time, they were asked to add any terms as they see fit, even if they noticed that it had already been added. Duplicate terms or concepts were welcomed, and to some degree expected. There were no wrong answers as consensus was not an objective for this activity.

The following questions were used to prompt participants at each station -

- What is it?
- How would you describe it to someone else? (i.e. Use; Who made it; Relationships to people, place, akua, etc.)
- What would you want to know about it? What's important to know about it? (i.e. format, date, ownership, relationships, hierarchy of xx)
- What does a practitioner need to know about a piece to learn from it? An academic?
- What is important for your 'ohana to know about it?

After participants completed the activity individually, I selected 1-2 items for us to review together as a group. This follow-up activity gave participants a chance to examine the terms that others had come up with and add any additional terms that built off those existing concepts. This also provided an opportunity for participants to share about their reasoning

behind their term selection and to expand beyond the terms themselves to begin to identify priorities as well as relationships between terms (if any).

In the second part of this meeting, participants were again asked to discuss terms for a set of cultural "objects" – this time together as a group. Items used for this part of the activity were tailored for each group and so necessarily varied. Items included kapa (tapa or bark cloth), ʻohe kāpala (stamps), ipu ("drum consisting of a single gourd" – Pukui & Elbert, 1986), and different styles of pōhaku kuʻi ʻai (poi pounders). Pōhaku kuʻi ʻai were included among the objects in all three groups to allow for at least one object that all groups would have in common.

All items were placed in the centre of the group and participants were given the choice of which item(s) they wanted to discuss. Due to time limitations, not all items were discussed. Conversations moved organically from one "object" to the next; and sometimes back to previously discussed items from this part of the activity as well as items from the stations they had visited in the first part of the meeting.

Session 2: Identify the scope of a Hawaiian knowledge organization system. Following an initial analysis of focus group and interview findings, a second focus group gathering was convened with each respective focus group. Part of the purpose of this meeting was to share preliminary findings with participants for member checking – to ensure accuracy and to allow for feedback. The second objective of this gathering was to gather insight around ʻike Hawaiʻi and any perceived bounds of ʻike. To help facilitate this discussion, a photo voice method was selected.

Wang and Burris (1997) developed the photovoice method from theoretical literature on education for critical consciousness, feminist theory, and documentary photography (p. 370). Photovoice has been used in participatory action research for needs assessments, advocacy, and community change (Wang, 2006). Wang and Burris (1997) explain that photovoice "uses the immediacy of the visual image to furnish evidence and to promote an effective, participatory means of sharing expertise and knowledge" (p. 369).

According to Wang (2006), there are three principal goals for the photovoice method, as part of participatory action research:

> (1) record and represent their everyday realities; (2) promote critical dialogue and knowledge about personal and community strengths and concerns; and (3) reach policymakers. (p. 148)

With this in mind, I used a modified approach to photovoice in this study. First, I provided participants the option of either taking photos, using photos they had already taken, or finding pictures available online. Second, because the primary focus here is the design of a KOS rather than public advocacy and social action, a public forum was not included and policymakers were not involved. Still, advocacy was very much part of our discussions, particularly in regard to best practices for research with communities and the various ways a knowledge organization system could benefit participants in their own research and communities of practice. Whereas some photovoice projects are left open-ended, participants in this study were given a specific focus and asked to provide photos (up to 3) that represent ʻike and/or ʻike Hawaiʻi.

The focus of this activity was to identify the perceived bounds of ʻike Hawaiʻi (if any). I considered asking this as a discussion question but while the question could help outline the scope of a KOS, it is a seemingly impossible question. At the same time, it could be quite awkward in that its definition seems inherent and all encompassing. Another way to think about this is that it is similar to asking a white person to describe the scope of knowledge; notice how a clarifying term isn't added when concerning "Western knowledge" as it usually is when referring to Hawaiian knowledge or Indigenous knowledge or traditional knowledge – as if somehow knowledge itself derives from whiteness and anything else is treated as "other". Thus, photos were used to illustrate and elicit discussion about aspects of ʻike, including sources of knowledge, methods of knowledge transmission, distinctions in the types or levels of knowledge, etc.

The task of taking or finding photos seemed informal and enjoyable – it invited creativity and personality/perspective. This method was more appropriate as compared to having to ask participants to come up with a definition of ʻike and facilitating a theoretical discussion about knowledge. This type of discussion may not seem out of place in academia but in an invited conversation amongst my peers and mentors, it would have been forced and probably wouldn't have attained/realized/actualized the rich conversation that these visuals helped to stimulate.

Participants submitted their photographs via email and came prepared to discuss their selections with the group. Each participant took turns leading the photo elicitation – sharing stories and interpretations and subsequently contextualizing their photos. This was followed by further discussion of observations and reflections by other group members, including facilitators.

Chapter Summary

Layering upon previous chapters that introduce Kanaka methodologies, this chapter provided a discussion of moʻokūʻauhau and moʻolelo as methodological foundations that ground this study in an Indigenous research paradigm. I explained the ways in which moʻokūʻauhau and moʻolelo embody and inform Kanaka identity and mana, resistance and resiliency, and kuleana – each as essential and interrelated elements for conscientization and decolonization – then expanded on the ways both serve as research methodologies that guide this study. Essentially, as called upon as the methodologies for this study, moʻokūʻauhau centers the genealogies (of relationships) that inform the basis of consciousness and knowing, and moʻolelo carries memory and experience which transmits knowledge and consciousness. The talk story method utilized both with kūpuna and with focus groups, and the adapted photovoice method used in this study were also described; noting the ways that kuleana, kūlana, moʻokūʻauhau and pilina informed the design of this research.

The methodology shared in this chapter affirms Kanaka ways of knowing. Furthermore, it provides a methodological framework not just for this study but for the development of a Hawaiian knowledge organization system as well.

Chapter 3: Indigenous Literacy, Knowledge and Libraries

This chapter reviews the literature pertinent to Hawaiian literacy and Indigenous knowledge in libraries. I begin with a summary of the rise and decline in Hawaiian literacy. Then, drawing on the broader Indigenous context of struggle and control of knowledge, I provide an overview of the impacts of colonization on Indigenous peoples and knowledges as relates to libraries. As part of this discussion, I seek to draw attention to the role of libraries as educational and cultural heritage institutions that establish and maintain the status quo, despite historical and ongoing injury to Indigenous peoples. To do so, I provide an overview of issues regarding ownership, control, power, and access with regard to Indigenous knowledge in cultural heritage institutions and outline the inadequacies of the existing knowledge organization systems in libraries.

Hawaiian Literacy

O koʻu aupuni, he aupuni ao palapala koʻu - Kauikeaouli

Since the time of pō, our history and knowledge were maintained by memory and transmitted orally generation to generation. When print was introduced to Hawaiʻi in the early 1800s, it allowed for fixed versions of moʻolelo. Kanaka eagerly learned writing and sought out this technology as a new form to preserve and perpetuate Hawaiian knowledge (Chapin, 1996; Silva, 2004; hoʻomanawanui, 2017). Writers quickly set out to document as much as they could from throughout the Kingdom. Early Hawaiian language newspapers included writings on moʻolelo Hawaiʻi, genealogies, kaʻao, mele, spirituality and religion, social and political events of the day, world news, and more (hoʻomanawanui, 2017; Nogelmeier, 2010; Silva, 2004).

Hawaiian literacy increased exponentially with the rapid adoption of print. Kauikeaouli, son of Keopuolani and Kamehameha I, and the longest reigning monarch of the Kingdom of Hawaiʻi, is quoted as stating, "O koʻu aupuni, he aupuni ao palapala koʻu" (Mine is the kingdom of education) (Kamakau, 1868). Kauikeaouli and his government actively encouraged Hawaiian citizens to learn how to read and write and provided the infrastructure to support this decree. Schools were built throughout the pae ʻāina and were taught in a Hawaiian-language medium. The conservative estimate is that 91% of Kanaka were literate by 1834 – this meant a 91% increase in about 14 years if we consider that the literacy rate

was near zero in 1820 (Laimana, 2011). Laimana (2011) puts this further into perspective:

> By 1832, Hawaiians had surpassed the current literacy rate in the United States, which at the time was barely 78 percent. Comparatively, during the same period of 1820-1824 literacy in the United States grew by only 6 percent, while Hawai‘i experienced a break the 90 percent level until 1902—68 years later, three hundred years after the first settlers landed in Jamestown. (pp. 10-11)

Clearly, Kanaka had an appreciation for writing and demonstrated their aptitude for learning (and teaching) in how quickly the Kingdom gained near universal literacy (Silva, 2004).

Both literacy and print were important not just for education but for facilitating more widespread communication during the 1800s – a century of monumental change in our nation. ho‘omanawanui (2017) notes the significance:

> During this time of massive death, social upheaval, and political change, writing and its ability to preserve, share, and thus perpetuate knowledge in another way was a miracle. For the first time, mo’olelo ha’i waha could be written down, typeset, printed, and distributed. (p. 85)

Recognizing the complex impacts of this new technology, Silva (2004) explains:

> Throughout the nineteenth century, print media, particularly newspapers, functioned as sites for broad social communication, political organizing, and the perpetuation of the native language and culture. It has often been noted that the change from orality to literacy has eroded native forms of thought and expression, especially due to the fixing and consequent reduction in possible meanings and versions of text… For the Kanaka ‘Ōiwi of Hawai‘i nei, however, who observed the passing away of their relatives and friends in genocidal numbers, writing, especially newspapers, was a way of ensuring that their knowledge was passed on to future generations. (p. 13)

Writing in newspapers and other publications served as a vital outlet for Kanaka, however, the power of print technology was also wielded by others in Hawai‘i.

Newspapers and other publications helped to spread messages of Christianity and American imperialism. Chapin (1996) notes:

> … a print technology in Hawai‘i in the nineteenth century became a revolutionary force for change… it is print that has enabled imperialism to spread its power across continents and oceans. The imposition of print upon the Hawaiian Islands coincided with the rise of America as an imperialist Pacific power. American-style newspapers were a major contributor to this expansion. (p. 15)

Consequently, these same tools would be used to advance Western imperialism in Hawai‘i,

and across Oceania, while controlling the narrative.

Yet, largely because of its rapid and widespread adoption, by Kanaka and settlers alike, the newspapers contain a wealth of information – some of which can no longer be found anywhere else – which adds to its significance and research value. In fact, the vast Hawaiian newspaper repository serves as one of the largest collections of Indigenous writing in the world (Nogelmeier, 2010). Nogelmeier (2010) estimates Hawaiian-language newspapers printed over 125,000 pages between 1834 and 1948 – most of this being printed after 1861. Considering changes in the size of type and newspaper pages, Nogelmeier asserts "the total production of 125,000 Hawaiian-language newspaper pages exceeds well over one million letter-sized pages of typescript text" (p. 64). While it can be problematic to rely upon the recordkeeping of cultural heritage institutions alone, the archive of the 19th and early 20th centuries writings in ʻōlelo Hawaiʻi is believed to be larger than the writings of all other Polynesian nations during the same time (Nogelmeier, 2010). Furthermore, ʻŌlelo Hawaiʻi written materials are believed to be larger than all Native American nations combined during the 19th and 20th centuries (Nogelmeier, 2010).

Colonization, Literacy and Education

As is consistent with the methods employed in colonization by the United States, our Indigenous language, ʻŌlelo Hawaiʻi, was banned from schools after decades of political pressure, primarily by Americans during the illegal occupation of Hawaiʻi. Haunani-Kay Trask (1999) describes the violence, stating:

> For Hawaiians, American colonialism has been a violent process: the violence of mass death, the violence of American missionizing, the violence of cultural destruction, the violence of the American military. Once the United States annexed my homeland, a new kind of violence took root: the violence of educational colonialism, where foreign *haole* values replace Native Hawaiian values; where schools, like the University of Hawaiʻi, ridicule Hawaiian culture and praise American culture, and where **white men assume the mantle of authority, deciding what is taught, who can teach, even what can be said, written, and published**. (p. 170, emphasis added)

After the 1896 ban, English replaced ʻŌlelo Hawaiʻi as the language of instruction in public and private schools for nearly a century. Today, English continues to be the primary language used in the majority of Hawaiʻi schools. This "linguistic genocide" is a strategy of colonialism used against Kanaka and other Indigenous peoples to usurp, and then maintain,

power (Kanaʻiaupuni et al., 2017).

(Ab)Use of formal education systems for the purpose of colonization is not particular to Hawaiʻi alone. According to Kanaʻiaupuni et al. (2017):

> In Indigenous experiences, schooling systems have deployed colonizing and assimilationist policies designed to eradicate Indigenous cultures and languages, systematically marginalizing the identities of Indigenous children in the name of progress. (p. 341S)

Western-oriented educational institutions actively enforced colonization and are strongly linked to both the subjugation and strategic disenfranchisement of Indigenous languages as well as the displacement of Indigenous literacies and worldviews. Describing the experiences of First Nations in Canada, Archibald (2008) notes:

> Colonized assimilation and acculturation predominantly through education forced Western literacy, values, and ways of thinking upon generations of Aboriginal people. Aboriginal languages, and hence our forms of orality (oral tradition in practice), were prohibited in the residential schools. More life-experience stories about children being harshly punished for speaking their language and about the intergenerational trauma of residential-school abuse are being told and published. Public schooling continued the colonial assault on Aboriginal children. (pp. 14-15)

The missionary and residential schools that Archibald discusses were not only found in Canada, in fact these Western-oriented education systems had similar impacts on Kanaka and other Indigenous peoples (Benham & Heck, 1998).

As was common practice in colonization, the language of the colonizer ultimately supplanted Indigenous languages and the voices and writings of the colonizers silenced and eclipsed Indigenous expression and literacies. Ngũgĩ Wa Thiong'o (1986) refers to this as the "cultural bomb":

> The effect of a cultural bomb is to annihilate a people's belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity, in their capacities and ultimately in themselves. It makes them see their past as one wasteland of non-achievement and it makes them want to distance themselves from that wasteland. It makes them want to identify with that which is furthest removed from themselves; for instance, with other peoples' languages rather than their own. It makes them identify with that which is decadent and reactionary, all those forces which would stop their own springs of life. It even plants serious doubts about the moral rightness of struggle. Possibilities of triumph or victory are seen as remote, ridiculous dreams. The intended results are despair, despondency and a collective death-wish. Amidst this wasteland which it has created, imperialism presents itself as

> the cure and demands that the dependant sing hymns of praise with the constant refrain: 'Theft is holy'. (p. 3)

Western education systems are a central part of the cultural bomb that Wa Thiong'o describes. Certainly, the violent historical and intergenerational effects of education institutions on Indigenous peoples is well documented, even if still commonly overlooked or ignored altogether.

So, while ʻŌlelo Hawaiʻi was the language of public and political discourse in the Kingdom (Nogelmeier, 2010), English would begin to supplant ʻŌlelo Hawaiʻi during the Republic of Hawaiʻi and persist through the ongoing occupation today. With time, the primacy of English led to a repositioning of power and authenticity that favored English texts over ʻŌlelo Hawaiʻi texts and voices (Nogelmeier, 2010). This seizure of power not only affected our native tongue but Indigenous literacy as well.

Whereas Hawaiian literacy is dynamic and, as described earlier, had become inclusive of more recent literacies, such as reading and writing, the colonial education system would re-locate the power to shape and define literacy in ways antithetical to Kanaka. Like other Indigenous ideas of literacy, Hawaiian literacy is multifaceted, interrelated, and (w)holistic and encompasses various literacies, including cultural and critical literacies. On the contrary, literacy, as redefined according to Eurocentric ideologies, places a narrow focus on those literacies more closely aligned with Western monocultural views and limited to reading, writing, listening and speaking (Edwards, 2010; Rawiri, 2008, 2016; Romero-Little, 2006; Shore, 2003). Lankshear and McLaren (1993) explain the relationship between literacy and power:

> The conceptions people have of what literacy involves, of what counts as being literate, what they see as 'real' or 'appropriate' uses of reading and writing skills and the way people actually read and write in the course of their daily lives – these all reflect and promote values, beliefs, assumptions and practices which shape the way life is lived within a given social milieu and in turn, influence which interests are promoted or undermined as a result of how life is lived there. Thus **literacies are indices of the dynamics of power**. (p. xvii, emphasis added)

In Hawaiʻi, as in other colonized nations, literacy is attendant to the benefit of the colonizer and their capitalist agenda, and subsequently legitimized and operationalized under the guise of 'education'. The assimilationist nature of Western literacy and education has functioned to suppress and marginalize Hawaiian literacy, language, and worldviews. Moreover, the

supposed long-term benefit of Western literacy, which serves as a baseline for success in the predominant, English-medium education systems, and for socio-economic welfare under the current occupation, remains a fascade while effectually subjugating Kanaka intellectually, spiritually, and physically, wherein we are disproportionately represented in health, crime, and incarceration rates.

Indigenous literacy and Indigenous knowledge institutions are vital for Indigenous identity and wellbeing. Edwards (2010) states:

> Government ideologies worldwide do not consider indigenous peoples or our ideas as regards key and important areas of work that impact significantly on indigenous identity and well being. Indigenous people will need to powerfully continue to remind our colonisers that Eurocentric thought is not the benchmark against which all knowledge and good ideas should be measured. At the same time we will need to provide counter narratives as to what literacies count, what counts as literacy and be the ones to say so. (p. 36)

Describing the traditional role of whare wananga in Aotearoa as, "the oldest social and educational institution in Aotearoa/New Zealand," and therefore "the oldest institution of literacy provision in Aotearoa/New Zealand," Edwards (2010) notes the critical leadership these and other Indigenous knowledge institutions play in articulating and positioning "the provision of literacy within appropriate contexts of knowing" and for the benefit of Indigenous peoples (p. 27). The same is true for Hawai‘i, yet the English-medium education system, that persists under the U.S. occupation, continues to dismiss our culture and sovereignty, except where it benefits tourism and the capitalist economy.

Hawaiian and other Indigenous literacies are important to conscientisation, self-determination, and sovereignty, and merit the attention of those invested in Indigenous futures. Indigenous theoretical frameworks for literacy support cultural reclamation and do not presuppose, or require, dependence on Western systems (George et al., 2009). Toward this end, Indigenous worldviews, and the knowledge and methodologies that stem from them, serve as an essential foundation for remembering, creating, and evaluating appropriate literacies, and the library and other education systems that would subsequently derive from these, for the wellbeing and empowerment of Indigenous peoples.

The role of libraries in colonization

In Hawai‘i, documentation of our culture and home was taken at will by explorers, followed by missionaries, businessmen, politicians, and novelists. As is evident in their writings, Western curiosity about Hawai‘i stemmed from various interests over time – manifest destiny, savior complex, capitalism, democracy, romanticization of the native, etc. Today, the tourism industry maintains, and even bolsters these narratives, by continuing to romanticize and sell native cultures for profit while dismissing the wellbeing of Kanaka and the ‘āina/environment from which that culture derives.

Since first contact, the Western world has viewed Indigenous peoples as objects of curiosity (Lilley, 2018; Smith, 2012). It is important to acknowledge here the role of libraries, archives, and museums in the study and documentation of the "other" by white men. Such cultural heritage institutions have historically been aided and reinforced by colonialism and Western imperialism. Western observations and writings about Hawai‘i have been preserved in libraries and archives around the world and have served as foremost sources of information on Hawaiian culture and history up until recently.

The presence of Indigenous peoples has long been absent from cultural heritage institutions. After all, Indigenous peoples were never meant as the intended audience; rather, our cultures, languages, and histories outlawed and objectified as subject matter while our humanity devalued and relegated to the margins. According to Smith (2012), "The ways in which scientific research is implicated in the worst excesses of colonialism remains a powerful remembered history for many of the world's colonized peoples" (p. 1). It was, and sometimes still is, the case that Indigenous cultures, languages, and peoples are put on display for entertainment and further subjugation by Western societies – all the while serving as justification for white supremacy under the guise of education.

This history of cultural heritage institutions cannot be overlooked, nor should it be, as this has been part of the Hawaiian experience since the first Westerner (accidentally) happened upon our islands. The purpose of sharing this here is not to lay blame, but to present this truth as part of a base understanding toward healing relationships between cultural heritage institutions and Hawaiian communities, and for moving forward with decolonization and consciousness in (and for) Hawai‘i. Libraries and archives store lots of our knowledge and stories within their walls and are therefore essential to the process of decolonization.

Ownership and Control

As Indigenous peoples continue to seek increased access to collections of cultural materials and knowledge in libraries, archives, and museums, questions about the methods and levels of access increasingly point to overarching challenges in ownership and control. The ownership of Indigenous knowledge is widely contested. The ways in which items and even entire collections came to be held in libraries and other cultural heritage institutions are not always clear or legal (Daehnke, 2009).

Oftentimes, Indigenous peoples had limited input, or were excluded altogether, from the collecting practices of the anthropologists, cultural heritage institutions, and other foreigners who appropriated items (Sullivan, 2002). Even in cases where ownership of an item is determined to be legal according to Western laws, that ownership may not be aligned with Indigenous laws, protocols, or understandings which have been developed over centuries (Anderson, 2010). Younging (2016) points out, "one of the greatest ironies of the status quo in the interface between European and indigenous knowledge management systems is that indigenous systems predate European systems by centuries" (p. 72). Any supposed ownership may not be recognized or interpreted in the same ways by the Indigenous peoples from which that knowledge was sourced.

Still today, the level of control granted to Indigenous peoples remains inadequate and largely constrained within the context of colonization – the assumptions, laws, and structures of the colonizers. One of the principle differences is in how reality and knowledge are conceptualized by the West – which has effectively led to the denigration and condemnation of Indigenous cultures and histories. For example, Western systems cling to the idea of 'freedom of information' and operate according to their understandings of knowledge as belonging to a public domain. However, as Younging (2016) explains:

> The problem is that advocates for the public domain seem to see knowledge as the same concept across cultures, and impose the liberal ideals of freedom and equality to indigenous knowledge systems. Not all knowledge has the same role and significance within diverse epistemologies, nor do diverse worldviews all necessarily incorporate a principle that knowledge can be universally accessed. Neither can all knowledge fit into Western paradigms and legal regimes.
>
> … Arguments for a public domain of indigenous knowledge again reduce the capacity for indigenous people's control and decision making over their knowledge and cannot be reasonably made outside the problematic frameworks of the colonization of TK

> and *gnaritas nullius.* Intellectual property law is largely European in derivation and promotes particular cultural interpretations of knowledge, ownership, authorship, private property, and monopoly privilege… Thus, indigenous peoples and their allies continue to argue for recognition of indigenous laws' jurisdiction over indigenous knowledge and the development of *sui generis* regimes that incorporate and complement indigenous laws at local, national, and international United Nations levels such as the WIPO IGC. (pp. 72-73)

Part of the problem Younging describes has to do with the assumed universalism and dominance of the West, characteristic of Eurocentrism. In relation to this, Henderson (2000) states, "Universality is really just another aspect of diffusionism, and claiming universality often means aspiring to domination. Universality creates cultural and cognitive imperialism, which establishes a dominant group's knowledge, experience, culture, and language as the universal norm" (pp .63-64). Ermine (2000) further agrees:

> This Western body of knowledge unleashed to the world as the singular world consciousness and evolutionary history that presents itself as all encompassing and impartial has grown into an intellectual knowledge system that is now known as Eurocentrism… this body of knowledge evinces narcissistic tendencies and refuses to interrogate the grounds of its own cultural narration and its sense of location in the broader world of existence. (p. 60)

The effect of the narcism that Ermine describes has resulted in the disenfranchisement of Indigenous peoples.

The relegation of Indigenous knowledge and peoples to the margins is a necessary result of Eurocentrism which employs racist discourse to negate Indigenous knowledge as primitive or 'lesser than' (Ermine, 2000; Smith, 2012). Smith (2012) observes, "the language of imperialism may have changed, the specific targets of colonization may have shifted and Indigenous groups may be better informed, but imperialism still exists" (p. 103). This is evidenced by the fact that the rights of Indigenous peoples, not limited to intellectual and cultural property rights, remain constricted to Western concepts and laws at national and international levels (which are yet further examples of Western constructions and that are also defined by those boundaries recognized predominantly by the West). This normalization and universalization of Western frameworks of 'property' and individualistic ownership effectually seizes control over Indigenous knowledge (e.g. intellectual property), and lands (e.g. real property), away from Indigenous peoples and nations (Anderson & Christen, 2019). Again, Eurocentrist beliefs underpin these systems and structures which serve to invalidate Indigenous knowledges (except where it can be subsumed as part of a reality defined by the

west) and dehumanize Indigenous peoples in ways that allow for the circumvention of the rights of Indigenous nations and peoples "to the extent that it is hard to imagine another configuration" (Anderson, 2015). Anderson (2015) asserts:

> Intellectual property law promotes cultural interpretations of knowledge, ownership, authorship, and property. For intellectual property law, the individual as author, genius, owner, and creator hold a central position. These frameworks do not necessarily correspond or compliment Indigenous people's understandings about the role and function of knowledge, or the role of individuals within communities and the joint responsibilities for collectively developed and held knowledge. (p. 769)

Thus, Western interpretations of individual creation and ownership are prioritized and normalized at the expense of Indigenous peoples and others who do not share these ideas. While Indigenous intellectual property law and international laws, like the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP), come into play here, these are topics that are already widely discussed and not the focus of this discussion.

Power and Access

Indigenous knowledge is vital to the wellbeing of Indigenous peoples and nations. Since libraries, archives, and museums hold materials of Indigenous knowledge, one could argue that access to these institutions is critical for our respective health, safety, education, and sovereignty. However, perhaps in part for this very reason, access has been callously restricted as part of a broader impact of colonial oppression that has beset many Indigenous peoples.

While we continue to face the ongoing pressures and influences of colonization, there is growing awareness of the need to address Indigenous concerns and ongoing barriers to accessing and disseminating our own knowledge. Smith (2012) explains:

> It appalls us that the West can desire, extract and claim ownership of our ways of knowing, our imagery, the things we create and produce, and then simultaneously reject the people who created and developed those ideas and seek to deny them further opportunities to be creators of their own culture and own nations. It angers us when practices linked to the last century, and the centuries before that, are still employed to deny the validity of indigenous peoples' claim to existence, to land and territories, to the right of self-determination, to the survival of our languages and forms of cultural knowledge, to our natural resources and systems for living within our environments. (p. 1)

Discourse and efforts to reclaim cultural practices and stories are well on their way. However, if we continue to operate under the assumption that digitization alone will increase access to collections and ʻike that will hoʻoulu lāhui (increase the lāhui, or grow the lāhui), without looking critically at the structures and systems in use, we limit the potential of these projects and 'put the cart before the horse'. Intellectual access needs to be made a priority if we are to effectively improve systems for access to physical and, increasingly, digital collections. As Mōʻī (King) Kauikeaouli (1834) declared, "He mea pono ia kakou e hooikaika me ka palapala. E ao ikaika i loaa pono ia kakou kana olelo, e hooikaika kakou, e na kanaka, a me na kamalii, a me na wahine." Access to ʻike is necessary to achieving hoʻoulu lāhui, as demonstrated by the policies and priorities of Mōʻī David Laʻamea Kalākaua in resisting foreign discourses, and seeking to restore and grow our moʻokūʻauhau, consciousness, and ea (Archer, 2016).

Librarians have often been criticized as gatekeepers to information and knowledge. This may be historically true in some cases, but what is often overlooked are the systemic ways that libraries as institutions, and the structures deployed by libraries, enable gatekeeping and function to define and interpret knowledge. Politics and power dynamics relating to the control of Indigenous knowledge and the classification of knowledge are interconnected. According to Anderson (2005), "Knowledge is more complicated than any form of binary allows and fundamental concerns about the intersection of relations of power in the production and circulation of knowledge are often understated or ignored" (p. 12). There are a number of aspects that impact Indigenous knowledge production and dissemination, including language, accessibility to digital collections or lack thereof, geographic limitations, condition of materials, etc. and these must all be addressed. Lawson (2004) contends:

> The power structures which shape access to information and knowledge organizations results in barriers as well as paths. These barriers may be inadvertent and unintended but result from a series of decisions, values and philosophical frameworks… The discussions about what information should be shared should also shape **how** that information is shared. (p. 178) [emphasis in original]

Considering that, this thesis focuses on the intellectual organization of knowledge and information – how information is shared – and how this can used as a tool to improve access for Indigenous peoples.

The predominant Western systems in place today were created for white people (Adler, 2017). They were not meant to serve Indigenous, Black, Latinx, Asian, or other non-white

peoples. As Adler (2017) notes, “it is frightening to realize that our classifications really were not meant to call out to people who were not white” (p. 24). Olson (2002) recognizes the implications Western knowledge organization has had for people of color and other communities ordered to the margins by library standards and institutions that operate on a historical conceptualization of ‘the public’ as white and homogeneous. Olson (2000) explains that through examining Western library standards and the frameworks that fortify them, library cataloging policies and practices instruct catalogers to select terminology based on that which “will probably be first looked under by the class of people who use the library” (p. 55). Olson’s (2001) analysis shows how cataloging and catalogers continue to operate on 19th-century ideologies that presume a “community of users with a unified perspective and a single way of seeking information” (p. 642). Thus, as has been documented by Olson (2000, 2002) and other scholars, libraries and the systems within were not created to serve Indigenous peoples.

As a prelude to discussing Indigenous methodologies for knowledge organization and the ways in which Indigenous peoples are addressing this issue, I provide an overview of the ways existing knowledge organization systems (KOS) are harmful to Indigenous (and other marginalized) peoples. As Smith (2012) summarizes this well, “They came, They saw, They named, They Claimed” (p. 80) – she was focused on research and colonialism but the same can be said of libraries and KOSs. Duarte and Belarde-Lewis (2015) highlight the importance of understanding the role of knowledge organization as part of the broader impact of colonial oppression that has beset many Indigenous peoples:

> When we are cognizant of the ways colonialism works through techniques of naming, describing, collocating, classifying, and standardizing, we can better appreciate, formulate, imagine, and support Indigenous approaches to knowledge organization. However, before we can create spaces for Indigenous ontologies – that is alternative information structures guided by Indigenous concepts of realities – we have to understand when and how cataloging and classification practices become techniques of colonization. (p. 682)

Accordingly, I will touch upon racial methods of maintaining and ingraining existing classifications as the “norm” to the detriment of the “other”. While not particular to the United States, I have chosen this as my focus both because Hawai‘i continues to be subjected to U.S. occupation and because of the ways the U.S. employs KO that exemplifies the ways in which these systems uphold and exert power. Specifically, I discuss the racism upheld by KO in the representation of the “other”; influences of KO on identity formation for

Indigenous peoples and other People of Color; and, the implications of KO for Indigenous knowledge transmission and learning.

(Mis)Representation and Racism

As will be explained in the sections that follow, knowledge organization is infrastructural and provides a warrant and tool for those in power (Bowker & Star, 1999). As Bowker and Star (1999) suggest:

> There is no simple unraveling of the built information landscape, or *pace* Zen practice, of unsettling our habits at every waking moment. Black boxes are necessary, and not necessarily evil. The moral questions arise when the categories of the powerful become the taken for granted; when policy decisions are layered into inaccessible technological structures; when one group's visibility comes at the expense of another's suffering. (p. 320)

While Bowker and Star (1999) were concerned with general classifications and the classifications of science, this aptly summarizes the seemingly necessary but dangerous ways in which libraries organize knowledge.

In the United States, library classifications are both a product of and a tool for advancing the social and political agendas of 'white America' (Adler, 2017). In examining the production of library classification systems in the 19th and 20th centuries, Adler (2017) draws a correlation between library classifications and systemic violence. Library classification systems were founded on scientific theories that assume the evolutionary superiority of the Anglo-Saxon race. Adler (2017) reveals, "the universalization of whiteness and the marking of nonwhite as exceptions to an assumed rule have, in fact, perpetuated the invisibility and dominance of whiteness" (p. 5). Adler (2017) explains that racist structures continue to legitimize and naturalize scientific theories and affect American consciousness:

> Segregation and the denial of rights and opportunities for African Americans have relied on classification "along the color line," to use W. E. B. Du Bois's terms. Library classifications provide narratives of how librarians imagined African Americans to be of interest to an American reading public, but not of a reading public – as sources of labor, in slavery, for public morality, and so. We must ask whether and how these structures affect or prohibit the cultivation of the self for seekers of knowledge who have not been figured into the public addressed by the writers of the classifications. (p. 25)

While focused on the classification of books about people of African descent, Adler (2017) makes brief mention of Native Americans to support the assertion that the lines drawn in classification "not only divide across race and nation, but they also indicate assumptions about citizenship and political status" (p. 18). In the example given, Adler (2017) points to how the DDC classifies "North American native people" and "Africans" in the "Other ethnic and national groups" category in *Table 5: Specific ethnic and national groups*, as opposed to grouping them under "North Americans" together with "People of the United States" or "Canadian" – see Tables 1 and 2 below. This signals that both groups "are not considered ethnically or nationally American" (Adler, 2017, p. 18).

Table 2 - DDC 305 Groups of People – .8 Ethnic and national groups

305.800 1–.800 9	**Standard subdivisions**
.809	**Europeans and people of European descent**
.81	**North Americans**
.82	**British, English, Anglo-Saxons**
.83	**Germanic peoples**
.84	**Modern Latin peoples**
.85	**Italians, Romanians, related groups**
.86	**Peoples who speak, or whose ancestors spoke, Spanish, Portuguese, Galician**
.88	**Greeks and related groups**
.89	**Other ethnic and national groups**

Table 3 - DDC 305 Groups of People – .89 Other ethnic and national groups

SUMMARY

305.891	**Other Indo-European peoples**
.892	**Semites**
.893	**Non-Semitic Afro-Asiatic peoples**
.894	**Peoples of north and west Asian origin or situation; Dravidians; peoples who speak, or whose ancestors spoke, miscellaneous languages of south Asia**
.895	**East and southeast Asian peoples; Munda**
.896	**Africans and people of African descent**
.897	**North American native peoples**
.898	**South American native peoples**
.899	**Papuans; Aboriginal Australians and Tasmanians; Malayo-Polynesian and related peoples; miscellaneous peoples**

In the case of some First Nations and Native American nations, the separation between native peoples and Canada or the U.S. is perhaps preferable and more accurately reflects their government relationships as opposed to being subsumed by the U.S. or Canada. Nevertheless, "North American native people" remain classed under "Other" even while the subdivision plainly suggests these peoples are better suited as "North Americans". Racism and the primacy of European races is no less evident in this context. Additionally, the groupings mark

the disenfranchisement and forceful removal of Indigenous peoples from entire continents as part of Euro-American imperialism and colonization – further illustrating how library structures continue the legacy of conquest and erasure. Sovereignty and self-determination are necessary to the discussion.

(Mis)Information

The ways that Indigenous peoples and People of Color are classified and categorized has an effect on our individual and collective identities. Scholars have exposed the racist practices upheld by Western science, including the collection of Indigenous peoples' skulls and the classification our intelligence and evolution. While no longer centered on our physical bodies, I would argue this practice of Western science continues in library and information sciences in the ways that we are classified and categorized as "other," sometimes in dehumanizing ways. Adler (2017) asserts:

> When people seek information about human expression, subjectivity, and experience, the indexes and associations call forth certain identities and responses… one concludes that the segregationist, disenfranchising, racist conventions in library classifications have hailed readers of color in damaging ways. It follows, then, that further studies should ask whether these systems have barred readers from accessing information related to identity formation and history, or affected reception or circulation of available information. We should bear in mind that the power to establish what qualifies as 'being' works or what counts as knowledge operates through reiteration and citation, but also through exclusion. In fact, power relies on the things it excludes, producing absences and silences through acts of refusal, concealment, exclusion, or restriction… (p. 24)

The excerpt from Adler (2017) above calls our attention to "the assumed, universalized whiteness" that is characteristic of white supremacy and absolutely affects the types of materials available in libraries and the ways in which these materials are organized in library catalogs and physical spaces. Terminology in library knowledge organization systems effectively marginalize African Americans and Indigenous peoples, whose cultures, knowledge, and existence are often strategically segregated and denigrated from the "assumed, universalized whiteness" that has been normalized in the United States. As a consequence of racism, one of the adverse impacts of misrepresentation within libraries is the misinformation of the histories and experiences of Indigenous peoples, and other people of color and marginalized groups.

This misinformation is dangerous and should not be overlooked. After all, if the perception of libraries is as centers of knowledge, then it is problematic (at best) that non-white people using libraries be regularly confronted with offensive terminology, meaning, and interpretations of themselves as reflected in these institutions. Librarians and other information professionals should be cognizant of the effects of information (not limited to information in libraries or accessed through libraries) on how we view ourselves and others (Vaughan, 2018). Here, I emphasize the ways this violence has affected Indigenous peoples, in particular, in the ways that Indigenous knowledge and peoples continue to be subjugated, as well as in the ways that many still today view Indigenous peoples as extinct or heading toward extinction with assimilation as our only salvation.

Institutional racism is exhibited in language choice not only in the words that are selected but also in the absence of words (Moorcroft, 1993). The silencing of colonized peoples impacts their capacity to preserve and disseminate their stories and their ability to access their histories, nonetheless the histories of others (Littletree & Metoyer, 2015; Moorcroft, 1993). As such, this form of oppression hinders access to knowledge and stifles the identities and health of colonized and marginalized peoples. Noting the need for change in libraries in order to remain relevant as society, politics, and economies change, Vaughan (2018) recommends:

> Librarians must recognize and reflect on their own internal biases when cataloguing and make it their job to deconstruct language and decolonize the systems that perpetuate the continued marginalization of others. To remain neutral about these systems is the very opposite of what it means to be a librarian in the twenty-first century. (p. 14)

The change Vaughan (2018) calls for is about more than libraries 'keeping up with a changing society' – it asks librarians and information professionals to delve deeper into the history of the profession and purpose of libraries and take action to reconcile for the systematic and institutionalized racism that continues to marginalize Indigenous identities, peoples, lands, and knowledges.

(Mis)Construction and (Mis)Apropriation of Knowledge & Learning

Smith (2012) explains that a "collective memory of imperialism has been perpetuated through the ways in which knowledge about indigenous peoples was collected, classified and then represented in various ways back to the West, and then, through the eyes of the West, back to those who have been colonized." This speaks directly to the research being done in and about

Indigenous communities and also extends to the ways in which access to that research is (or is not) being provided. So, while libraries may not have been the focus of Smith's writing, the same can be applied to the methodologies that libraries, as an institution, employ to collect, classify, and represent Indigenous peoples and Indigenous knowledge. In other words, libraries have remained fundamentally complicit in Western imperialism.

Collecting processes, while usually more closely associated with museums than with libraries, have been widely critiqued and associated with imperialism and colonization. Until recent history, criticisms have focused (and perhaps rightfully so) on this and other issues of ownership (i.e. theft and disenfranchisement) and control (of physical materials). Since the latter part of the twentieth century, scholars have begun to examine issues of access to Indigenous knowledge (Berman, 1993, 1995; Lawson, 2004; Lincoln, 2003; Moorcroft, 1992, 1993; Olson, 2000, 2002; Webster & Doyle, 2008; Young & Doolittle, 1994). Working toward a paradigm shift and challenging dominant narratives, particularly in regard to the prevalence of white supremacism which has driven research and filled library shelves for too long, Indigenous elders, practitioners, and scholars passionately mobilize as part of a global movement for reclamation of Indigenous practices, knowledge, and voices. As part of this movement, there has been a focus on education and Indigenous language revitalization. While libraries play a role in both, there has been a noticeable gap in Indigenous scholarship on libraries as a tool for reclamation, education, and social justice. This study seeks to contribute to the closing of this gap.

When education and, indeed, knowledge is organized in ways that are either foreign, or directly in conflict with our own ways of organizing and transmitting knowledge, it negatively impacts Indigenous peoples' identities and wellbeing. Adler (2017) underlines the critical importance of knowledge organization in libraries:

> If it is by way of names and disciplinary norms that we arrive at knowledge in the library, and via markers that draw dividing lines, often in cruel and punishing ways, that we learn about ourselves in the world, then it is worth thinking about the ways subjects are constructed, who is excluded, and by what means people come to knowledge. (pp. 24-25)

The dominant knowledge organization systems pose structural barriers resulting from systemic issues of classification and representation. On the whole, Indigenous peoples have had to accept their effective marginalization by using inaccurate and imprecise organization of documents and subject headings or create "smaller, flexible, sometimes ephemeral, private

offline and online locations" (Duarte & Belarde-Lewis, 2015, p. 679). The result has been marginalization, historicization, omission, lack of specificity, lack of relevance, and lack of recognition of sovereign states (Doyle, 2006, 2013; Olson, 2000). This affects the ways we access information and, subsequently, informs our identity and social understandings (Lawson, 2004; Moorcroft, 1993).

Just as a KOS can have implications for identity formation, a KOS serves as an "intellectual authority to guide learning" (Hur-Li, 2016, p. 71). Discussing the role of KOSs as "educational infrastructure," Doyle (2013) explains:

> KOS function materially and symbolically as textbooks in the authority and influence they carry in transmitting official knowledge and in their prescriptive nature. They impose rules for search and retrieval, constrain alternative vocabularies, and are regulated by policy and standards bodies that are sanctioned by institutions. They reflect and reproduce dominant curricular structure and content, and operate as "required reading" in that it is necessary for users to absorb and replicate their structure and semantics in order to navigate them (form search strategies) and find resources in library collections. (pp. 117-118)

As such, KOSs are not just an intellectual exercise, rather there are real implications for knowledge transmission and learning. Yet, KOSs are often taken for granted and deemed neutral (Doyle, 2013; Bowker & Star, 1999). Bowker and Star (1999) discuss the hidden power of classifications:

> Classifications are powerful technologies. Embedded in working infrastructures they become relatively invisible without losing any of that power... classifications should be recognized as the significant site of political and ethical work that they are.
>
> … In the past 100 years, people in all lines of work have jointly constructed an incredible, interlocking set of categories, standards, and means for operating infrastructural technologies. We hardly know what we have built. No one is in control of infrastructure; no one has the power to centrally change it. To the extent that we live in, on, and around this new infrastructure, it helps form the shape of our moral, scientific, and esthetic choices. Infrastructure is now the great inner space. (p. 319)

That KOSs are concealed in public and academic institutions amplifies their hidden power amid false assumptions of the neutrality of these state/education systems. Doyle (2013) contends:

> This naturalization obscures the ways in which they shape educational processes and institutions, entrench existing power relations implicitly (through structure) and explicitly (through semantics), and convey the dominant culture's beliefs and values

> about Aboriginal people. That is, KOS function as hidden curriculum in reflecting and reproducing dominant accounts through the language and logic of library classification and description. (p. 117)

It follows that KOSs function as gatekeepers and have implications for, among other things, scholarship and Indigenous knowledge depending on the extent Indigenous peoples and knowledge are represented – firstly in library collections and, subsequently, in the KOS (Doyle, 2013). As such, Doyle (2013) concludes KOSs "are gatekeepers to Aboriginal student success in addition to undermining diverse scholarship and knowledge production" (p. 118). Lorraine Johnston (2007) explains the consequence of limiting ourselves to Western systems:

> For those, the Other, whose knowledge processes follow different paradigms, the traditionally structured Western library becomes almost completely inaccessible. The division of knowledge into disciplines in Western science is at complete odds with the Indigenous view of knowledge as holistic and inter-related, and it is this disciplinary division which forms the basis of library classification systems. (p. 2)

Existing structures limit our ways of thinking – burdening users to draw relationships between subject matter and collections that they know to be evident in Indigenous worldviews but that remain largely ignored or absent altogether from KOSs employed by libraries.

Over time, the forced use of dominant Western KOSs that employ the colonizer's language and thought confines Indigenous thinking and creativity, thereby stifling Indigenous scholarship. Wa Thiong'o (1986) refers to this strategy as a "cultural bomb" that establishes control of the mind of colonized peoples:

> The effect of a cultural bomb is to annihilate a people's belief in their names, in their languages, in their environment, in their heritage of struggle, in their unity, in their capacities and ultimately in themselves. It makes them see their past as one wasteland of nonachievement and makes them want to distance themselves from that wasteland. (p. 3)

Recognizing the effects of the cultural bomb on Indigenous peoples and the subsequent need to 'decolonise the mind' (Wa Thiong'o, 1986), Littletree and Metoyer (2015) explain that "the power to name based on Indigenous ways of knowing can impact the production and the transmission of information and its use" (p. 641). Focused on the adoption, adaption, or abandonment of digital technology amongst Indigenous peoples and the barriers and opportunities of digital technology for Indigenous language revitalization, Galla (2018) notes:

> The pursuit for knowledge is pervasive in this digital age; at times it may be easy to forget that "newfound" knowledge and artifacts are sacred to individuals and communities. Not all knowledge is authorized "public" knowledge—even if it is made "accessible" in this digital age. (p. 107)

As many have become accustomed to having information available at our fingertips in this digital age, the 'power to name' is amplified, even while rendered universal or invisible, concealed in new languages and algorithms.

Similarly, Battiste (2005) refers to 'cognitive imperialism' as "the means by which whole groups of people have been denied existence and have had their wealth confiscated" (p. 9). Cognitive imperialism "denies people their language and cultural integrity by maintaining the legitimacy of only one language, one culture, and one frame of reference" (p. 9). Battiste (2005) observes that even in efforts to bring awareness of the causal connection between cognitive imperialism and the "despair" of "cultural minorities," the ideology of oppression "seeks to change the consciousness of the oppressed, not change the situation that oppressed them" (p. 9). Battiste (2005) calls for a serious examination of Western knowledge, science, and modern educational theory, stating:

> How these assumptions create the moral and intellectual foundations of modern society and culture have to be studied and written about by Aboriginal people to allow space for Aboriginal consciousness, language, and identity to flourish without ethnocentric or racist interpretation. (p. 9)

Sandy and Bossaller (2017) examine knowledge organization from a cognitive justice standpoint and suggest that access to Indigenous peoples should be provided in ways that respect their worldview. Sandy and Bossaller (2017) explain, "subject access to all knowledge, including indigenous knowledge, is imperative for libraries and other knowledge institutions, and obstacles to intuitive subject access present a social justice problem" (p. 129). Although resources in cultural heritage institutions may be limited, Sandy and Bossaller (2017) assert, "Institutions with responsibility for indigenous collections have the obligation to do their best to ensure cognitively just access" (pp. 146-147). Even in cases where resources are limited, the creation and implementation of "specialized KOSs" should be made a priority for any institution that provides access to Indigenous users and that is committed to anti-racism and decolonization. Pointing to the ways universal KOSs have failed to provide access to Indigenous users and materials, the authors explore "cognitively just, reliable subject access to indigenous knowledge," supported by advances in web technologies, as an alternative.

Duarte and Belarde-Lewis (2015) assert, "while knowledge organization researchers and practitioners may not be able to overhaul generations of social inequalities, adopting and including terms that reflect the experiences and perspectives of the marginalized is a step toward the redress of colonial power" (p. 682). Adler (2017) contextualizes this conversation within ongoing attempts to dismantle monuments of systemic racism:

> Recent attempts to root systemic racism out of institutions have included calls to remove commemorative monuments and representations of slaveholders and white supremacists. The merits of and reasons for each of these removals vary and are entirely site-specific, but they all seem to be driven by a belief that we might find resolution through a disavowal and erasure of racist figures and symbols. In certain ways library classifications serve as monuments to the profession and its founders, but they are perhaps more (or at least differently) significant because of their hiddenness and their power with regard to access and ordering of knowledge. Indeed, they cannot easily be undone. (p. 27)

Instead of "fixing" existing classifications, Adler suggests other approaches, including the creation of local reparative taxonomies. Adler (2017) asks us to consider, "What if a classification assumed something other than an unnamed whiteness as a universalized norm for its essential framework?" (p. 28).

Chapter Summary

As has been discussed in this chapter, the ways in which knowledge is organized and represented is both a symbol of and consequence of power. While habitually taken for granted, the structure and terminology of knowledge organization systems are intellectually, socially, and politically significant. Classifications and other forms of KO provide authority, define relationships, control the interpretation and trajectories of knowledge, and determine the level(s) of access available to users.

Indigenous peoples and allies have brought greater awareness to Indigenous concerns regarding the ownership and control of Indigenous knowledge and the inadequate access to Indigenous knowledge for Indigenous peoples. While not yet widespread, these efforts are starting to take hold. There is also a wider recognition of the need for Indigenous participation and inclusion in the preservation and management of knowledge and decisions regarding access to (our) knowledge and resources.

Chapter 4: Protocols, Conscientization, and Libraries

This chapter provides an overview of Indigenous cultural protocols and methodologies, as well as concepts of warrant and authority, as relates to knowledge organization and access. In doing so, this chapter underscores the vitality of Indigenous epistemologies and particular approaches to knowledge organization. Through an understanding of the essential role and power of language, specifically Indigenous languages for Indigenous peoples, it is evident that solely relying on English and a false narrative of universality in systems of knowledge transmission and access is not only inadequate but dangerous for Indigenous peoples and knowledges.

Protocol as Conscientization

Indigenous peoples have established laws and cultural protocols to safeguard knowledge, ensure balance and wellbeing, and otherwise govern nations for millennia. Lawson (2004) suggests:

> Practical research and consultation are needed in several topics relating to control of First Nations information and knowledge. Examination of the varied concepts relating to ownership of knowledge and rights to use knowledge is warranted. International indigenous discussions regarding controlling knowledge include concerns about biopiracy, keeping knowledge secret, and international legal mechanisms such as patents and trademarks. This literature regarding indigenous efforts to protect knowledge should be connected to the literature of the information professions. Research can build an understanding of First Nations protocols within a cross-cultural context. (p. 225)

Indigenous protocols are sometimes referred to in English as “customary laws”, “indigenous laws”, “traditional knowledge management”, etc. (Younging, 2016). In Hawai‘i, we use terms like loina, kapu and kanawai (Kanaka‘ole Kanahele et al., 2016). Elsewhere in Oceania, terms such as tapu, are used. In each of these cases, the terminology alludes to the sacred, and knowledge as deriving from and representing akua (gods and goddesses). According to Lawson (2004):

> Data mining and other approaches common to Western knowledge management can be contrasted with the ways in which traditional protocol societies, elders and storytellers care for knowledge. Many descriptions of knowledge management from Western perspective do emphasize the importance of people as dynamic elements within a knowledge system but do not incorporate cultural aspects such as values, protocols or ethics. Contrasting the roles of protocol systems in an oral society and knowledge

> management programs in a large corporation may provide insight into both approaches. (p. 224)

To provide additional context, kuanaʻike Hawaiʻi recognizes a succession and continuum – we are part of a lāhui; we are kupuna from birth (Western science is catching up to this understanding); we have mana, and recognize collective mana (of people, places, and things around us). With this understanding, we recognize a kuleana (privilege and responsibility) for our actions (and inactions), and that we represent not only ourselves but our ʻohana, kumu, ʻāina, and community – past, present, and future. Essentially, loina, or cultural protocols, unify us toward a common purpose while embodying a collective value system and honouring our relationships and associated responsibilities to that lāhui, to the ʻāina, and to all things. As such, we come to an understanding that Indigenous knowledge is transmitted through moʻolelo as well as through the loina themselves that inform us of methods for appropriate knowledge transmission and access (Younging, 2016, p. 70).

Through loina, we separate the sacred from the profane and "reiterates the continuum of the thought process of what is important" (Kanakaʻole Kanahele et al., 2017). Understanding the degrees of sacredness determines the caliber of protocol. Loina involve precise, proper behavior and require training and practice. Dependent upon the situation, the purpose and audience, loina usually involve oli, or chant, which goes to further demonstrate the belief in the power of orality and the spoken word in kuanaʻike Hawaiʻi. According to Gon (2008), loina are "the right behavior conducted at the appropriate time by the proper people, presented to the correct recipients, toward a positive and significant end." Gon (2008) explains that loina serve multiple functions:

- It focuses the attention of all participants to the task at hand.
- It evokes respect in the form of silence and attention on the part of the recipients.
- It prepares the participants to engage seriously in what will follow.
- It initiates a set of responses from those who know the protocol, and therefore sets into action a social process that unifies not only those who conduct the protocol but also all who are involved.
- It transforms the mood from the mundane and ordinary into something deeper and more important.
- It links all participants together and consolidates them into a unit.
- It links the participants to their surroundings via an enhanced sense of place.

- It expresses and confirms a living and vital Hawaiian culture, making each person a bit more appreciative of and more connected to these islands that we call home. (p. 1)

Loina are important processes which honor and remind us of the hierarchy of the universe as recognized by our kūpuna and documented in moʻokūʻauhau, like the Kumulipo, a 2,000+ line oli. Thus, loina are both a product of and a representation of kuanaʻike Hawaiʻi. Insofar as they serve as a method for access – access to spaces, people, and ʻike – loina inform the provision of access to ʻike Hawaiʻi in libraries. In other words, cultural protocols are part of Indigenous methodologies and absolutely hold implications for knowledge organization and level(s) of access.

As has been outlined earlier, the frameworks and value systems evident in Indigenous epistemologies and communities differ and sometimes conflict with outside interests and systems of law, particularly around concepts of intellectual property rights and other colonizing systems of the west. With (neo)capitalism consistently prioritized over human rights in the United States, Indigenous peoples continue to be dehumanized, and our languages, cultures, and ways of existence are debased, displaced, and silenced/erased. Throughout history, there have been spirited movements to resist, reclaim, and assert agency for the wellbeing of our peoples, lands, and futures. One of the outcomes of this movement has been the gradual decolonization and communal re-valuing of Indigenous knowledge and practices as a way to improve our wellbeing and the wellbeing of the lands that we continue to be in relationships with (Penehira, 2011). Part of this has included the documentation of cultural protocols around the use of Indigenous knowledge. Occasionally, this has raised questions of authenticity and authority that reflect Western conceptualizations of Indigenous knowledge as somehow being static and in the past altogether. Kovach (2009) explains:

> For Indigenous people, the push back has always been over the preservation of culture. It goes beyond practising personal cultural identity, though by necessity that is part of it, and is about ensuring the existence of a tribal worldview for the next generation. Culture holds knowledge, knowledge holds culture; they are iterative, interdependent, and alive... Academic research, concerned as it is with knowledge, is a highly relevant site [in terms of expanding the landscape where tribal knowledges can flourish]. As a community of researchers, if we do not contest the formidable patterns of settler-Indigenous relations that continue to define us, if we do not take a field trip into our own mutual history, we are bound to replicate – subconsciously or not – the unsettling historical pattern. (p. 163)

Even if indirectly or subconsciously, subjecting ourselves to colonial laws and concepts, as we seek to liberate ourselves from these foreign systems, is a serious danger that is not only contradictory to the decolonization process but gravely detrimental to it, as it contributes to false illusions of freedom and progress whilst returning us to the same 'unsettling historical pattern'.

Many are aware of the impacts the commodification of Indigenous knowledge has had on Indigenous peoples and environments – particularly in the tourism industry (Trask, 1999) and Western sciences. I am alluding here to the ways that Indigenous healing practices have been stolen for profit while other Indigenous practices have been looked to as models to address climate change and land management for sustainability. The misappropriation of culture has been commonplace for so long and the benefits have usually been one-sided and not for the betterment of Indigenous peoples. Nevertheless, as part of the movement toward decolonization, Indigenous peoples have been re-establishing and adapting cultural protocols to restore and improve our nations and lands (Younging, 2016); often directly and indirectly enhancing the lives of those who occupy our homelands, invited or otherwise.

In *Kūkulu Ke Ea A Kanaloa: The Culture Plan for Kanaloa Kahoʻolawe*, Pualani Kanakaʻole Kanahele et al. (2009) discuss the need for ceremony and protocol as part of reinstating cultural reform and transformation after the return of Kahoʻolawe from the U.S. navy (who had been using the island for warfare target practice for warfare since the 1940s). As part of this discussion, Kanakaʻole Kanahele et al. (2009) explain the importance of loina:

> Ceremony re-establishes an awareness of relationship between people and place and is a conduit for intergenerational thought continuum. It provides a pervading attitude toward ecological sensitivity tantamount to mālama and aloha ʻāina. Ceremony teaches codes of behavioral attitude and respect for places, peoples and things. It is a safety procedure that reaches into the realm of the unseen. It is a unifying medium giving strength to purpose. Ceremony is a way of reaching out to them and what is most important; it allows them to reach you. (p. 13)

As the passage above notes, mālama ʻāina and aloha ʻāina are inextricably tied to loina and to Indigenous peoples and knowledges. Moreover, loina provides awareness and education about our relations, as well as the ceremony and respect that are required to sustain those relations.

Younging (2016) further explains the significance of protocol to Indigenous knowledge:

> The social structures that recreate, exercise, and transmit this law through generations, and the protocols that govern these processes, are deeply rooted in the traditional territories of indigenous peoples and, understandably, are inalienable from the land and environment itself. Indigenous customary law is inseparable from indigenous knowledge. In some indigenous nations, the abstract subtlety of indigenous customary law is indivisible from cultural expressions such as stories, designs, and songs. That is, a story may have an underlying principle of environmental law or natural resource planning. A song may explain the custodial relationship that a certain community has with a particular animal species. (p. 70)

Bringing this broader discussion of loina and methodologies to the ways in which Indigenous knowledge and culture is cared for in libraries and archives, we find several sets of protocols have been developed. Greater consideration of Indigenous theoretical concepts and protocols for knowledge transmission will advance understandings of Indigenous knowledge (Lawson, 2004). According to Lawson (2004):

> There is little documentation or description of First Nations' protocols regarding openness and access restrictions on knowledge; ownership of knowledge; sacredness of knowledge; and rights to use or benefit from knowledge, particularly within the field of information studies. Knowledge of First Nations protocols will provide an opportunity to examine underlying First Nations concepts about knowledge itself. An examination of the political conflicts and history of knowledge suppression will expose power relationships which have shaped current First Nations knowledge systems, and which generated First Nations mistrust of mainstream knowledge institutions. (p. 225)

While Lawson was focused on the particular local contexts of First Nations, a similar examination of protocols would benefit other Indigenous peoples as well, including us here in Hawai‘i.

Recognizing the sovereignty and rights of Indigenous peoples as the owners of Indigenous knowledge, these protocols provide support for addressing common issues in the management of Indigenous materials and serve as a guide for libraries, archives, and other cultural heritage institutions that have a responsibility to preserve Indigenous knowledge. Two such sets of cultural protocols for libraries and archives are the *Aboriginal and Torres Strait Islander Protocols for Libraries, Archives and Information Services* (ATSILIRN, 2012) and the *Protocols for Native American Archival Materials* (PNAAM) (First Archivist Circle, 2007). Both are widely referenced and include sections on the handling of description and classification of Indigenous materials.

The Aboriginal and Torres Strait Islander Protocols for Libraries, Archives and Information Services were published in 1995 by the Australian Library and Information Association (ALIA) and endorsed by the Aboriginal and Torres Strait Islander Library, Information and Resource Network (ATSILIRN). The ATSILIRN Protocols, as they are often referred to as, provide guidance for interacting with Aboriginal and Torres Strait Islander people and materials. Since 1995, the ATSILIRN Protocols have been updated twice – in 2005 and in 2010 – which goes to show the investment and commitment that libraries, Indigenous peoples, and other stakeholders have in these protocols (ATSILIRN, 2012). The most recent update includes 12 protocols: 1) Governance and management; 2) Content and perspectives; 3) Intellectual property; 4) Accessibility and use; 5) Description and classification; 6) Secret and sacred materials; 7) Offensive; 8) Staffing; 9) Developing professional practice; 10) Awareness of Aboriginal and Torres Strait Islander peoples and issues; 11) Copying and repatriation of records; and 12) The digital environment (ATSILIRN, 2012). Protocol 5 points to issues with description and classification and specifically outlines five ways to address the inadequacies:

> To improve access organisations will:
> 5.1 Use national Indigenous thesauri for describing documentation relating to Aboriginal and Torres Strait Islander peoples and issues.
> 5.2 Promote appropriate changes to standard descriptive tools and metadata schemas with the aim of retrospectively re-cataloguing items recorded with unsuitable subject headings.
> 5.3 Improve access by the introduction of classificatory systems which describe items by their geographic, language and cultural identifiers.
> 5.4 Consult with Aboriginal and Torres Strait Islander peoples at local, state/territory and national levels in relation to the description, cataloguing and classification of materials in libraries, archives and information services.
> 5.5 Provide opportunities for Aboriginal and Torres Strait Islander people to describe and annotate material that relates to themselves and their communities. (ATSILIRN, 2012)

The five points prescribed emphasizes the need for changes to standard tools in libraries and the critical importance of consultations with Indigenous peoples regarding knowledge organization.

Building upon the ATSILIRN Protocols, the *Protocols for Native American Archival Materials* (PNAAM) presents North American best practices for the preservation and management of Native American knowledge and resources in libraries and archives. The PNAAM were created by the First Archivist Circle, a group of Native American and non-Native American archivists, librarians, museum curators, historians, and anthropologists representing

fifteen Native American, First Nation, and Aboriginal communities. Speaking primarily to non-tribal organizations with materials pertaining to Native American communities, the PNAAM addresses the following topics: 1) Building Relationships of Mutual Respect; 2) Striving for Balance in Content and Perspectives; 3) Accessibility and Use; 4) Culturally Sensitive Materials; 5) Providing Context; 6) Native American Intellectual Property Issues; 7) Copying and Repatriation of Records to Native American Communities; 8) Native American Research Protocols; 9) Reciprocal Education and Training; and, 10) Awareness of Native American Communities and Issues.

For each standard, PNAAM provides guidelines for archives and libraries to address issues in the collection, ownership, preservation, handling, access, and use of American Indian archival resources. Of particular significance to this study, PNAAM calls for improvements in descriptive information and the addition of culturally appropriate and accurate language through the following actions:

- Encourage culturally affiliated communities to provide context for the collections from their perspective. Supplement descriptive materials with cultural sensitivity statements.
- Inform patrons, at the request of a community, of potentially offensive content prior to use by adding a notice to descriptive tools or items such as "The [tribal name] finds information in this work inaccurate or disrespectful. To learn more contact . . . ." Amelia Flores, the Colorado River Indian Tribes Library/Archive Director, applies a disclaimer to problematic publications acquired for the library, which states: We do not endorse this publication.
- Work with community representatives to revisit indexing terminology, Library of Congress Subject Headings, Anglo American Cataloging Rules (second edition), and classification schemes.
- Promote changes to established lexicons to allow retrospective conversion or enhancement of antiquated or inadequate catalog records to include contemporary, culturally responsive language. In consultation with communities, add cultural identifiers and information about language and geography.
- Add explanations of derogatory words to original titles (e.g., [title created by xxxx in xxxx year]) or remove offensive terms from original titles and provide substitute language (e.g., replace "squaw" or "buck" with [woman] or [man]).
- Actively gather metadata to accompany Native American archival collections to reflect the relationship between the creator or researcher and the community of origin.

The PNAAM were developed in 2006 and adopted early on by members of the Society of American Archivists' (SAA) Native American Archives Section. Although PNAAM was

formally proposed to the general body of the SAA in 2008 and again in 2012, SAA did not endorse the PNAAM until 2018. In the SAA Council's announcement, they acknowledged their endorsement of PNAAM was "long overdue" and stated that they "regret and apologize that SAA did not take action to endorse the Protocols sooner and engage in more appropriate discussion" (Society of American Archivists, 2018). Still, the fact that it took 12 years for the SAA to endorse protocols that had already been adopted by the SAA Native American Archives Section, whose very focus is Indigenous archives, is evidence of how deeply engrained colonizing methodologies are in the field of information science.

Loina can address this injustice and imbalance, as part of the cycle Graham Smith (1997) describes as encompassing resistance, conscientization, and transformative praxis. Smith (1997) advocates for transformative praxis that realigns practice with theory and functions as an intervention mechanism to address the multiple oppressions and exploitations of Māori and other Indigenous peoples. Smith (2003) challenges Western notions of transformative praxis, conscientization, and resistance that accept these concepts as discrete and lineal:

> The position implicit within the new formations of Maori intervention, and which may have wider significance for other indigenous populations is that all of the above components are important; all need to be held simultaneously; all stand in equal relation to each other. This representation might best be understood as a cycle. (p. 12)

According to Smith, the relationships between resistance, praxis, and conscientization are not linear and can be expressed more precisely as a circular model that recognizes multiple access points. Moreover, the elements within the cycle can be experienced in any order and can also be engaged simultaneously. Consistent with the principle of whānau, Smith (2003) notes:

> In the cycle diagram, all Maori can be plotted somewhere on the circle (some are standing still, some are going backwards, others are well advanced) - the point is that every Maori is in the struggle whether they like it or not, whether they know it or not. (p. 13)

Such is also the case for Hawai'i – we can all locate ourselves within the circle. A large part of where we're at individually, and collectively as a lāhui, has to do with the role of the mainstream education system. While he doesn't call out libraries specifically, Smith (1997) recognizes the ways in which education systems wield the power to develop and validate 'theory' around

culturally selected constructions. As educational institutions, libraries have played active and passive roles in this validation and in the privileging of some knowledges that have purposefully relegated Kanaka and other Indigenous knowledges to the margins (Olson, 2002; Webster & Doyle, 2008). The next section continues with a critical analysis of libraries, focusing on knowledge organization as a primary system for access and yet altogether inadequate for Indigenous knowledge.

Locating Research in Libraries

Linda Tuhiwai Smith (2012) argues modernism fueled the "positional superiority" of Western knowledge. Smith (2012) notes, "Once it was accepted that humans had the capacity to reason and to attain this potential through education, through a systematic form of organizing knowledge, then it became possible to debate these ideas in rational and 'scientific' ways" (p. 62). Systems of education were presented as paths to salvation even as those very systems effectively dehumanized Indigenous peoples and classified their cultures and languages for extinction. The fragments of culture that benefit white superiority and the West were claimed as 'discoveries' by the West, re-classified as part of science and research attributed to white men, and subsequently commodified or otherwise used to support the power of the West over the colonized (Smith, 2012). According to Smith (2012):

> The production of knowledge, new knowledge and transformed 'old' knowledge, ideas about the nature of knowledge and the validity of specific forms of knowledge, became as much commodities of colonial exploitation as other natural resources... These systems for organizing, classifying and storing new knowledge, and for theorizing the meanings of such discoveries, constituted research… The instruments or technologies of research were also instruments of knowledge and instruments for legitimizing various colonial practices. (pp. 62-63)

Research was deposited in libraries and museums with the belief that research belonged to "the cultural archive and body of knowledge of the West" (Smith, 2012, p. 64). Consciously or not, these institutions uphold the sanctity of research and its instruments, and therefore the theft, murder, erasure, and self-interested objectives of colonization as a driving force of that research.

Knowledge organization is at the core of library services and these systems serve as the primary method of access in libraries, whether operationalized through the library catalog or in the ways

books and other materials are organized on the physical shelves and in digital environments (e.g. databases). The knowledge organization system is the iwi kuamoʻo (backbone) of the library and impacts all facets of librarianship, including collection management, reference, and instruction. Knowledge organization provides the infrastructure for user services, including the ways users learn to search, the arrangement of collections, and the physical experience whether browsing or retrieving items from shelves. Earlier, I discussed the importance of knowledge organization systems and the danger that dominant systems pose to Indigenous self-determination. Here, I emphasize the significance of knowledge organization systems for any meaningful attempts to decolonize. If libraries collect works about Indigenous knowledge but resort to cataloging these with the dominant knowledge organization systems, or continue to teach Indigenous researchers how to search the dominant knowledge organization systems without providing alternatives or offering transparency about the problems inherent in those systems, then we are simply continuing the assimilationist and colonial ideologies in modern contexts. Indigenous knowledge organization systems are germane to the decolonization of collections, libraries, research and scholarship. Thus, the goal of this study is to find ways to improve access to those moʻolelo that have been written or otherwise recorded (e.g. written, typed, audio/visual, carved, weaved, etc.) and deposited in libraries through the implementation of Hawaiian knowledge organization in these institutions.

For decades, librarians and scholars have recognized the difficulties of organizing and describing Indigenous materials with existing, Western systems like the Library of Congress and Dewey Decimal System (Berman, 1993, 1995; Doyle, 2006, 2013; Joseph, 1980; Lawson, 2004; Lincoln, 1987, 2003; Martens, 2006; Martin, 1995; Moorcroft, 1992, 1993, 1994; Moorcroft & Garwood, 1997; MacDonald, 1993; Olson & Schlegl, 2001; Szekely & Weatherall, 1997; Webster & Doyle, 2008). It is not by accident that these systems are inadequate for organizing Indigenous knowledge – like other systems created for the white, heterosexual, Christian, cis men, these Western systems were not meant to provide equal treatment in the organization of knowledges any more than they were meant to serve Indigenous peoples or other people of color.

The salvation offered to Indigenous peoples and other marginalized groups through education is only afforded to those who concede and imitate the dominant culture. Failure is deemed the fault and responsibility of the individual, not the system. Hence, the popular belief remains that those

unable to succeed, in the ways and areas that the mainstream, capitalist systems foster, are 'burdens' to society – even when their misfortune is the consequence of a system working as it was intended to. Similarly, the institution of libraries and the knowledge organization systems that librarians have chosen to perpetuate are not flawed, rather they operate as they were intended to. Recognizing that what has become the predominant systems in place for organizing knowledge in libraries were created by white, cisgender male property owners and for white cisgender men, it comes as no surprise that these systems are largely inadequate for Indigenous peoples. As a consequence of this, Indigenous researchers are left to rely on librarians and other information professionals to help navigate these foreign systems.

Western knowledge organization schemes are not suited for Indigenous knowledge and wholly inadequate to provide access to Indigenous peoples. Yet, Indigenous peoples have long been subjected to the authority of dominant systems to organize and interpret knowledge in libraries and archives. Some have found ways to navigate these systems while others have taken it upon themselves to create their own distinct systems that are better suited for their needs. Lawson (2004) notes:

> A deeper shared understanding of the mandates, responsibilities and practices of archives, libraries and museums and First Nations ways of knowing is needed to evaluate the feasibility, effectiveness and desirability of integrated and networked knowledge centres. The process of developing this shared understanding between First Nations knowledge workers and Western knowledge professionals will itself create a network of people which will help bridge First Nations and Western knowledge systems. (pp. 227-228)

I agree with Lawson that more dialogue is needed to determine the desirability of library knowledge organization systems for Indigenous knowledge. This study seeks to add to the discourse and to articulate Indigenous ways of knowing to allow for a shared respect/understanding, within the scope of Hawai'i and libraries. And, in fact, one of the intended outcomes of the study was to "create a network of people" which will help to perpetuate and enhance Indigenous knowledge systems.

Recognizing the relationships, good and bad, between Indigenous knowledge and libraries, we must be careful not to make the mistake of assuming library knowledge organization systems, or the institution of libraries as a whole, will benefit Indigenous knowledge at this moment or into

the future for that matter. Because so much of our history and relations with foreigners has been composed of hurt, sickness, and trauma, the idea of integrating Western systems with our own comes with the full weight of past injustices. Exacerbating the issue, the monoculturalism of the mind inherent in Western institutions of knowledge (Shiva, 1993) presupposes its dominance and priority over Indigenous institutions of knowledge and Indigenous communities. Younging (2016) warns that "these high-capacity, time-tested indigenous knowledge systems have been devalued and diminished by having Eurocentric perceptions and institutions imposed upon them" (p. 69). The result of this has been the misinterpretation, misrepresentation, misappropriation, unauthorized use, abuse and disenfranchisement of Indigenous knowledge.

Attempts at integration, even when well-intentioned, under the guises of 'diversity' or 'inclusion' for example, can be dangerous to Indigenous knowledge systems and perpetrate further violence on Indigenous peoples. As Kovach (2009) recognizes, "the absence of tribal epistemic inquiry reflects a colonial institution that reproduces itself" (p. 175). Kovach (2009) states:

> Imagining a new approach requires a specific analysis of the past that complicates the 'us-other/other-us' dynamic of Indigenous-settler relations that equates this relationship to one of simple dominance. Without tending to the particulars of this relationship there is a tendency towards a single 'inclusivity strategy,' a perspective that is not particularly useful, even slothful. I argue that there can be no advance in Indigenous research approaches without acknowledging the historical inflluence of Indigenous-settler relations on educational policy, practice, and research. The urge to replicate historical responses, albeit in a nuanced manner, is so great that moving forward is impossible without first reckoning with them. Furthermore, if the academy is going to seriously consider Indigenous knowledges, there must be recognition of the distinct status of Indigenous people as unique from other minority groups. This is not to diminish other groups, but to point out that the relationship between post-secondary education and Indigenous people is distinctive and so must be the responses. (p. 157)

Kovach was responding to research and the academy but, as a link between the two, libraries also have a role to fill here. Inaction can no longer be conceiled by the thin veil of neutrality imagined by librarians and long prized within the institution of libraries. It is important that we remain critical and intentional in the ways we perform in this moment and the ways in which we choose to move forward – even if opting to reduce reliance on or disengaging entirely with existing cultural heritage institutions altogether. This endeavor is tougher than we appreciate because it involves a post-positivist, decolonizing undertaking.

Warrant and Authority

Looking at the methods of development of the dominant knowledge organization systems and the values inherent in those systems, particularly the partiality for written knowledge and the ways through which authority is recognized (i.e. through academia and publishing), it is not surprising that the outcome would be incongruent with Indigenous knowledge systems which tend to value orality and whose formalized education systems differ from that of non-Indigenous nations. Smith's (2012) analysis situates one of the problems of relying solely on literary warrant for the classification of Indigenous knowledge:

> Their authority as experts in Maori things was vested in the whole structure of colonialism so that while engaging in very colonial operations with Maori, they also carried out investigations into Maori life which later were published under their names. Through their publications they came to be seen by the outside world as knowledgeable, informed and relatively 'objective'. Their 'informants' were relegated to obscurity, their colonial activities seen as unproblematic, and their chronic ethnocentrism viewed as a sign of the times. (p. 85)

Since contact with foreign nations, a lot of the written literature about Indigenous lands and peoples are according to the perspectives of outsiders, who write according to their human experience and biases. Smith (2012) discusses the problematic nature of colonists who assumed several occupations and were later seen as "'reliable' and respected sources on Maori beliefs and customs" (p. 85). This is part of the challenge of literary warrant – it is meant to mirror the source literature without being critical of the sources themselves, in effect operating in a vacuum.

A knowledge organization system built upon literary warrant serves a society only to the extent that the literature is representative of that society. However, this has not been the experience of anyone deemed outside of a supposed 'norm' and therefore relegated to the 'margins', such is often the case with Indigenous peoples, the LGBT+ community, and people of color in the United States, for example. Within colonized lands and nations, the colonizer controls the dominant narratives and literatures, and in so doing controls knowledge by extension – in libraries, we see this demonstrated in the systems of access to knowledge, namely the knowledge organization system which, to all intents and purposes, reinforce the literature and therefore the power of the colonizer.

Hawai‘i is unique from other Indigenous peoples in that many of our kūpuna quickly adopted writing and printing systems to document mo‘olelo and other lived experiences in these mediums. Because of this, we are fortunate to have a large archive of Indigenous writing today. However, due in large part to the lack of training and language fluency in ‘Ōlelo Hawai‘i on the part of catalogers and other librarians, these works often receive limited description, or are overlooked or unprocessed altogether. These barriers, even when unintentional, negatively impact access for researchers and consequently, the ideas, scholarship, and practice that would have come from these sources. So, while written Indigenous literature exists and is prolific, these voices haven’t been afforded the same opportunities as English literature to effect literary warrant and inform description and classification within dominant systems.

While library classification has typically followed literary warrant, there are other types of warrant, including social warrant, education warrant, and cultural warrant (Doyle, 2013). Doyle (2013) asserts Indigenous warrant has been ignored and needs to be recognized and prioritized to actualize any real improvement to KO. Farnel et al. (2018) similarly refers to the need to prioritize Indigenous authority. This includes recognition of the authority of Indigenous languages and names (for themselves, places, plants, etc.). Naming is important and provides a lens for understanding Indigenous worldviews.

Farnel (2017) proposes use of Basil Bernstein’s language codes theory as a means for approaching the notion of community appropriate metadata. One of the points Farnel (2017) makes is that Bernstein’s language codes theory “provide a means of understanding metadata not as a set of discrete elements carrying meaning but rather a collection of elements that together enable meaning making” (p. 14). Farnel (2017) suggests that “we should think about metadata for resources holistically and begin with the broadest definition of the facets or characteristics to be represented and then move toward discussion of specific elements” (p. 14).

Indigenous Knowledge Organization, in Libraries

Indigenous knowledge organization systems exist and continue to be applied in our communities. These systems help us to navigate cultural protocols and gain access to Indigenous knowledge and perspectives. As such, Indigenous peoples and their allies have begun to identify and pursue opportunities to install or adapt Indigenous systems for improved representation, organization,

and access. Some have moved beyond critiques of existing supposed "universal" systems to imagine possible pathways for establishing Indigenous knowledge organization (Gilman, 2006; Lee, 2011; Moorcroft, 1993; Szekely, 1997). A number of scholars have examined approaches to Indigenous knowledge organization in their specific contexts.

In 2015, *Cataloging & Classification Quarterly*, a mainstream library journal, published a special issue on Indigenous knowledge organization featuring research from Aotearoa, Canada and the United States. The issue provided a platform for sharing across Indigenous peoples about the various ways in which we approach knowledge organization in libraries. It offers case studies and valuable insight for Indigenous communities, like mine, as we begin to imagine a system that will provide better representation of our culture and history and appropriate access to knowledge from our communities, for our communities. The authors of these articles describe how KO operates in their communities and highlight necessary themes for the development of KO projects that fit their local contexts. As communities, together with institutions, develop and install Indigenous KO in libraries, it is important that these successes, and challenges, continue to be shared with other communities looking for models and workflows that can inform or be adapted to fit their local contexts.

Still, that these publications tend to be relegated to one-off "special" issues is likely an indication of the status of these projects within their institutions and within the general field of library and information science. These works and projects are sometimes characterized as "radical cataloging" alongside other ideas and works concerning groups 'in the margins'. However, insofar as these projects seek to improve access and practice cataloging and description that aligns with the worldviews represented in its collections and user populations, it is not all that radical. It only seems that way if we accept the mythical presumption that there is a single, one-size fits all, universal solution offered as salvation by the West. Otherwise, it makes sense that we continue to resist symptoms of colonization and affirm local, Indigenous systems that have worked for our peoples for centuries and even longer in some cases.

In her dissertation, titled *Naming, Claiming, and (Re)Creating: Indigenous Knowledge Organization at the Cultural Interface*, Ann Mary Doyle (2013) explores approaches to Indigenous KOS design. Doyle (2013) provides a theoretical discourse on knowledge

organization and identifies elements that lend themselves to Indigenous knowledge organization. Her driving question is relevant to this study - "how can Indigenous approaches to knowledge inform principles of design of library knowledge organization systems to serve Indigenous purposes?"

Table 4 - Approaches for Indigenous Knowledge Organization Systems

	APPROACHES TO DESIGN			
	Indigenous knowledge-based	**Hybrid**	**Local adaptation of universal KOS**	**Advocacy for change of universal KOS**
Australian Institute of Aboriginal and Torres Strait Islander Studies		X		
Brian Deer Classification	X			
First Nations House of Learning		X		
Māori Subject Headings	X			
Native American Educational Services (NAES) Classification	X			
Ojibway and Cree Cultural Centre Classification	X			

Doyle (2013) maps select examples of KOSs into four design approaches (see Table 3 above) – 1) Indigenous knowledge-based (such as the Brian Deer Classification, and the Native American Educational Services (NAES) Classification); 2) Hybrid (such as the First Nations House of Learning, Māori Subject Headings, and Australian Institute of Aboriginal and Torres Strait Islander Studies); 3) Local adaptation of universal KOS; 4) Advocacy for change of universal KOS. In this study, I am most interested in Indigenous knowledge-based design approaches and the hybrid approaches that prioritize Indigenous knowledge. According to Doyle (2013):

> Contextual elements (jurisdiction, site, and domain focus and scope) shape practice and are in a mutually constitutive relationship with the purposes designated for a KOS. The design strategy (the type of KOS) and its particular site carry both opportunities and constraints for design and for social change, and shape the nature of its discourses. (p. 213)

As a survey of existing projects and the experiences of First Nations in Canada, Doyle's study makes a significant contribution to Indigenous knowledge organization while also highlighting the need for further research in this area. Doyle (2013) asserts that the international literature on knowledge organization can be grouped into two categories – the first is "the evaluative study

and critique of the dominant knowledge organization systems," mainly the Library of Congress Classification (LCC), the Library of Congress Subject Headings (LCSH), and the Dewey Decimal Classification (DDC), whereas the second pertains to research on the "design and development of bibliographic knowledge organization systems in Indigenous contexts" (p. 17-18). Instead of discussing the inadequacies of the dominant knowledge organization practices in libraries, which has been well documented (Berman, 1971; Olson, 2000), this chapter focuses on the latter, applied research concerning Indigenous knowledge organization in libraries. It also extends the conversation beyond bibliographic knowledge organization by weaving Indigenous research methodologies and knowledge organization "in Indigenous contexts" in ways that prioritize Indigenous methodologies and communities as opposed to limiting ourselves to current understandings of bibliographic knowledge organization and libraries.

My methodology is informed by the practices and experiences of others who have created, designed, and continue to develop Indigenous knowledge organization systems. Having been fortunate to meet and talk with Māori and First Nations librarians who are doing this work, initiatives in Canada and Aotearoa have been particularly influential in the ways that I think about Indigenous knowledge organization for Hawai‘i and have therefore been the focus of this literature review. The work of Native Americans on Turtle Island has also contributed to the design of this study. Many projects are focused on local contexts, still in some cases, like Brian Deer Classification and Māori Subject Headings, the KOS has found application across tribes.

In Aotearoa, the Nga Upoko Tukutuku Māori Subject Headings (MSH) have been widely documented, allowing for others to learn from their creation process. The research that took place before and during the establishment of the MSH described library services to Māori populations and barriers to use by Māori, including identification of the need for subject headings in te reo Māori to provide access to materials for and/or about Māori (de Barry, 1998; Garraway & Szekely, 1994; MacDonald, 1993; Szekely, 1997). Reports detail the considerations and decision-making in the development process as well as the outcomes (Māori Subject Headings Working Party, 2000, 2001; Simpson, 2005). Evaluation of the MSH are limited to date; however, presentations, publications, and feedback from librarians indicate awareness of their availability and support of their application (Bryant, 2015; Paewai, 2017; Paranihi, 2011, 2013). In addition, workshops are held to promote the use of the MSH.

On Turtle Island, the Truth and Reconciliation Commission formalized a commitment to decolonizing academic institutions and libraries (Lee, 2019). The need for Indigenous knowledge organization to address the inadequacy of Library of Congress Subject Headings for First Nations materials is one of the priorities in the movement to decolonize libraries. Public higher education institutions have hosted information professionals, students, and First Nation and Metis communities to discuss pathways to Indigenous KO. Symposia such as the *Making Meaning Symposium* at University of Alberta in February 2018, *In Our Own Words* held at Ryerson University in partnership with York University in June 2018; and *Sorting Libraries Out* hosted by Simon Fraser University in partnership with the University of British Columbia in March 2019, have been held "to develop a community of practice across the country to work through the complexities of a unified way to deal with the American subject headings that are so problematic for describing Indigenous materials in Canada" (Lee, 2019, p. 3).

With greater awareness of the need to "decolonize description," increasingly so with the Truth and Reconciliation Commission Calls to Action, initiatives to address the issue are underway at university libraries. Leading the way, librarians at the Xwi7xwa Library at the University of British Columbia (UBC) have developed and implemented the Brian Deer Classification system for years. Widely praised for the ways in which it is able to represent and organize First Nations collections, the Brian Deer Classification takes into account the diversity within First Nations and allows for flexibility to better fit the unique needs of each community.

The initiatives in Aotearoa and First Nations show that Indigenous knowledge organization is not a trend or "one and done" type project. It involves a long-term commitment to maintain the new system itself and to sustain relationships with community – keeping the community and their evolving needs at the core. The creation of Indigenous knowledge organization systems is a collaborative and iterative process. Indigenous peoples must be at the core – participating, consulting, and leading throughout the process. When the Decolonising Description Working Group (DDWG) at the University of Alberta set recommendations for their project, they included a dedicated position to focus on relationship building thereby showing the importance of relationships by assigning a position and resources toward fulfilling this outcome (Farnel et al., 2018). Building and sustaining relationships with Indigenous communities is an overarching goal of Indigenous KO projects.

As changes in society occur, the knowledge organization system must be able reflect those changes. Librarians must remain vigilant and in relationship with Indigenous communities to recognize and respond to changes in language, ideas, needs, and interests. Indigenous forums and formal partnerships, like those in First Nations, take place regionally and nationally, as in the case of Māori Subject Headings, and benefit KO initiatives. Internationally, opportunities to gather and share stories at the International Indigenous Librarians Forum and at the Association of Tribal Archives, Libraries, and Museums conferences also help to build relationships and learning across Indigenous peoples and nations.

Nevertheless, local contexts are important to knowledge organization. Like culturally responsive research practices, knowledge organization for Indigenous knowledge and for Indigenous researchers must locate power within Indigenous communities (Denzin & Lincoln, 2008, p. 6). So, I return to Kanaka epistemologies and methodologies to provide the much-needed context for establishing pathways for Hawai‘i.

Importance of Indigenous methodologies

As a foundation for knowledge and knowledge transmission, Kanaka methodologies provide the frameworks and serve as models for Hawaiian knowledge organization. Hawaiian epistemologies are different from Western epistemologies and, as such, a Hawaiian research process also requires distinctive protocols and systems for access. Kovach (2009) notes:

> Indigenous methods do not flow from Western philosophy; they flow from tribal epistemologies. If tribal knowledges are not referenced as a legitimate knowledge system guiding the Indigenous methods and protocols within the research process, there is a congruency problem. Furthermore, by not clearly recognizing Indigenous inquiry for what it is – a distinctive methodology – the political and practical quagmire will persist. (pp. 36-37)

Kovach explains the importance of recognizing the legitmacy of Indigenous knowledges and the methodologies that flow from that foundation.

In considering the relationship between Indigenous methodologies and qualitative research, Kovach (2009) recognizes two intervening political challenges. First, it is difficult to find a research approach that is accountable (not extractive) to Indigenous worldviews. Second,

Western and Indigenous thought have fundamental epistemological differences and the divergences are conflicting for Indigenous researchers. Kovach (2009) explains:

> From the perspective of those who wish to employ a methodological approach guided by their own cultural epistemology, but cannot because it is personally and/or structurally shut out (intentionally or not), it feels as though the space is uninviting. This applies to quantitative research, qualitative research, and the post-secondary research environment in general. This sense of exclusion has a direct impact on Indigenous scholars and students within academia. (p. 29)

Clearly, there is a great need for a range of methodological approaches determined by Indigenous communities. According to Kovach (2014), "the research that influences policy and shapes practices that impacts Indigenous communities emerges from Western, not Indigenous, knowledges or forms of inquiry. The proposition is that methodology itself necessarily influences outcomes" (p. 13). Indigenous methodologies are not widely recognized in contemporary society and are not always allowed to co-exist with dominant methodologies and disciplines in academia. However, insofar as research shapes policy and practice, Indigenous research methodologies could lead to greater relevancy of the research as well as enhanced research outcomes (i.e. policy, programs, and practices) for Indigenous contexts (Kovach 2014). Taking it a step further, if we conceive how knowledge organization impacts access and subsequently research – particularly in the types of resources and voices that are surfaced and made more readily available – then the proposition can be extended to knowledge organization systems as well.

Just as there is a need for Indigenous methodologies in research then, there is also a need for the recognition and application of Indigenous methodologies in knowledge organization to support research. Doyle (2006) explains that methodologies inform the infrastructure and design of knowledge organization. Concerning design, for example, the metaphor of the medicine wheel has been considered for some Native American tribes while the wharenui (meeting house) provides a framework for the Māori Subject Headings. An Indigenous methodology has been applied in the case of Māori Subject Headings and the Māori theoretical framework encompasses Wairua / Te Kora – the spiritual, Hinengaro / Te Po – the intellectual and emotional, and Tinana / Te Ao Marama – the physical (Māori Subject Headings Working Party, 2001b; Te Whiu, 2021).

Hawaiian knowledge systems account for different perspectives and are flexible to remain accessible to a range of methodological approaches based in Kanaka epistemologies. A knowledge organization system should be able to replicate this. As evidenced by the acceptance of differing versions of moʻolelo as truths, there is no single perspective nor is that the goal of Kanaka methodologies. This points to the importance of moʻokūʻauhau to locate variations in moʻolelo and practice – each relevant, valid, and truths. Inevitably, the system will not be able to account for the multitude of contexts for which information needs occur. If the KOS can account for the many relationships that exist in a (Hawaiian) world/epistemology, then maybe it'll be flexible enough to meet the information needs in different contexts; users will be able to retrieve the info within their context because they'll be able to plug in their questions in a way that configures the search/system to meet their needs [sort of like personalized systems]. Kovach (2014) notes:

> Within Indigenous research design, there is no prescribed 'look'. How Indigenous knowledges are presented, the way in which the researcher binds epistemology with methods, and the framework that is utilized to show this relationship are all researcher-dependent. The extent to which the researcher shares self-knowledge and how she integrates cultural relationship may be implicit or explicit. Indigenous research design allows flexibility in the manner and extent to which the personal and particular are integrated; there can be no 'check-box' approach. In presenting the qualities of an Indigenous research framework, **the intent has been to guide not prescribe**. (p. 176, emphasis added).

Kovach (2014) explains that an Indigenous framework encompases a respect for relationships, purpose, sacred knowledge, and giving back. Goodyear-Kaʻōpua (2016) expands on this notion in her description of Hawaiian studies research:

> We incorporate the lived experiences of our people on our ʻāina into the way we frame, conduct, and present our research. What distinguishes *Hawaiian studies* from *studies of* Hawaiian topics is a commitment to revitalizing the collective ability of Kanaka Hawaiʻi to exercise our ea in healthy, respectful, and productive ways. Hawaiian studies methodologies support the revitalization of vessels that promote a robust flow of ea. (p. 9)

As Goodyear-Kaʻōpua (2016) explains, Kanaka methodologies draw from ʻāina and contribute to ea. Following the commitment of Hawaiian studies research to our collective ea, knowledge organization must also align with this aim and support research that revitalizes our ability to "excercise our ea" and mālama our relations with ʻāina.

Relevance of Indigenous Languages

As evident in existing systems, even well-meaning attempts to include or represent Indigenous concepts fall short due to problems with translation and the limitations of English to represent Indigenous knowledge and worldviews. Kovach (2014) believes:

> There are at least two fundamental difficulties in presuming that qualitative research, a Western tradition, can fully bring Indigenous methodologies under its wing. The first centres on form or, more specifically, the language that holds meaning in epistemological discourse. Indigenous knowledges have a fluidity and motion that is manifested in the distinctive structure of tribal languages. They resist the culturally imbued constructs of the English language, and from this perspective alone Western research and Indigenous inquiry can walk together only so far. This is a significant difficulty for all those, Indigenous and non-Indigenous, who do not speak a tribal language yet are inquiring into the nature of tribal knowledges.
>
> The other matter relates to knowledge itself. Indigenous methodologies are guided by tribal epistemologies, and tribal knowledge is not Western knowledge. Knowledge is neither acultural nor apolitical. (p. 30)

In the same way, Indigenous KO seeks to normalize Indigenous languages in libraries. This does not pidgeon hole or stifle the growth of systems as communities may choose to include additional languages within their KOSs or to map their Indigenous KOS to KOSs in other languages, whether it be other Indigenous languages or even colonizer languages.

The question for Hawai‘i and access to Hawaiian knowledge then becomes, ‘is use of English adequate?’ And, in this study, I assert that reliance on English for KO is deficient. As Kovach notes, the two “can walk together only so far” – why should we be satisfied with how far English can take us? This is not a new idea, English has remained inadequate for communicating and interpreting meaning within Hawaiian epistemologies and for ‘ike Hawai‘i (Matsuda, 2015). ho‘omanawanui (2019) explains the problem with translation:

> Much of the rich context of mo‘olelo Hawai‘i is lost in translation from ‘ōlelo Hawai‘i into English, particularly since the western and Kanaka worldviews are so different from each other. What is lost is not merely linguistic, as no language translates directly into any other language, but more importantly, the loss includes cultural concepts, poetics, aesthetics, and values. (p. 72)

As issues with translation naturally persist, we cannot depend on translations from English

systems which capture Euro-American interpretations of Hawaiian knowledge as these are largely inadequate and inappropriate for ʻike Hawaiʻi and Hawaiʻi researchers.

It is completely necessary to utilize ʻŌlelo Hawaiʻi in KO, and in research tools and discourse altogether. ʻŌlelo Hawaiʻi, and the spoken word, are central to kuanaʻike Hawaiʻi and ʻike Hawaiʻi. Therefore, ʻōlelo Hawaiʻi must be prioritized and serve as the principal language of a Hawaiian knowledge organization system.

Despite colonization and continued occupation, the number of ʻŌlelo Hawaiʻi speakers is increasing as is the number of Hawaiians enrolled in higher education. This intensifies the demand for knowledge organization systems that fulfill the research needs of researchers who would prefer to search in their first language and from within Kanaka methodologies.

Chapter Summary

This chapter brought awareness to the need to decolonize the field of information science and expand the information profession in ways that recognize, respect, and include Indigenous languages, knowledge, and peoples. It is vital that institutions acknowledge the historical trauma experienced and inherited by Indigenous peoples due to colonization and/or occupation, and the role that libraries have played in perpetrating this trauma both actively and passively. Among other things, libraries have and, in many cases continue to, legitimize and consecrate research and knowledge according to Western notions of warrant and authority at the expense of Indigenous knowledges, languages, lives, and lands.

As introduced in this section, Indigenous protocols are utilized to control and manage access, and their continued use validates and substantiates Indigenous knowledges, languages, and epistemologies in ways that align with transformative praxis. Loina are examples of transformative praxis while at the same time a form of continued resistance and conscientizing. As illustrated by ATSILIRN and PNAAM, loina have already been developed and established with regard to specific Indigenous peoples and locales, in part to decolonize and improve library services and practices. These loina encourage institutions to open their gates and respectfully engage with Indigenous communities in the ways their peoples, cultures, and knowledges are represented and provided access to (or not).

As the iwi kuamoʻo of libraries, knowledge organizations both document and serve as a primary example of colonialism within education institutions, and subsequently provide a substantial opportunity to systemically decolonize libraries and transform the ways we access knowledge. Part of this work necessarily involves breaking down the myth of universality in systems of knowledge transmission and access. Past and ongoing research and initiatives underline the relevance and importance of loina, Indigenous methodologies, and languages for decolonizing knowledge organization.

As this chapter also emphasized, Indigenous participation and leadership in the preservation and management of knowledge, particularly regarding access to Indigenous knowledge and resources in libraries, archives, and museums is critical to both process and outcomes. It is hugely important to form and uphold reciprocal relationships when performing research with Indigenous peoples, as has been well articulated by numerous Indigenous scholars (Archibald, 2008; Kovach, 2009; Smith, 2012; Wilson, 2008). The same is true when caring for Indigenous knowledge and approaching work in libraries, archives, and museums with Indigenous peoples.

Chapter 5: Hawaiian Knowledge Organization

Drawing from‘ike kupuna, principally performance cartographies that center ‘āina, this chapter begins to lay the groundwork for a Hawaiian knowledge organization system. ‘Ike is established as a foundation and domain of Hawaiian knowledge organization, followed by an introduction to sources and systems of ‘ike that have sustained Kanaka and ‘āina for generations. Continuing to identify possible frameworks and models for a Hawaiian knowledge organization system, the chapter wraps up with a review of select Kanaka methodologies, such as Papakū Makawalu and other methodologies for representing akua relationships and for organizing time. The methodologies and systems of knowledge transmission are not comprehensive and are instead intended to introduce Kanaka concepts, values, and understandings and, at the same time, illustrate the depth and breadth of ‘ike, as documented and practiced by Kanaka scholars.

Intellectual Access – Toward Hawaiian Knowledge Organization

The rise of literacy in Hawai‘i occurred in the 1830s (nearly 200 years ago) yet a Hawaiian knowledge organization system has not been implemented by libraries. Why?

While Kanaka contributed to and wrote manuscripts, most writing took place in nūpepa or as part of the composition of mele. For a long time, bibliographies served the purpose of a knowledge organization system that could be used to guide retrieval and learning. The degree to which these were relied upon for Hawaiian research is both a signal of the longstanding recognition of the inefficiency of Western systems for Hawaiian knowledge and an example of attempts to fill these gaps in bibliographic access through other means of traditional librarianship (Hur-Li, 2016).

Past and ongoing efforts to improve access to Hawaiian knowledge in libraries have focused mainly on transcription, translation, and digitization. Examples of projects that have improved access to the Hawaiian language newspaper repository include Ho‘olaupa‘i, Awaiaulu, and the Hawaiian language newspaper index (Nogelmeier, 2010). Some projects have begun the seemingly daunting but crucial task of indexing Hawaiian resources (Nogelmeier, 2010, p. 164). Examples include Mary Kawena Pukui’s HEN (Hawaiian Ethnological Notes) Index, *Hawaiian Genealogies: Extracted from Hawaiian Language Newspapers* (volume 1, 1983; volume 2, 1985) by Edith McKinzie, *Hawaiian Chants: An Index of Published Sources and Audio*

Recordings (1990), compiled by Amy Stillman, and *Hawaiian Legends Index* compiled principally by Lilian Chang and later expanded and revised by other librarians at the Hawai‘i State Library.

Since the time of Nogelmeier's writing until now (a period of about 10 years), additional projects by repositories, government agencies, the University of Hawai‘i, and others, have contributed to the effort to improve access to Hawaiian materials. The focus of these projects has varied but generally speaking, the bulk of digitization has been focused on materials in Hawaiian or that otherwise support language revitalization, and/or materials related to land ownership, genealogy, and Hawai‘i history. Ulukau and Papakilo Database are two primary examples of digital repositories of these digitized materials. In regard to format, digitization has largely been of nūpepa and other textual documents, however digitization of audio recordings, particularly in the case of *Ka Leo Hawai‘i* recordings, has also received attention. Notably, the Office of Hawaiian Affairs created the Papakilo Database which is comprised of collections from several Hawai‘i-based repositories, including the Bishop Museum, Hula Preservation Society, ‘Ulu‘ulu Moving Image Archive, and Bureau of Land Conveyances. The Hawai‘i State Archive is pursuing digitization of their collections and makes several document and photograph collections freely available online. Still, the focus remains on digitization, transcription, and translation.

More work is needed to improve intellectual access to Hawaiian materials. Existing indexes can be built upon for this purpose, especially with continuing advances in technologies. With greater control of Hawaiian education and the return to ‘Ōlelo Hawai‘i in education, the need for a Hawaiian KOS is increasingly recognized. To that end, this chapter reviews the literature pertinent to Hawaiian knowledge and knowledge organization from Hawaiian perspectives to introduce Hawaiian concepts and understandings of knowledge. The principle questions this chapter seeks to answer are:

1. How is ‘ike conceptualized and transmitted by Hawaiian scholars and cultural experts?
2. What elements, categories, and/or values inform a Hawaiian knowledge organization system?

This is not meant to provide an exhaustive literature review of Hawaiian knowledge. Rather, the sections that follow provide a survey of the Hawaiian cultural context to knowledge as informs knowledge organization. An overview of ʻike and systems of knowledge transmission are provided, followed by an outline of specific Kanaka methodologies and frameworks, as documented and practiced by Kanaka scholars. These cultural understandings and knowledge frameworks have existed for centuries – as preserved by kūpuna and practitioners, as well as within libraries and other cultural heritage institutions. We are challenged with the opportunity to draw from these systems for preservation and access.

ʻIke

Before entering Kanaka methodologies, it is important to have an understanding of ʻike. An introduction to the ways Kanaka conceptualize ʻike and realize methods of knowledge transmission is provided in this section. This understanding will provide a basis from which to analyze the epistemological elements, categories, and values that inform Hawaiian knowledge organization. The ways in which ʻike is understood is critical to determining the purpose, scope, and function of a Hawaiian KOS. The focus or emphasis in Hawaiian knowledge organization is on ʻike, and the meanings and interpretations of ʻike, rather than the physical manifestations themselves. This is not to say that physical manifestations are inconsequential, do not themselves contain mana, or could not otherwise be imbued with mana.

In the ways ʻike Hawaiʻi is discussed, insofar as anyone discusses ʻike conceptually (as opposed to ʻon-the-ground' applications and manifestations), it is sometimes referred to as ʻHawaiian knowledge'. As is the case with other Indigenous knowledges, ʻike Hawaiʻi is sometimes referred to in English as traditional knowledge, cultural knowledge, local knowledge or wisdom, culture, indigenous technical knowledge, traditional ecological knowledge, and ancestral knowledge (Agrawal, 2002; Battiste, 2005). As we see in library classifications and elsewhere, ʻike Hawaiʻi is sometimes referred to derogatorily as ʻfolklore' or ʻmythology', marginalized as something of the past, or omitted entirely. These references point to an assumed dichotomy between Indigenous knowledge and Western knowledge, as has been purposefully produced and perpetuated by networks of power (Meyer, 1998).

‘Ike is as difficult a word to define as is ‘religion’ or ‘faith’ as these concepts are complex, and what is considered ‘ike may differ according to the person. Pukui’s (1986) Hawaiian language dictionary defines ‘ike as:

> nvt. To see, know, feel, greet, recognize, perceive, experience, be aware, understand; to know sexually; to receive revelations from the gods; knowledge, awareness, understanding, recognition, comprehension and hence learning; sense, as of hearing or sight; sensory, perceptive, vision.

Meyer (1998) explains that “the idea of knowledge (‘ike) is immediately linked with sensory, and emotional descriptors, which are also linked to revelations from the gods” (p. 26). Regarding mana and ‘ike, Arista (2018) states:

> ‘Ike was structured by memories trained to retain information. Its salience and authority was secured through speech. Its mana (power) was amplified in multiple evocations and recapitulations, enhanced by oral performances before and among a Hawaiian-speaking public over the span of centuries. (p. 421)

This underscores the role of memory and speech with regard to ‘ike, highlighting the later in particular.

Pule, or prayer, and oli, or chants, are part of loina generally and are performed as part of the process of seeking ‘ike. Two oli, in particular, are common at community events and small group gatherings to open spaces and/or focus energies to the kuleana at hand – *E Ho Mai*, composed by Edith Kanakaʻole, and *Nā Aumakua*, as adapted from Davida Malo’s *Hawaiian Antiquities* by Pua Kanahele-Kanakaʻole; I myself have used both oli to call for assistance in my own research journey. In both examples, the chanter is asking for ‘ike and support to boost our ‘ike. There is an open acknowledgement of the sacred and spiritual sources of knowledge and a request for aid to heighten their abilities to gather information and attain knowledge (usually pertaining to the activity they are about to participate in).

E Hō Mai

E hō mai ka ‘ike mai luna mai ē	*Grant us the knowledge from above*
O nā mea huna noʻeau o nā mele ē	*Concerning the hidden wisdom of songs*
E hō mai	*Grant us these things*
E hō mai	*Grant us these things*
E hō mai	*Grant us these things*

Na ʻAumakua

Na ʻAumakua mai ka la hiki a ka la kau!	*Ancestors from the rising to the setting sun*
Mai ka hoʻokuʻi a ka halawai	*From the zenith to the horizon*
Na ʻAumakua ia Kahinakua, ia Kahinaʻalo	*Ancestors who stand at our back and front*
Ia kaʻa ʻakau i ka lani	*You who stand at our right hand*
ʻO kiha i ka lani	*A breathing in the heavens*
ʻOwe i ka lani	*An utterance in the heavens*
Nunulu i ka lani	*A clear, ringing voice in the heavens*
Kaholo i ka lani	*A voice reverberating in the heavens*
Eia na pulapula a ʻoukou ʻo ka poʻe Hawaiʻi	*Here are your descendants, the Hawaiians*
E malama ʻoukou ia makou	*Safeguard us*
E ulu i ka lani	*That we may flourish in the heavens*
E ulu i ka honua	*That we may flourish on earth*
E ulu i ka pae ʻāina o Hawaiʻi	*That we may flourish in Hawaiʻi*
E ho mai i ka ʻike	*Grant us knowledge*
E ho mai i ka ikaika	*Grant us strength*
E ho mai i ke akamai	*Grant us intelligence*
E ho mai i ka maopopo pono	*Grant us understanding*
E ho mai i ka ʻike papalua	*Grant us insight*
E ho mai i ka mana.	*Grant us power*
ʻAmama ua noa.	*The prayer is lifted, it is free.*

In *Nā Aumakua*, the chanter calls upon ʻaumakua to come guard and guide them in fulfillment of their kuleana, thereby underlining the role of kūpuna in learning and knowing. There are two direct references that point to forms, or planes, of ʻike - "e ho mai ka ʻike" and then again a few lines later "e ho mai ka ʻike pāpālua." Usage of the term ʻike pāpālua, which translates as "to see double" or "supernatural knowledge, extrasensory perception," signals the spiritual and, for lack of a better word in English, psychic aspects of knowledge. Furthermore, the oli illuminates a relationship between ʻike, ʻike pāpālua, ikaika (strength), akamai (intelligence), maopopo pono (understanding), and mana (power, energy, authority) and presents these as valuable gifts to be sought after and attained.

Similarly recognizing the relationships embedded in ʻike, Meyer (2008) identifies seven categories "to organize systems of consciousness that are needed to enliven what knowing means" (p. 218):

1. Spirituality and Knowing: The Cultural Context of Knowledge
2. That Which Feeds: Physical Place and Knowing
3. The Cultural Nature of the Senses: Expanding Our Ideas of Empiricism
4. Relationship and Knowledge: Self through Other
5. Utility and Knowledge: Ideas of Wealth and Usefulness
6. Words and Knowledge: Causality in Language
7. The Body/Mind Question: The Illusion of Separation

The categories Meyer put forward were intended for understanding how consciousness animates knowing. In the same way, the categories also serve as a useful framework for knowledge organization. After all, if knowledge organization is intended as a pathway to knowledge, then the organization system should embody and reinforce the knowledge it seeks to serve as a conduit for.

Turning to the second category Meyer identifies, "That Which feeds: Physical Place and Knowing," I discuss ʻāina as a critical source of ʻike and expand on ʻāina-related frameworks for organizing ʻike. The remaining categories from Meyer are no less important, and are covered to varying degrees in this study, however my focus has been on 1) Spirituality and Knowing: The Cultural Context of Knowledge, 2) That Which Feeds: Physical Place and Knowing, and 4) Relationship and Knowledge: Self through Other, being as these are extremely lacking in existing knowledge organization systems and at the same time, provide a foundation and structure for the remaining categories.

As a subsistence economy, lāhui Kanaka survival was tied to ʻāina and, more specifically, their knowledge about ʻāina (Meyer, 1998). According to Meyer (1998), "learning was a constant exchange between the environment, the gods and people" (p. 29). Underscoring the role of ʻāina in a Kanaka worldview, Meyer (1998) observes:

> The environment played a central role in how Hawaiians lived, survived, and made sense of their experiences. The natural world, then, was both content and essence with regard to the what and how of knowledge. Environment became a structure, process and product of most lessons, and thus, the natural world was not separate from a moral one. (p. 32)

As such, to say that ʻike was highly regarded would be an understatement. ʻIke was continually being expanded upon as Kanaka understandings increased and evolved to keep up with the changing environment.

ʻIke Hawaiʻi is a system of knowledge amassed from and validated by ʻāina (and environment) and the generations of kūpuna before us. Oliveira (2014) explains:

> The ancestral knowledge systems of our kūpuna have guided us for countless generations… We must quote the moʻolelo of our ancestors and walk on this path so other indigenous peoples may likewise be inspired to embark on their own personal meandering journeys of rediscovery and enlightenment.
>
> This alanui kīkeʻekeʻe (zigzag road) has reminded us that the path to Kanaka knowledge is not always straight and linear. But, like the alaloa o Maui (ancestral path around the island of Maui) that encircles the island, this path has no beginning or end: ancestral knowledge is a holistic continuum grounded in the past, relevant in the present, and indispensable in the future. (p. 114)

ʻIke is derived from our environment and from our ancestors who have survived and thrived with/in their environments for thousands of years (Handy et al., 1972; Meyer, 1998). When praised for his wisdom during his travels in Europe, Mōʻī Kamehameha II, ʻIolani Liholiho, was quoted as responding, "Na wai hoʻi ka ʻole o ke akamai, he alanui i maʻa i ka hele ʻia e oʻu mau mākua?" (Why shouldn't I know, when it is a road often traveled by my parents?) (ON 2301). Exuding confidence, Liholiho references the wisdom of his kūpuna and cites them as the source of his intelligence. Notably, he doesn't credit formal education systems or the reading of European or other foreign writings to validate his intellect. Still, his statement alludes to the high value placed on learning in Hawaiʻi, and the continuity of knowledge, as he himself continues on the path of his ancestors.

Names, knowledge, and protocols are relative to ʻāina. Davianna McGregor (1989) maintains:

> The Hawaiian related to the land as an ancestor and dear friend – giving its various natural forms and features descriptive names just as they named their own children; understanding and adjusting to its various moods at different times of the year; nurturing it with loving care. (p. 93)

McGregor points to the significance of naming as both signifying and recognizing our familial relationship with ʻāina. As has been conveyed, ʻāina provides a structure through which Kanaka have located ourselves within our island communities. In *The Polynesian Family System in Kaʻu, Hawaiʻi*, Handy and Pukui (1972) explain:

> The fundamental unit in the social organization of the Hawaiians of Ka-ʻu was the dispersed community of *ʻohana*, or relatives by blood, marriage and adoption, living some inland and some near the sea but concentrated geographically in and tied by ancestry, birth and sentiment to a particular locality which was termed the *ʻāina*.
>
> The expanded and all-inclusive family or *ʻohana*, and the home-land or *ʻāina*, were two complementary factors which constituted this regional dispersed community. The term *ʻāina* represented a concept essentially belonging to an agricultural people, deriving as it did from the very *ʻai*, to feed, with the substantive suffix *na* added, so that it signified "that which feeds" or "feeder." (pp. 2-3)

Handy and Pukui (1972) explain that even the terminology we use for family systems derives from ʻāina, specifically moʻolelo and agricultural practices related to kalo (taro):

> The Hawaiian diet was built around poi. Now the taro differs from all other food plants in Hawaiʻi in propagating itself by means of *ʻoha* or sprouts from the sides or base of the main corm (which is termed *makua*, meaning parent or "father"). The planter breaks off and transplants the *ʻoha*. As the *ʻoha* or sprouts from the parent taro (or *makua*) serve to propagate the taro and produce the staple of life, or *ʻai*, on the land (*ʻai-na*) cultivated through generations by a given family, so the family or *ʻoha-na* is identified physically and psychically with the homeland (*ʻai-na*) whose soil has produced the staple of life (*ʻai*, food made from taro) that nourishes the dispersed family (*ʻoha-na*).
>
> But the family was not conceived of as consisting only of its living members. It included the family forbears, to whom was applied another term that is a figure from the speech of a folk for whom growth, as observed in the vegetable world, is a basic concept. The inclusive term for deceased ancestors and living elders, *kupuna*, as representing the stock from which the *ʻohana* spring as off-shoots, was derived from the verb *kupu* "to grow," with the suffix *na* added. (pp. 3-4)

The origins of the terms ʻāina, ʻohana, makua, and kupuna, serve as evidence of the significance of ʻāina to societal structures and collective consciousness. This further demonstrates the role of ʻāina as embedded in Kanaka epistemologies as a source of nurturing and a sense of continuity.

Handy and Pukui (1972) describe the subjective relationship between Kanaka and nature:

> It is hard for the modern intellectually rigid and extroverted mind to sense the subjective relationship of genuine Hawaiians to Nature, visible and invisible. But without some degree *sending the feeling* that underlies this quality of consciousness in those who live intimately in a condition of primary awareness and sensitivity on the plane of subjective identification with Nature, coupled with perceptions and concepts arising therefrom – without some comprehension of this quality of spontaneous *being-one-with-natural-phenomena which are persons, not things*, it is impossible for an alien (be he foreigner or

> city-hardened native) to understand a true country-Hawaiian's sense of dependence and obligation, his "values," his discrimination of the real, the good, the beautiful and true, his feeling of organic and spiritual identification with the *ʻāina* (homeland) and *ʻohana* (kin). (p. 28)

Handy and Pukui (1972) continue to explain the depth of importance of nature to Kanaka, as embodied in so-called "legends". The "legendary drama" of our kūpuna, Handy and Pukui (1972) explain, are "living, dynamic realities, parts of an orderly and rational philosophy" (p. 28). According to Handy and Pukui (1972):

> If Pele is not real to you, you cannot comprehend the quality of relationship that exists between persons related to and through Pele, and of these persons to the land and phenomena, not "created by" but *which are,* Pele and her clan. A rosy dawn is not merely a lovely "natural phenomenon": It is that beloved Person named "The-rosy-glow-of-the-Heavens," who is "Hiʻiaka-in-the-bosom-of-Pele," the youngest and most beloved sister of that greater (and loved though awe-inspiring) Person, Pele-honua-mea (Pele-the-sacred-earth-person), whose passions express themselves in the upheavals of vulcanism, whose "family" or "clan" are the terrestrial and meteorological phenomena related to vulcanism and the land created by vulcanism, as actively known in Ka-ʻu. (p. 28)

Thus, we recognize how ʻāina provides much-needed context to comprehend moʻolelo themselves but also the interfaces of and exchanges with the environment around us. As Handy and Pukui (1972) put it, the physical environment is "the material upon which and out of which the legendary drama of Ka-ʻu is wrought with the patterns of inherited traditional Polynesian lore" (p. 18). Intimate knowledge of ʻāina contributes to our ability to understand human relationships with each other and with all things that hold mana (Handy & Pukui, 1972). Handy and Pukui (1972) note:

> It is necessary to comprehend this psychic phase, against the background of Hawaiian religious experience, beliefs, practices and concepts, if family relationships, duties, *kapu* and ethical principles are to be understood. No one can comprehend the so-called "lore" and "beliefs" relating to *ʻaumakua* and *kupua* without knowing a great deal about the aspects and features of the locale and natural environment with which *ʻaumakua* and *kupua* are identified. (p. 39)

The importance of ʻāina (place, land) in Kanaka worldview and memory is evidence of a close relationship with the environment (Oliveira, 2014, p. 66). According to Handy and Pukui (1972):

> It may be said, therefore, that the physical environment *conditions* the functioning mechanism of adjustment : but it would be incorrect to say that the physical environment

> *determines* the form or pattern. Nevertheless, the particular form which the Ka-ʻu community manifests, as a variant from the basic norm (if there be a norm) of an old Polynesian community as an aggregate or complex of families, can not be brought into true focus except against the background of the Land (ʻĀina). The *ʻOhana* as a functioning social mechanism operates within the milieu of sea, shore, coastal and inland slopes and uplands, subject to weather, sun and moon. (p. 18)

For Kanaka, our environment is inclusive of ʻāina, kai, moana, and the spaces above and below. Oliveira (2014) explains that the Kanaka worldview was indeed based on the "world (they) view(ed)":

> Their places were not confined to the boundaries on ʻāina but extended vertically and horizontally in every direction, encompassing heavenscapes, landscapes, and oceanscapes. By identifying and, more importantly, naming the various strata of the heavens, regions on the landscape, and depths of the ocean, Kanaka transformed spaces into personalized places. (pp. 47-48)

Oliveira (2014) makes references to the mana and spirituality within Kanaka worldviews, particularly in regard to relationships with ʻāina.

Altogether, Pukui, Oliveira, and McGregor help us to understand how names, moʻolelo, and subsequently knowledge relates to, or is understood within the context of, ʻāina. To put it another way, ʻāina is essential to ʻike. Battiste (2005) describes the fundamental relationship between Indigenous knowledge and land:

> Indigenous knowledge is also inherently tied to land, not to land in general but to particular landscapes, landforms, and biomes where ceremonies are properly held, stories properly recited, medicines properly gathered, and transfers of knowledge properly authenticated. (p. 8)

Just as our wellbeing is rooted in ʻāina, ʻike is also entrenched in ʻāina. Therefore, any discussion about ʻike, education, or the intergenerational transmission of ʻike, is incomplete without consideration to the integrity of ʻāina (Battiste 2005). As will be explained later, ʻāina is not only a source of ʻike but gives authority to ʻike and informs the ways our stories are stored, shared, and interpreted. Battiste (2005) succinctly describes the relationships embodied by ʻike:

> Indigenous knowledge thus embodies a web of relationships within a specific ecological context; contains linguistic categories, rules, and relationships unique to each knowledge system; has localized content and meaning; has established customs with respect to

> acquiring and sharing of knowledge (not all Indigenous peoples equally recognize their responsibilities); and implies responsibilities for possessing various kinds of knowledge. (p. 8)

This aptly applies also to Hawai‘i. The land base provides for our existence and the ‘ike we have is gained through generations of observation of ‘āina (including the ocean). This ‘ike enabled our ancestors to survive and thrive – traversing and traveling Moananuiākea and establishing an extensive agriculture system are but two examples of the expanse of ‘ike.

From this discussion, we understand ‘ike exists in a balanced relationship between ‘āina and Kanaka, and should not be mined or raped from either – as has been consistent practice under colonialism and occupation. Further, Wilson (2008) recognizes, “Knowledge cannot be owned or discovered but is merely a set of relationships that may be given a visible form” (p. 127). It is critical that ‘ike be represented and understood within this context of relationality. Kanaka‘ole Kanahele et al. (2009) explain that “the process of owning knowledge is to consume, digest and experiment with the information, to know what works and what needs adjustment” (p. 19). This understanding of ownership and ‘ike again places us within the continuum of ‘ike and elevates ‘ike and, perhaps more specifically, the transmission of ‘ike above any supposed ownership for profit or other individual benefit.

Sources & Systems of Knowledge Transmission

> The ancestral knowledge systems of our kūpuna have guided us for countless generations. Ancestral indigenous ways of knowing are valid systems of knowledge grounded in the places from which they evolve. We must quote the mo‘olelo of our ancestors and walk on this path so other indigenous peoples may likewise be inspired to embark on their own personal meandering journeys of rediscovery and enlightenment.
>
> This alanui kīke‘eke‘e (zigzag road) has reminded us that the path to Kanaka knowledge is not always straight and linear. But, like the alaloa o Maui (ancestral path around the island of Maui) that encircles the island, this path has no beginning or end: ancestral knowledge is a holistic continuum grounded in the past, relevant in the present, and indispensable in the future. (Oliveira, 2014, p. 113)

Kanaka methodologies serve as a foundation for Hawaiian knowledge organization. Classifications and categorizations of knowledge deriving from these methodologies organize knowledge in and of themselves and thereby serve as models for the intellectual organization of information and materials in libraries. Insofar as an oral tradition can be constricted to fixed

words and meanings, this section outlines examples of methodologies and structures that inform knowledge organization in libraries. Rather than providing a comprehensive synopsis, I focus on the methodologies and relationships that are foremost to Hawaiian knowledge organization in libraries – principally ʻāina, moʻolelo (inclusive of ʻōlelo noʻeau and mele), and moʻokūʻauhau.

Given the importance of ʻāina in a Kanaka worldview, the greatest, or most evident, examples of Kanaka classification are arrived at through the study of ʻāina. Names, knowledge, and protocols are relative to place. Kanaka utilized performance cartography to map spatial understandings (Oliveira, 2006, 2014). Oliveira (2006) highlights seven modes of expression:

> Traditionally, Kanaka Maoli [Native Hawaiian] utilized ʻperformance cartographyʼ to reference their constructed places, legitimize their existence, and reinforce their legacies. Such cartographic representations were expressed in many ways including: *inoa ʻāina* (place names), *mele* (songs), *hula* (dance), *ʻōlelo noʻeau* (proverbs), *mahele ʻāina* (land divisions), *moʻolelo* (historical accounts), and *moʻokūʻauhau* (genealogies). The modes of expression and/or communication utilized in Hawaiian performance cartography function like a map in that it references spatial understandings and features. (pp. 204-205)

These modes of expression, both coming from and representing ʻāina, are inherently systems for communicating and transmitting ʻike. In the following sections, I focus on six of the seven modes of expression identified by Oliveira (2014) - inoa ʻāina (place names), mele (songs), ʻōlelo noʻeau (proverbs), mahele ʻāina (land divisions), moʻolelo (historical accounts), and moʻokūʻauhau (genealogies) – in order to provide additional perspective and envision how these could be employed in Hawaiian knowledge organization to better represent Kanaka understandings. Hawaiian KO involves recognizing the relationships between these modes of expression; a Hawaiian KOS should be able to represent each of these. At a basic level, each could be appointed as respective fields within a Hawaiian KOS. Moreover, as Oliveira (2014) notes, “Because mapping techniques were often relative to one’s location at any given place and time, further discussion of these practices may be enhanced by narrowing the discussion to a single island in ka pae ʻāina Hawaiʻi” (p. 59). It is important to recognize this nuance up front and acknowledge its relevance to knowledge organization because the categories and terms selected in knowledge organization will no doubt have political, social, and other implications and/or be interpreted accordingly from one’s location (i.e. the island you stand upon).

Inoa ʻĀina

Inoa ʻāina, or place names, communicate the location, physical features, other significant aspects of, or relationships to a place. Social and political implications are inherent in names. Inoa ʻāina are one way of memorializing wahi pana, or sacred or storied places, whether for a person, akua, activity (such as fishing or surfing), or historic event situated at that place. Kepaniwai, for example, literally translates to "the water dam," and is the name of the site where Kamehameha's invading army battled Kalanikūpule and his warriors in 1790 – the number of bodies was so numerous that they filled the Wailuku Stream much like a dam and blocked water flow in this area. The inoa ʻāina encapsulates the moʻolelo of the battle without needing to retell it in its entirety and memorializes the encounter, the warriors, and the aliʻi who led the respective armies.

Inoa ʻāina can also encompass names for natural elements, such as wind and rain names, as well as land features, like waterfalls, rivers, mountains, and hills. The inoa ʻāina of mountains and hills are well documented in performance cartographies. One of the most storied hills is Kaʻuiki in Hāna, which is renowned for being the home of the kupua, Māui, and the birthplace of aliʻi, most notably Kaʻahumanu, favorite wife of Kamehameha Paiʻea. Kaʻuiki is also the site of an impressive fortress that protected Hāna residents from invading armies. The winds are also identified and named, in the traditions of Pele, Lono, and Kūapakaʻa Laʻamaomao (Kanakaʻole Kanahele et al., 2009). The moʻolelo of Kūapakaʻa Laʻamaomao is a well-known example of a moʻolelo that inventories the wind names of each island, though mostly that of Hawaiʻi, Molokaʻi, and Kauaʻi. Many versions of this moʻolelo exist, suggesting its significance. The earliest known writing of this moʻolelo was printed in ʻōlelo Hawaiʻi as a serial, in the *Ka Hae Hawaii* Hawaiian newspaper, by S.K. Kuapuu, titled, *He Wahi Moʻolelo* (April 17 – June 19, 1861); Samuel M. Kamakau and Abraham Fornander also wrote versions. But, the version most often cited is titled, *Moolelo Hawaii o Pakaa a me Ku-a-Pakaa, na Kahu Iwikuamoo o Keawenuiaumu, ke Alii o Hawaii, a o na Moopuna hoi o Laamaomao*, written by Moses Kuaea Nakuina and published in in ʻōlelo Hawaiʻi in 1902. His version was later translated and published in 1990, by Esther T. Mookini and Sarah Nakoa, as *The Wind Gourd of Laʻamaomao* – this book is widely referenced and utilized in Hawaiian Studies and other research, exhibiting

the continued significance of the moʻolelo for naming the winds as well as for teaching about values.

Inoa ʻāina are sometimes duplicated. As evidenced by the select list of inoa ʻāina in Table 4 below, inoa ʻāina are sometimes shared by places on multiple islands, such is the case with Hāʻiku, Kailua, Kona, Wailua, Waimea, and Wailuku. Likewise, inoa ʻāina for rain, winds,

Table 5 - Inoa ʻĀina in common on multiple islands

	Mokupuni							
		Hawaiʻi	Maui	Molokaʻi	Lānaʻi	Oʻahu	Kauaʻi	Niʻihau
Inoa ʻĀina	Hāʻiku	x	x			x	x	
	Kailua	x	x			x		
	Kona	x		x		x	x	x
	Wailua		x			x	x	
	Waimea	x				x	x	
	Wailuku	x	x					

mountains, etc. may also be duplicated; oftentimes in recognition of similar characteristics or other associations to an older homeland (Kanakaʻole Kanahele et al., 2009). For example, moaʻe, or trade winds, are experienced on more than one island. Just as we would distinguish between historic figures or personal names generally, it is important to be aware of these shared inoa ʻāina in order to decipher between places, and to recognize relationships evidenced in those shared names that may be referenced in moʻolelo and moʻokūʻauhau as this factors into our interpretations and understandings of moʻolelo. For, while the dominant narrative may be that Māui captured the sun atop Haleakalā on the island of Maui, at least one version of the moʻolelo refers to Puʻu Heleakalā as the hill in Nānākuli on Oʻahu island where Māui snared the sun's rays (Fujikane, 2016; Kamakau, 1991, p. 136). Some might ask, well was it a hill on Oʻahu or a mountain on Maui that Māui climbed to wrangle the sun? However, it is the following questions that delve into the relationships within the moʻolelo that are significant – how does place inform the moʻolelo? And, being as these two ʻāina share the same name, how might these two places be connected? Inoa ʻāina point to relationships between ʻāina (the most obvious example being ʻāina with shared names) and to similar experiences with ʻāina.

In many Western societies, "'space' is often not defined as 'place' until it is given a name and is labeled on a map by a colonizer" (Oliveira, 2009, p. 110). Recognizing the prominence of performance cartographies, Akana (2013) observes that many inoa ʻāina "are not found on maps but are remembered in memory, located, fortunately, with each performance" (article 5). The relationships inherent in inoa ʻāina, and naming in general, extend beyond Hawaiʻi as representations of our connections within Moananuiākea, mainly the group of islands that have come to be referred to as Polynesia. Inoa ʻĀina such as Pāʻia on Maui and Pahia in Aotearoa, or Olohena on Kauaʻi and Olosega in Sāmoa, "serve as reminders of common ancestry, history, and identity as *kānaka honua, kānaka holomoana*, "people of the land, people of the open ocean"" (Akana, 2013, article 5). As Kanakaʻole Kanahele et al. (2009) notes, "to reuse the name is to allow the memory and spirit of that homeland to thrive" (p. 90). Whether giving names to ʻāina or to people, this reiteration of names conveys mana from a place or person, or from a thing that has been imbued with mana, is a characteristic of the Hawaiian practice of naming.

ʻŌlelo Noʻeau

One of the ways metaphor and kaona (concealed references layered meanings) are employed is in ʻōlelo noʻeau (proverbs, wise sayings). ʻŌlelo noʻeau are both a product of and a manifestation of Hawaiian cultural expression. Within its layers of meaning, ʻōlelo noʻeau provide a basis for understanding a Hawaiian worldview. Referring to the collection of ʻōlelo noʻeau collected, translated, and annotated by Mary Kawena Pukui, the Preface to *ʻŌlelo Noʻeau: Hawaiian proverbs & poetical sayings* (1983) notes the significance of ʻōlelo noʻeau and the spoken word as cultural expression:

> The sayings may be appreciated individually and collectively for their aesthetic, historic, and educational values. They reveal with each new reading ever deeper layers of meaning, giving understanding not only of Hawaiʻi and its people but of all humanity. Since the sayings carry the immediacy of the spoken word, considered to be the highest form of cultural expression in old Hawaiʻi, they bring us closer to the everyday thoughts and lives of the Hawaiians who created them. Taken together, the sayings offer a basis for an understanding of the essence and origins of traditional Hawaiian values. (p. vii)

ʻŌlelo noʻeau commonly invoke and describe ʻāina, including natural features and the cultural or historical significance of places. For example, ʻōlelo noʻeau map ʻāina to aliʻi (chiefs or chiefesses) – to the places they're from, where they lived, or where they visited or frequented.

As distinguished in the excerpt below (taken from the same Preface referenced above), ʻōlelo noʻeau "may be categorized, in *Western* terms" however a "conceptual arrangement" into categories would be inadequate (Pukui, 1983, p. vii):

> The sayings may be categorized, in *Western* terms, as proverbs, aphorisms, didactic adages, jokes, riddles, epithets, lines from chants, etc., and they present a variety of literary techniques such as metaphor, analogy, allegory, personification, irony, pun, and repetition. **It is worth noting, however, that the sayings were spoken, and that their meanings and purposes should not be assessed by the Western concepts of literary types and techniques.**
>
> … The sayings are arranged alphabetically in Hawaiian. **A conceptual arrangement, grouping into categories such as "Love" or "Domestic Life," would not have succeeded, as a single saying often speaks to many topics**. In addition, some sayings have origins so remote or connotations so obscure that **such categorizing would risk misinterpretation**. Therefore, each saying in offered as a separate individual distillation of thought. Explanations beyond those of the author are left to the reader's understanding and research. (p. vii) [emphasis added]

Interestingly, it is acknowledged that ʻōlelo noʻeau can have multiple interpretations beyond those provided by the author, nevertheless the onus for any further explanations is placed on the reader. It is unclear whether the exercise of categorization was deemed deficient, or if the concern is more precisely placed on any supposed attempt to organize and arrange ʻōlelo noʻeau into English language categories. Moreover, the challenge of grouping ʻōlelo noʻeau under multiple topics might have seem cumbersome or tedious in print formats. But, if topical groupings are preferable over (or in addition to) alphabetical arrangements, it would seem a worthy undertaking, especially considering how advances in digital technologies enable for multiple representations previously unfeasible due to limitations to print.

Mahele ʻĀina

Our kūpuna had an intimate understanding of the heavenscapes, landscapes, and seascapes and named the various strata and regions within each (Oliveira, 2014). Mahele ʻāina, or land divisions, were developed to construct place. The methods and terms used in mahele ʻāina sometimes differ between islands which makes sense given the variations in ʻōlelo Hawaiʻi dialects and in naming practices. Examination of mahele ʻāina terminology in nineteenth century primary sources written by Kanaka scholars, like Davida Malo and Samuel Kamakau, and

cartographers such as W.D. Alexander, further demonstrate variations in naming practices by place (Oliveira, 2014). Nevertheless, for the purposes of this study, a base understanding of mahele ʻāina as described in what is often referred to as the "ahupuaʻa system" provides a sufficient framework for the divisions or classifications within mahele ʻāina. Within the ahupuaʻa system, each mokupuni, or island, is organized into several moku (districts), which are then further divided into ahupuaʻa (smaller districts). Again, this is a simplified explanation of mahele ʻāina but provides a base for representing ʻāina in a way that leaves room for further specificity to be added later.

The mahele ʻāina most often referred to today are (re)constructing place in sometimes foreign and abstract ways in the sense that there is no considerable regard as to the natural or spiritual elements of ʻāina. Nevertheless, the same goals of mapping and inscribing meaning persist. Examples include voter districts and zoning or land use categories. Traditionally, manmade structures, like ahu (stone), were erected to mark boundaries but most mahele ʻāina were devised by geographical and other natural features of the land, such as rivers or ridges. In fact, there's a single rock at the top of Haleakalā that delineates eight of the twelve moku ʻāina (districts) on Maui (Landgraf, 2003; Oliveira, 2014).

Ahupuaʻa are commonly described as a land district extending from the mountains to the sea. While this is a generalization and not a 'hard and fast rule' regarding the shape or extent of ahupuaʻa (Preza, 2010), it does provide an understanding of ahupuaʻa and demonstrates the understanding our kūpuna had of the land-sea continuum (Oliveira, 2014). This also alludes to the access to resources available to people within an ahupuaʻa as commonly spanning the elevations and areas existing between the mountains and sea. While the span and size of ahupuaʻa varied greatly, this concept of access to resources being in part based upon ahupuaʻa or place-based informs larger discussions of kuleana and access to ʻike as well.

Māhele ʻāina were not fixed, but instead changed over time – often as part of a kālaiʻāina (carving of boundaries and redistribution of land) performed upon an aliʻi taking over reign so that she or he could install trusted konohiki to manage the ahupuaʻa or moku. While mahele ʻāina continue to change hands today, there remains an understanding of the importance of knowing who and what was on the ʻāina prior to the current caretaker. However, under the

current occupation of Hawai‘i, this has not always been the case as exemplified by the land struggle at Kapalua on Maui, where a large corporation was able to purchase rights to ‘āina and build a luxury resort despite knowing there were iwi kupuna (burials) present. Other examples of land struggles are the bombings of Kaho‘olawe, military training at Mākua Valley, and telescope construction at Mauna Kea. These land struggles continue to highlight differences in worldview and understandings of ‘āina. They also point to the role of research in our resistance and the value of being able to access information through ‘āina in order to support accessibility by our communities and bolster efforts to reclaim and protect ‘āina. With the continued destruction and desecration of ‘āina in Hawai‘i, it remains unknown what ‘ike has been cut off, carved out, or lost to development and abuse of land by the U.S. military (and their allies who also litter and vandalize Hawai‘i and its surrounding waters for target practice).

Mahele ‘āina serve as more than geopolitical boundaries, they also serve as maps of local climate patterns and weather (Akana, 2013). For example, Ko‘olau is used to refer to the windward facing areas of Maui, O‘ahu, and Kaua‘i, that receive trade winds and higher annual rainfall (Akana, 2013, article 5). Table 5 below highlights other mahele ‘āina that share characteristics in common and therefore also share inoa ‘āina among islands.

Table 6 - Māhele ‘Āina in common on multiple islands

Inoa ‘Āina	**Within these islands**	**Characteristics of māhele ‘āina**
Ko‘olau	Maui, O‘ahu, Kaua‘i	Windward facing areas that receive trade winds and higher annual rainfall
Puna	Hawai‘i and Kaua‘i	South easterly winds and lush vegetation but overall less rainfall than Ko‘olau areas
Kona	Hawai‘i, O‘ahu, Maui, Kaua‘i	Leeward facing areas that are usually drier

As illustrated in the examples above, our kūpuna recognized similar climates or environmental phenomena among places and, for this reason, some mahele ‘āina share the same name (Louis, 2008; Akana, 2013). When performing ‘āina research, it is important to be aware that these places share inoa ‘āina and ascertain which island(s) and which place(s) a source is referring to – lest you misinterpret the information and detach or misappropriate meaning.

Adding to the literature on Kanaka cartographies, Louis & Kahele (2017) provide a framework for orienting space that expands beyond mahele ʻāina to include broader epistemological understandings and classifications. Building upon mahele ʻāina and a Kanaka Hawaiʻi cartography as outlined by Oliveira (2014), Louis and Kahele (2017) suggest orientation and classification according to three locations – the human body, the island, and the planet respectively. Table 6 below illustrates the classification by Louis and Kahele (2017).

Table 7 - Kanaka Classifications

Body-centric	**Island-centric**	**Planet-centric**
Professional	Physiological • Landscape • Oceanscape • Skyscape • Starscape	[Phenomenology] • [Space/Time]
Gendered	Sociopolitical	
Genealogical		

This type of framework extends the idea of the ‘physical’ to include the human body as an extension of ʻāina and also places both within the broader landscape of the planet. Louis and Kahele (2017) assert that Kanaka Hawaiʻi cartographic foundations and frameworks “determine the kinds of knowledge Kanaka believe they can acquire, shapes the way that knowledge is symbolized or represented, and affects the processes used to communicate or transmit that knowledge to others”. Metaphor and kaona are central to how we understand our reality. These epistemological understandings do not escape Oliveira (2014), rather the framework proposed by Louis and Kahele (2017) is complementary and is included in this section to extend the ways in which mahele ʻāina are conceived and performed within a knowledge organization system, so as not to limit space to land and instead include the oceanscape, skyscape, and starscape related to and beyond Hawaiʻi.

Mele

Mele (song) has played a significant role in storytelling and in documenting our history. As a principal method for memory within an oral society, mele are rich in ʻike and are valuable resources for research on a wide array of topics. Dr. Pua Kanakaʻole Kanahele explains that oli – a type of mele – are data that hold significant information; she estimates that 90% of oli are

about the earth and its reciprocal cycles (Kanakaʻole Kanahele, 2012), hence providing a wealth of information about ʻāina. Describing the wealth of a resource that mele offer, Oliveira (2014) notes:

> Although only a few hundred mānaleo remain, mele written in ʻōlelo Hawaiʻi are serving as a resource for Kanaka eager to learn about the traditions of our kūpuna. The ʻike kupuna contained in archival collections is priceless because these collections capture the worldview of these mānaleo by quoting them through their lyrics. These fragments of ancestral customs and practices are treasures for this generation as well as those to come in the future. (p. 99)

In this way, mele not only exhibit the intelligence of our kūpuna but also serve as a substantial resource on ancestral customs and practices. Haku mele, or composer, Kanani Kahaunaele (2014) further explains the value of mele as a tool for memory:

> Our haku mele poetic devices and techniques show us how to remember massive amounts of information. If there's anything any Hawaiian can add to their mana gauge, tool box, or mental rolodex, it is to know Hawaiian mele, for therein lie invaluable lessons and knowledge of our heritage. (p. 56)

Writing about her journey as a haku mele, Kahaunaele (2014) explains that a high proficiency in ʻōlelo Hawaiʻi and knowledge, experience, and a deep connection to our history, ʻāina, elements, people, and kulāiwi, or homeland, are requirements for developing an ability to compose mele.

Mele are often composed and performed to honour and remember ʻāina and other kūpuna, whether directly or indirectly; and sometimes to also invoke their presence and/or support. In the same way, mele are another device for 'mapping' relationships to ʻāina and to kūpuna by and large. Oliveira (2006) states, "to know a place is to be able to chant the landscape" (p. 231). Recounting her political activism, Kahaunaele (2014) describes various functions mele serve:

> Whether to invoke the spirits with the mele pale "Nā ʻAumākua"; to rally our fellow Hawaiians with "I Kū Mau Mau"; to ask for wisdom with "E Hō Mai"; to admonish the oppressor, educate the masses, lift our spirits, or celebrate victories, mele is a common denominator that inspires and supports activism and activists. Hawaiian music has and shall be used as a tool of empowerment for our nation. Mele exponentially increase the value of our Hawaiʻi. Mele amplify our spirit, our minds, our potential, and our existence. In the "Kumulipo," we have learned of our origins. Our mele pule directly connect us to our gods and ʻohana spirits. We have learned how to honor through mele inoa and mele maʻi, how to heal through mele läʻau kähea, and hurt through mele ʻanāʻanā. "E Iho Ana"

> reveals omens and prophecy. “He ‘Ai Na Kalani” shows what Kalākaua was fed, arming him to lead our lāhui. “Ka Wai A Kāne” teaches us the characterization of subtleties in nature. “Eia Hawai‘i” shows us genealogy and the homelands of Kahiki. Mele show us how to behave. “Ka‘ililauokekoa” takes us on a pursuit of a mate, and numerous classic mele hula overflow with examples of physical beauty and tantalizing images of good loving. (p. 56)

As is evident by Kahaunaele’s explanation, mele are used for diverse purposes in resistance and empowerment in particular.

Just as these purposes vary so too do the types, or categories, of mele. Mele are broadly understood as either mele hula or oli; oli referring to “chant not danced to in both text and delivery style” (Kanaka‘ole Kanahele et al., 2017, p. 35). Nonetheless, mele have been categorized in a number of ways. The level of granularity within categorizations of mele illustrates the extent and sophistication of mele as a form of cultural expression, and at the same time serves as a testament to the rich detail and variety of information embedded within mele. To provide an example of the terminology and specificity possible in the categorization of mele, Table 7 provides a list of vocabulary for 19 kinds of chants [note: this is part of a list of 31 terms provided by Kanahele Kanaka‘ole, et al. (2017, pp. 35-36) for the kinds of chants, chant styles, and voice techniques].

Table 8 - Terminology for kinds of chants

Kind of Chant	Description
Oli	chant not danced to in both text and delivery style
Mele hula	chants for dance
Ha‘i Kupuna	chanting in praise of progenitors
Hea Inoa	name chant
Helu	a chant with enumeration of deeds, body forms, etc.
Ho‘āla Kuahu	awaken the kuahu
Ho‘i	a chant of exit for hula, for burial
Ho‘opuka	a chant of entrance for hula for life
Inoa	at the end the chant has a name to which the chant is dedicated, it is a supplication to a deity or ali‘i
Ka‘i	brings dancers out on stage to the audience
Kake	grabled chanting style to hide or add sounds to words, some words cause amusement and trickery
Kanikau	laments, chants of loss
Kau	a chant of praise with complimentary words of familiarity to deity, ali‘i or favorite child
Kaukau	a chant of lament

Kuʻauhau	a recitation of a geneology
Malo	the chant honoring the wearing of a malo by and honored aliʻi
Paha	improvise chant, not previously composed, make it up as it moves you
Paeaea	a chant of supplication, fishing for something
Waʻa	a chant praising the canoe of the chief

Through discussion with mele practitioners, and consultation of the table of contents and indices of the numerous books of mele we have today, we would be able to gather additional categories of mele and greater insight as to the types and functions of mele. This would help to identify vocabulary and the essential and unique characteristics of mele that are appropriate for representation in and beneficial to knowledge organization systems.

Moʻolelo

Moʻolelo document inoa ʻāina and other modes of expression, and enliven the exploits and achievements of individuals within moʻokūʻauhau. For example, moʻolelo of Māui name the ʻāina Māui travels to and through on his way to capture the sun at the summit of Haleakalā. The role and significance of moʻolelo will be discussed in greater detail in the methodologies chapter but a brief overview is provided here.

Poepoe (1906) explains that moʻolelo in Hawaiʻi are very similar to the ancient moʻolelo of Greece; and our mele are indeed greater. According to Poepoe (1906):

> E hoomaopopoia, he lahui kakou me ko kakou Moolelo Kahiko, i ano like loa me ka moolelo kahiko o ka lahui o Helene; a he mau mele kahiko hoʻi ka ko kakou mau kupuna i like aku a i oi aku nohoi ko lakou hiwahiwa ame ke kilakila i ko na mele kaulana loa o ua lahui Helene nei.
> Ua piha ko kakou mau mele me na hoonupanupa ana a ia mea he aloha; piha me na keha ana no na hana koa a wiwo ole a ko kakou poe ikaika o ka wa kahiko; ka lakou mau hana kaulana; ko lakou ola ana ame ko lakou make ana. Aia maloko o ko kakou Moolelo Kahiko na Mele ame na Pule Wanana, na mele haʻi-kupuna a kuauhau hoi.

Recognizing the richness of mele and moʻolelo, Poepoe (1906) affirms mele, pule (prayer), moʻokūʻauhau, and the deeds of our kupuna are all held within our moʻolelo.

hoʻomanawanui (2019) explains that Kanaka Maoli writers of the early historical period (1778–1940s) were not just informants but instead contributed to millions of pages of text in ʻŌlelo Hawaiʻi:

> Recognizing the vital importance of reading and writing, Kanaka Maoli created and enthusiastically contributed to a massive archive of written materials, such as nūpepa (newspapers), puke (books), unpublished manuscripts, buke mele (mele books, collections of oli and mele), and papers, a number of which are still held in private collections, such as the Bishop Museum and individual families, and public repositories (e.g. public libraries and the Hawai‘i State Archive). While the vast majority remain untranslated from ‘ōlelo Hawai‘i, and unindexed, there is a conservative estimate of over one million pages of written Hawaiian texts.
>
> During this vibrant period of blossoming literacy, Kanaka Maoli composed new mo‘olelo and mele in numerous traditional genres, applied old genres to new contexts (e.g., kanikau for the demise of a newspaper that went out of business), and created new genres (e.g., mele aloha ‘āina, or patriotic songs, were particularly prolific in the tumultuous period between the overthrow of the Hawaiian kingdom in 1893 and the illegal annexation to the United States in 1898). Kanaka writers from across and beyond the Hawaiian archipelago enthusiastically contributed to lively debates and discussions in newspapers on mo‘olelo, mele, and mo‘okū‘auhau, many explaining the urgency in preserving and perpetuating such valuable information for future generations. They also actively translated foreign literature into Hawaiian, further expanding Kanaka Maoli literacy and participation in the literary arts. (p. 74)

The nature of mo‘olelo in oral cultures is fluid being as these were not written statically in particular words and sequences until the mid-nineteenth century, after hundreds, if not thousands, of years of being passed on through ‘ōlelo and other means (i.e. hana no‘eau). Whether strategic or by accident, mo‘olelo may change in particular contexts and over time as the story is told from generation to generation. In part because of this, the context of mo‘olelo depend on geographic location (i.e. one island to the next or even one ahupua‘a to the next), mo‘okū‘auhau, storyteller, hālau, cultural practice, etc. The focus of mo‘olelo is not always ‘authenticity’ as this suggests the existence of a single, definitive truth which is at odds with the acceptance of a multitude of truths within Kanaka epistemologies. Rather, mo‘olelo are dynamic modes of expression that exhibit the value and usefulness of multiplicity.

Kanaka scholar, ku‘ualoha ho‘omanawanui (sic), offers a theory of mo‘olelo Hawai‘i that helps to not only define mo‘olelo Hawai‘i but to begin to organize mo‘olelo in a possible framework as well. ho‘omanawanui (2017) asserts the following about mo‘olelo Hawai‘i (emphasis is my own):

1. Being complex enough to necessitate **divisions and classifications based on time period, genre, subject, theme, language, and authorship**.

2. Sharing human genealogies and culturally based genealogical connections to Moana Nui, including genre, subject, theme, language, perspective, and devices (oral, written, and rhetorical). In addition, the practice of writing was formally introduced to Hawai‘i by Americans, and western literary production has thus influenced Hawaiian literature from the time it was first written down.

3. Because mo‘olelo Hawai‘i is "generational," it has a mo‘okū‘auhau. What distinguishes this classification from Johnson's is that it is culturally derived— Kaiwi's classification is formulated from Manu Meyer's work on Hawaiian epistemology and is consciously aware of Indigenous-rooted theory and methodology. Therefore, **mo‘okū‘auhau is a more culturally appropriate way of formulating categories of mo‘olelo Hawai‘i.**

4. By its very nature, literature—who produces it, what environment it is produced in, and what language(s) it is produced in (which also indicates an audience)— is political, and the political nature of mo‘olelo Hawai‘i, regardless of the topic being written about, is innate. (p. 58)

Building upon prior research, ho‘omanawanui (2017) provides a revised mapping of genres for mo‘olelo Hawai‘i using traditional and modern terms; she defines 'traditional' as "in use for a long time" and the later as "implemented in the past several decades" (p. 60). She includes the following categories, noting that there are overlaps: kākā‘ōlelo (oratory), mele (poetry, not danced to), mele hula (poetry that can be danced to), ‘ōlelo wehi (adornment), mo‘olelo ka‘ao (traditional non-authored prose), mo‘olelo hakupuni (creative authored prose), and mo‘olelo (authored prose).

While detailed, ho‘omanawanui (2017) acknowledges that even her expanded list of genres will require updates – "As Hawaiian language and literature continues to grow and change along with the people, such a collection of genres and terms will continue to evolve and expand" (p. 61). Still, her theory supports the need for a knowledge organization system which would necessarily encompass (and incorporate) the complexities of mo‘olelo and assist users to distinguish these relationships. Each of ho‘omanawanui's suggested classifications - time, genre, subject, theme, language, authorship - warrants further inquiry. Such an analysis of all six classifications would require in-depth research into each respectively.

Moʻokūʻauhau

A brief overview is provided here, however moʻokūʻauhau has already been discussed in detail in chapter 2 – as a methodology for this study and as a principal framework for knowledge organization. Moʻokūʻauhau, or genealogies, honour and celebrate kūpuna and our relations to the universe. Kanakaʻole Kanahele (2011) maintains, "moʻokūʻauhau is a literary introduction to a family lineage. The family line may include humans, elements of nature, sharks, or other forms of life" (p. 1). Nuʻuhiwa (2019) further explains:

> From the Hawaiian perspective, moʻokūʻauhau is generally considered a genealogical map of the origins of all things that are birthed. Moʻokūʻauhau also includes the inception and creation of anything tangible, intangible, animate, inanimate, built, birthed, or created. Simply stated, a moʻokūʻauhau is a recorded explanation of the kumu (origin or source) for anyone or anything that has come into being or into existence. (p. 40)

Through the memorization and presentation of moʻokūʻauhau, we trace and honour our ancestry and origins (Kameʻeleihiwa, 1992).

Similar to a Māori worldview of whakapapa, moʻokūʻauhau not only connects us to each other but ties us to ʻāina and to kāinga. Lilley (2018) explains that whakapapa "links all of human kind with the environment that surrounds us, and carries an expectation that we would care for these elements in the same way that we would care for other whānau (extended family) members" (p. 247). The same can be said in a Hawaiian worldview. We see ʻāina directly mentioned in moʻokūʻauhau as well as reflected in naming practices that recognize familial connections to particular ʻāina.

Still today, moʻokūʻauhau is commonly seen as a way for Kanaka to connect with our kūpuna (ancestors) and ʻāina (land, earth). As Akana (2013) states, "the farther back we go in search of common ancestors, the more inclusive our genealogical identity becomes" (article 5). Relationships with ʻāina are made apparent in personal or ancestral names that honour the place(s) where someone was born, lived for any period of time, or participated in a historical event that took place on that ʻāina (hoʻomanawaui, 2019). Thus, in the same way that names are given to places to recognize relationships, we also continue to carry names of places in our families. Even now, if the person or family is forced to move due to the high cost of living in

Hawai‘i or otherwise decides to spend time away from the pae ‘āina for whatever reason, the personal or ancestral name is carried on and serves as a reminder of that genealogical relationship to ‘āina.

Structures of Knowledge Organization

As has been described, inoa ‘āina (place names), mele (songs), hula (dance), ‘ōlelo no‘eau (proverbs), mahele ‘āina (land divisions), mo‘olelo (historical accounts), and mo‘okū‘auhau (genealogies) document, honour and locate ‘āina and Kanaka, as lineal descendants, in place and time. These performance cartographies and cultural expressions provide examples of mappings within a Kanaka worldview – the categories and classifications, spatial understandings, specific characteristics of ‘āina (i.e. rain, wind, and boundaries), and noteworthy details about the relationships between ‘āina, akua, and Kanaka that underline our relationality and worldviews. Each holds significance for memory, the interpretation of meaning, and knowledge transmission, and are therefore significant to a Hawaiian KOS.

Now that we’ve established the groundwork for ‘ike and some of the principal systems of knowledge transmission, the final section of this chapter will turn to examples of structures that can be used to represent and organize knowledge. What are some methodologies and structures for knowing that can inform KOS? How do we make it make sense for us?

The following are examples of knowledge organization centered in ‘ike Hawai‘i and Kanaka methodologies. While our kūpuna have passed down numerous examples for us, I have selected the following: 1) Papakū Makawalu (mo‘okū‘auhau based – tied to nature); 2) Akua; and, 3) Time. While these are discussed independently, there are obvious overlaps and crossover, for example between Papakū Makawalu and Akua.

Papakū Makawalu

Papakū Makawalu offers a methodology for understanding the natural world and universe. The framework stems from the Kumulipo, specifically Wā ‘Umikūmākolu (the 13th time period), and is taught by Pua Kanaka‘ole and the Edith Kanaka‘ole Foundation (EKF). According to the EKF’s website, “Papakū Makawalu connotes the dynamic Hawaiian worldview of the physical,

intellectual and spiritual foundations from which life cycles emerge."

Papakū is defined as "foundation or surface, as of the earth; floor, as of ocean; bed, as of a stream; bottom" (Pukui & Elbert, 1986). The term "makawalu" can be broken down as "maka" (eyes) and "walu" (eight); so, translated literally, it means "eight eyes". The term can also be defined as "numerous, many, much, in great quantities" (Pukui & Elbert, 1986). Kanakaʻole Kanahele et al. (2009) describes Papakū Makawalu as the following:

1. a system and a methodology that arranged three houses of knowledge established by Hawaiians centuries previously; it is lololo;
2. is applicable for this time and space;
3. is a holistic approach to the Hawaiian cultural lifestyle with application to all arenas of life;
4. has many perspectives to a particular cultural object because of the interrelationships within and among Papas, thereby provides a multiplicity of foundations furthering infinite growth; and
5. is an intelligent approach to the evolution of cultural practices. (p. 24)

For these reasons – mainly, that it is an established system and methodology, holds relevancy and application to local contexts, demonstrates a holistic and multi-perspective approach, and achieves breadth and depth in accordance with the intelligence of ʻike kūpuna – Papakū Makawalu presents a worthwhile methodology and structure for knowledge organization. Kanaka scholar and Papakū Makawalu practitioner, Kalei Nuʻuhiwa (2019), adds that Papakū Makawalu methodology "affords researchers a methodology for analysing details and provides educators with a pedagogy that can be used to teach any Hawaiian topic, practice, or subject from many perspectives" (p. 43). Insofar as it can teach or instruction about any topic and from multiple perspectives, this methodology could also be used to organize knowledge within libraries on any topic and from multiple perspectives.

As noted earlier, Papakū Makawalu essentially categorizes the world into three houses - Papahulilani, Papahulihonua, and Papahānaumoku. According to the EKF website, these houses are understood as physical spaces as well as classes of experts:

1. Papahulilani is the space from above the head to where the stars sit. It is inclusive of the sun, moon, stars, planets, winds, clouds, and the measurement of the vertical and horizontal spaces of the atmosphere. It is also a class of experts who are spiritually, physically, and intellectually attuned to the space above and its relationship to the earth.

2. Papahulihonua is inclusive of earth and ocean. It is the ongoing study of the natural earth and ocean and its development, transformation and evolution by natural causes. It is also a class of experts who are spiritually, physically, and intellectually attuned to this earth and its relationship to the space above and the life forms on it.
3. Papahānaumoku moves from the embryonic state of all life forces to death. It is the birthing cycle of all flora and fauna inclusive of man. It is the process of investigating, questioning, analyzing and reflecting upon all things that give birth, regenerate and procreate. It is also a class of experts who are spiritually, physically and intellectually attuned to things born and the habitat that provides their nourishment, shelter, and growth.

Within these houses of knowledge, Papakū Makawalu emphasizes the importance of physical space and function (e.g. ability to give birth) to understanding and being. This methodology also acknowledges all life forms in the ocean, on land, and in the atmosphere and further affirms knowledge is both derived from and organized by our natural world.

Makawalu requires near exhaustive analysis from all points of reference, hence the embedded imagery of "eight eyes," as part of the research process for understanding and becoming experts of the natural world. Expanding on the practice of Makawalu, Lenchanko (2015) explains:

> Makawalu involves rigorous investigative procedures: 1) breaking apart a concept, word, or phrase to purposefully study the various definitions of each individual component; 2) rethinking how those individual components function and contextually fit together; 3) recombining integral parts to distinguish deeper and relevant meanings according to your need. (pp. 21-22)

Lenchanko (2015) asserts, "the beauty of a makawalu methodology is that it allows for a wae or separation and sorting of knowledge, and then a kūkulu or construction of knowledge on many different levels" (p. 22). This practice is integral to the research process and will be important for a Hawaiian knowledge organization system, mainly in terms of the levels at which knowledge can be organized and represented.

Furthermore, the emphasis on multiple relationships in Papakū Makawalu fundamentally informs the design of a knowledge organization system. Kanakaʻole Kanahele et al. (2009) makes an important statement about the interrelationships that exist between practices, or areas of expertise:

> Although one is able to focus on a single practice or area of expertise, practices do not stand-alone. To understand the practice fully is to have an eye open to the many possible relationships of the practice because of the multiple components that constitute it. The independent reality of a practice can only be understood through its many components. (p. 17)

A full understanding of any practice is gained through an understanding of its relationships. In this way, relationships are made a prominent part of understanding. One of the underlying values within ʻike Hawaiʻi is this pilina, or relationship, that prompts the need "to have an eye open to the many possible relationships," as opposed to manufacturing rigid boundaries where one practice ends and another begins, which ultimately poses unnecessary limitations to knowledge. Moreover, "evolution has a lot to do with keeping practices alive," which again highlights the need to remain open as practices evolve (Kanakaʻole Kanahele et al., 2009, p. 17). It is the respective practitioner's passion that drives the evolution of a practice according to the present reality and it is their kuleana to maintain the "integrity of the practice" as it evolves, adjusting as needed, according to their own conscious and subconscious (Kanakaʻole Kanahele et al., 2009, p. 17). Knowledge organization systems should be able to represent and keep up with this evolution of practice to ensure that the knowledge is somehow recorded and transmitted to future practitioners.

Multi-perspective systems commonly highlight cross-culture interactions but could be used to acknowledge and represent the diversity of perspectives within a culture as well. To this end, Papakū Makawalu imparts the significance of multi-perspective representation *within* Kanaka knowledge systems. Nuʻuhiwa (2019) notes, "the multiplicity of perspectives is in effect a very holistic approach to how the Hawaiian ancestors understood the nuances, socioecology, and natural cycles of the environment" (pp. 43-44). Extending this methodology to knowledge organization, these systems should have the capacity to represent multiple perspectives and offer users the ability to enter knowledge from various papa (foundation or class) and pae (level). As explained by Nuʻuhiwa (2019):

> The Papakū Makawalu process is a holistic understanding of a single papakū, achieved when its components are deconstructed, examined, and reconstructed. The result is an ontological map of the Hawaiian Universe. The potential for expanding the information on a single topic is unlimited. (p. 45)

This is precisely what the KOS should be able to simulate. Starting from any topic in the Hawaiian Universe, users should be able to deconstruct, examine, and reconstruct that topic. In this process, the KOS should also present the multiplicity of relationships that each papakū holds (its moʻokūauhau – and the components of the starting point and the larger papakū that the starting point is a component of).

Papa Hoʻohuli ʻŌlelo

Using the Papakū Makawalu methodology, Lori Kanoelani Walker (2013) describes how understanding of ʻōlelo Hawaiʻi and place informs design. Walker (2013) suggests a three-part methodology, called the Papa Hoʻohuli ʻŌlelo, or "language transforming chart," which is essentially a table for organizing relationships to a particular ʻāina in a process for ʻŌlelo Site Mapping. The research process Walker (2013) outlines begins with the "ʻōlelo traditions checklist," which anchors place within the following categories: piko, inoa o laila, inoa i laila, moʻolelo kō laila, and wahi pili/kokoke. Table 8 below shows each category and the "ʻŌlelo Element" that corresponds with each, as presented by Walker (2013, p. 76).

Table 9 - ʻŌlelo Data Table

	ʻŌlelo Element	**Interpretation** (This column to be filled in)
Piko Center; place of focus	*Moku* ʻdistrict' *Ahupuaʻa* ʻland division within moku' *ʻIli* ʻland division within ahupuaʻa'	
Inoa o laila (Permanent, fixed) Names of permanent and fixed elements exclusive of the place	*Puʻu*, ʻhill' *Loko Iʻa*, ʻfishpond' *Kahawai/Muliwai/Punawai*, ʻriver/stream/spring, water features' *Heiau*, ʻtemple, place of	

	worship' *Lele,* 'sacrificial altar' *Koʻa,* 'shrine' *Pōhaku,* 'rocks'	
Inoa i laila (Transient) Names of elements found at the place but may exist elsewhere	*Ua,* 'rain' *Makani,* 'wind' *Mea kanu,* 'plant, flora' *Holoholona* 'animal, fauna'	
Moʻolelo kō laila Storied elements that reference the place	*Moʻolelo,* 'stories' *Mele,* 'songs' *Oli,* 'chants' *Pule,* 'prayers' *ʻŌlelo Noʻeau,* 'proverbial sayings'	
Wahi pili/kokoke Names of places adjacent or related to piko	*Moku* *Ahupuaʻa* *ʻIli*	

With this table, Walker (2013) outlines significant information points for researching *ʻāina*, focusing here on various inoa ʻāina and moʻolelo (inclusive of ʻōlelo noʻeau, oli, and mele) referring to or otherwise related to the particular ʻāina (pp. 75-76). As evidenced by the case studies Walker (2013) includes, each category may have multiple elements associated with it, thereby illustrating the interrelationships not just between categories but within categories as well. This again underlines the importance of pilina within a Papakū Makawalu methodology.

Akua

As manifestations of our environment, akua both hold and represent higher levels of ʻike. When analysing any animate being, there is a direct tie to akua through things like kinolau (physical manifestations or representations), practices that pay tribute or otherwise reify relations with akua, and the places where akua visit or reside. As Nuʻuhiwa (2019) notes, akua are "Natural

phenomena associated with the action of specific gods. Nature or processes of nature, cycles, immortal element, high ranking aliʻi, wondrous beings, things that provide life or death to humans" (xiii). Through coming to know akua, we gain a deeper understanding of ʻāina and the universe. We also learn our roles within the context of place and space (e.g. wao kanaka vs. wao akua – elevations of space within a mokupuni that are appropriate for Kanaka vs sacred elevations reserved for akua).

In *Nānā I Ke Kumu,* Pukui describes how akua are always present. Sharing about the role of prayer, Pukui (2002b) explains:

> A tree is befelled for canoe-making. "E pule ʻānō. Pray Now." The body of a beloved relative is being consigned to the ancestor gods. "E piʻi ka pule. Let the prayers ascend." A high chief takes his medicine. A woman plants potatoes by moonlight. A sorcerer casts a spell. "E hoʻopuka i ka pule. Send forth the words of prayer." "E pule i kēia manawa. Now is the time for prayer." For the Hawaiian of the past, all times and every time were indeed occasions for prayer. (p. 121)

Our kūpuna, and some Kanaka still today, are polytheistic and believe there are thousands of akua (Beckwith, 1970, 1972; Kanahele, 1986; Kepelino, 1932/2007; Malo, 1840/1951). Kanahele (1986) emphasizes the constant interaction with akua as well as the fluidity in which Kanaka seamlessly switched between akua and/or conceived of new akua. With regard to these tendencies and polytheism as generally practiced in Hawaiʻi, Kanahele (1986) stresses:

> While some of us may regard the question with complete objectivity, others might have a hard time concealing a sense of disbelief, or even of shame, as if to say, "How could our ancestors have been so superstitious?" This kind of attitude is natural when we don't understand the subject. But it also betrays the usual arrogance of persons who think, whether consciously or unconsciously, that somehow they are superior to polytheists. (p. 71)

Kanahele (1986) makes an important point here about the perception of Kanaka beliefs and practices, even amongst Kanaka, many of whom have converted to Western, monotheistic religions.

As Kepelino (1932) explains, there are millions of akua. Kepelino (1932) is widely cited as noting, "He nui wale na akua ma ka papa elua, he miliona o na miliona lakou" (p. 11). What is

sometimes overlooked is that while Kepelino (1932) recognizes that there are millions of akua, he also categorizes akua by type:

> Ma ka Moolelo Hawaii nei, ekolu mau papa akua i ka nana'ku.
>
> 1. Ka papa o ke Akua-nui
> 2. Ka papa o na uhane i hanaia, a me na kanaka, oia na aumakua.
> 3. Ka papa o na mea uhane ʻole. (p. 11)

Kepelino explains that there are millions of akua in papa ʻelua, in contrast to papa ʻekahi, which only has three "Akua-nui", namely Kāne, Kanaloa, and Lono. What's important to note for the purposes of this study is that Kepelino (1932) provides a categorization for akua and suggests a hierarchy, albeit a loose one, based on the papa outlined – 1) Akua-nui; 2) ʻaumakua; and, 3) nā mea uhane ʻole. This hierarchy of akua is according to Kepelino (1932) and may differ depending on the source or person. However, Kepelino gives us a baseline for understanding how our kupuna organized their relationships with and understandings of akua.

Similarly, in his discussion of akua, Kanahele (1986) comments on the intelligence required for Kanaka to have and know such a profuse amount of akua. Kanahele (1986) states, "when we examine closely the reasons for having so many gods, we cannot help but admire the rational and intelligent way in which our kūpuna arranged their relationships with the divine forces around them" (p. 71). Maintenance of this knowledge and of the kuleana that comes with knowing these akua requires incredulous memory, ritual, and ceremony. Sometimes akua were thanked and put to sleep to close out the interaction, if needed. If an akua or kupua was no longer worshipped or recognized, their name would be lost and they would "dwindle and fade into nothingness" (Malo, 1951, p. 228).

Four akua – Lono, Kū, Kāne, and Kanaloa – are commonly recognized and portrayed as the "main" akua. All four are kāne, or male. It is possible that these akua are recognized as the four main gods because they were indeed all powerful. It could also be indicative of the patriarchy underlined by Christian missionaries who were highly influential in education and publishing at the time of their writing. Kanahele (1986) goes so far as to assert that "the old myths were tampered with in order to make them conform with Christian teachings" (p. 68). As an example, Kanahele (1986) explains that Kepelino, like Kamakau and other early converts, took liberties in

his interpretation of the hierarchy of akua in order to erect the Trinity in Hawaiian mythology (p. 68). Perhaps it was due, at least in part, to Western influence that these authors made decisions (consciously or not) that effectually marginalized or entirely omitted female akua.

Putting aside the question of hierarchy, another aspect, in regards to akua, that may be worthy of consideration is the role of gender, not limited to the akua themselves but in the ways gender informs pono (balance), ceremony and protocol. The Kumulipo recognizes the first human as a woman, Laʻilaʻi (Malo, 1840/1951), who is named just before Kiʻi (the first man) and Kāne, and is credited as being the mother of Kanaka (or at least one branch of Kanaka genealogy). With Laʻilaʻi came the momentous transition from pō (night, darkness, spirit realm) to ao (day, light, life on earth) and, in these few lines of the Kumulipo alone, gives us layers of understanding about birth and procreation as well as our ancestral connection to akua. Moreover, Malo (1840/1951, pp. 81-83) notes that practices of women included prayer to particular female akua. According to Kameʻeleihiwa (2016), "Female temples and the exaltation of the female goddesses were only found in Hawaiʻi and not anywhere else in Polynesia" (p. 64). Insofar as this relates to access to Hawaiian knowledge systems, this would inform knowledge organization and access to library collections even while contradictory to current Western cultural beliefs in 'freedom of information' and disciplinary standards within library and information science that prioritize open access. Kameʻeleihiwa (2016) explains:

> The greatest testament to the Konohiki system was the management of hundreds of acres of fishponds on Oʻahu… And the knowledge of how to run fishponds was embodied in the Moʻowahine (Lizard Women) clans of Haumea, the Earth Mother goddess. Said to be born on Oʻahu on the cliffs of Nuʻuanu, Haumea and the Moʻowahine were worshiped in the Hale o Papa (female temple) - where only women worshipped… Every fishpond had a Moʻowahine guardian, and it was said that when she was absent, the fish left with her. This kind of mythology suggests that the knowledge of surface and underground - water was closely guarded by Hawaiian women of the Moʻo clans who worshipped Haumea Earth Mother and other famous Moʻowahine in charge of water management. Since men could not go to the Hale o Papa female temple to worship, and learn from the goddesses, mothers would teach their sons, as well as their daughters, the intricacies of this occupation. (p. 64)

In this discussion, it is important to acknowledge female akua are sources of knowledge and that Hawaiian women are knowledge keepers. Put another way, gender is understood as a dynamic aspect of knowledge transmission. More research into the various genders in Hawaiian and

Polynesian societies and the associated roles of each, not limited to education and knowledge, is needed. Nevertheless, for the purposes of this study, gender does not necessarily prevent access to knowledge but informs the structures and protocols through which knowledge can be attained.

Another way akua inform the structures of knowledge organization is in the infinite networks of relationships they embrace. As a primary example, kinolau exhibit a method of classification based on akua. Kinolau can be translated literally as "many bodies" and refers to the many forms that contain mana within nature and the universe. Each akua has associated kinolau that might include plants, animals, natural elements, celestial bodies, and realms. To provide some examples, kinolau for Kāne include freshwater, sunlight, rainbows, and bamboo. As he is most associated with life-giving and sustaining life, Kāne's kinolau aligns with this kind of mana and the things needed for nourishment and life (e.g. water). The oli "He Mele no Kāne," also referred to as "Aia I Hea Ka Wai ā Kāne" enlightens us about the various forms of fresh water, which are all associated with Kāne. The chant asks and answers, "aia i hea ka wai ā Kāne?" – where are the waters of Kāne?

Aia I Hea Ka Wai ā Kāne

He ui, he ninau:	A query, a question,
E ui aku ana au ia oe,	I put to you:
Aia i hea ka Wai a Kane?	Where is the water of Kane?
Aia i ka hikina a ka La,	At the Eastern Gate
Puka i Haehae,	Where the Sun comes in at
Haehae Aia i laila ka Wai a Kane.	There is the water of Kane.
E ui aku ana au ia oe,	A question I ask of you:
Aia i hea ka Wai a Kane?	Where is the water of Kane?
Aia i Kaulana a ka la,	Out there with the floating Sun,
I ka pae opua i ke kai,	Where the cloud-forms rest on Ocean's breast,
Ea mai ana ma Nihoa,	Uplifting their forms of Nihoa,
Ma ka mole mai o Lehua;	This side the base of Lehua;
Aia i laila ka Wai a Kane.	There is the water of Kane.
E ui aku ana au ia oe,	One question I put to you:
Aia i hea ka Wai a Kane?	Where is the water of Kane?
Aia i ke kuahiwi,	Yonder on mountain peak,
I ke kualono,	On the ridges steep,
I ke awawa,	In the valleys deep,
i ke kahawai;	Where the rivers sweep:

Aia i laila ka Wai a Kane.	There is the water of Kane
E ui aku ana au ia oe,	This question I ask of you:
Aia i hea ka Wai a Kane?	Where, pray, is the water of Kane?
Aia i kai, i ka moana,	Yonder, at sea, on the ocean,
I ke Kualau, i ke anuenue	In the driving rain, in the heavenly bow,
I ka punohu, i ka ua koko,	In the piled-up mist wraith, in the blood-red rainfall
I ka alewalewa;	In the ghost-pale cloud form;
Aia i laila ka Wai a Kane.	There is the water of Kane.
E ui aku ana au ia oe,	One question I put to you:
Aia i hea ka Wai a Kane?	Where, where is the water of Kane?
Aia i luna ka Wai a Kane.	Up on high is the water of Kane,
I ke ouli, i ke ao eleele,	In the heavenly blue, in the black piled cloud,
I ke ao panopano	In the black black cloud,
I ke ao popolo hua mea a Kane la, e!	In the black mottled sacred cloud of the gods;
Aia i laila ka wai a Kane	There is the water of Kane.
E ui aku ana au ia oe,	One question I ask of you:
Aia i hea ka Wai a Kane?	Where flows the water of Kane?
Aia i lalo, i ka honua, i ka Wai hu,	Deep in the ground, in the gushing spring,
I ka wai kau a Kane me Kanaloa-	In the ducts of Kane and Loa,
He waipuna, he wai e inu,	A well spring of water, to quaff,
He wai e mana, he wai e ola,	A water of magic power- The water of life!
E ola no, ea! Life!	O give us this life!

Source: Emerson, 1965, p. 257-259

At the risk of oversimplifying the intelligence preserved in this oli, “He Mele no Kāne” examines and records the hyrdologic cycle as observed by kūpuna over generations. The hydrologic cycle is ascribed to the continuous movement and energies of Kāne on land (aia i ke kuahiwi… i ke kahawai), on the ocean (aia i kai, i ka moana), in the sky (aia i luna) and below the surface of the earth (aia i lalo, i ka honua). As the physical manifestations of akua, kinolau are respected and cared for within those spaces, especially in the case of wai, or water, considering its significance for all life. Thus, this oli affirms wai as a kinolau of Kāne and, at the same time, signals Kāne’s presence in all of the places where wai is present. In that way, this oli, like many others, exhibit our kūpuna’s deep understanding of ‘āina and the interrelationships between spaces, natural elements, plants, animals, etc. Further, that kinolau are physical manifestations of akua within our environment illustrates, once again, our connection to ‘āina.

In recognition of this genealogical relationship with akua, kinolau are demonstrative of knowledge organization deriving from moʻokūʻauhau. The references to akua and kinolau in inoa ʻāina exhibit these relationships between akua and ʻāina, and are characteristic of a tradition of honoring akua in naming practices. For example, Kanaloa is an older name of the island now commonly known as Kahoʻolawe. In this case, the name Kanaloa is in reference to the lineage of the island as well as to imagery of the island, alluding to the island's shape which resembles a whale or porpoise in water – both of which are kinolau of Kanaloa (Kanakaʻole Kanahele et al., 2009). Kanakaʻole Kanahele et al. (2009) expands on the relationship between the island and Kanaloa, stating:

> The island or the fish child of Papa was endowed with the name of the god whose image it bore. In the Hawaiian's practice of ʻaumakua or akua worship, images are carved or an object is found in the likeness of the intended deity. The expectation of the Hawaiian toward Kanaloa, Kahoʻolawe the deity, the island, is that the island possesses a concentrated amount of mana, which causes the island to react as a heiau, kiʻi or kuahu. Therefore it is treated as such, which is the reason Kamohoaliʻi resided here, he is indeed a kinolau of Kanaloa and in the world of the sharks Kamohoaliʻi is the haku or lord of the ocean. (p. 90)

Thus, the references in naming, including those to akua and ʻāina, were not limited to memorialization but were also purposeful in order to describe and/or invoke mana for namesakes. As such, names and naming are also representative of human relationships and inform conduct in regard to places and to all life, so as to "enhance and harness the mana of the place and space" (Kanakaʻole Kanahele et al., 2009, p. 91). This last point concerning mana is a critical principle represented by akua relationships and mediated through associated loina that acknowledges a kuleana to care for and tend to the relationships and mana that you hold or are otherwise connected to. Within Kaupapa Māori theory, this principle is very similar to whānau and whanaungatanga, and the underlying emphasis on the extended family structure and practice (G. Smith, 2004).

For all of the aforementioned reasons, akua provide an intricate model for knowledge organization, particularly in regard to the concept of multiplicity and the ways in which the intellectual, physical, and spiritual intersect and overlap within kuanaʻike Hawaiʻi and nohona Hawaiʻi.

Time

Just as our kūpuna finetuned their skills of observation and developed physical measurements for determining the size of fish, plants, and other things, they also devised several ways for conceptualizing and communicating time. The creation and application of these measurements for time indicate layered understandings, cognizant of the cyclical changes they observed within their natural environment and the consequent changes to production and effectiveness in seasonal, monthly, and daily tasks. Thus, time informs knowledge organization in a number of ways. Time can be indicated in relation to the content of source materials; time in relation to content creators (often noting the birth and death years in existing systems); and, time in relation to the physical or digital material itself (e.g. creation date). Below I briefly summarize three methods of measuring or otherwise referencing time that could inform a knowledge organization system. I briefly introduce wā and makahiki, then focus on Kaulana Mahina, which provides greater specificity in time as attributed to nature (e.g. the moon).

Wā. As illustrated by the pattern of time in the Kumulipo, wā refers to "a space between two points in time" (Andrews, 2003), an interval of time, or an era. Fourteen wā are recounted in the Kumulipo – starting with the beginning of the universe in wā ʻakahi through to Laʻilaʻi in wā ʻawalu and the birth of aliʻi Kalaninuiīamamao in wā ʻumikūmāhā. Wā is also commonly used as part of the phrase, ʻi ka wā kahiko', which translates to 'in the old days' or 'in traditional times'.

Makahiki. Makahiki refers to 'years' and are composed of two principal parts – Kau and Hoʻoilo. Kepelino (1932) describes the respective characteristics of both seasons:

> 1. O ke Kau, o ka hoi ana mai ia o ka la, mai ka aoao kona mai o ka honua, a kupono ma ka aoao koolau nei, a hiki mai la ka mahana, a ulu ae la na hua ai, a loloa ke ao, oia iho la ke kau, a o ka hooiloia ma ka aoao kona o ka honua. 2. O ka Hooilo, o ka haalele ana ia o ka la i ka aoao koolau nei a hoi aku ma ka aoao kona, a hiki mai ka la ke anu, a make iho la na laau ai, a loloa ka po, oia ka Hooilo; a o ke Kau no ia ma ka aoao kona o ka honua. 3. A ua maheleia ka makahiki i na wa elua, o ke Kau, a me ka Hooilo. (p. 85)

The division of makahiki not only established the wet and dry seasons but was also coupled with the establishment of activities and conduct acceptable for each. The season of Kū, an akua associated with war, is when war and politics were allowed, and the season of Lono, an akua associated with agriculture, is a peaceful season. Thus, this organization of makahiki into two

parts based on the seasons in nature also structured human behaviours and events in Hawai‘i. During Ho‘oilo months, Hawai‘i usually experiences rainy and stormy weather, high waves, etc. (Kepelino, 1932). Whereas during Kau, or Kau Wela months, it is usually hotter, calmer ocean and weather, etc. (Kepelino, 1932).

Kaulana Mahina. Kanaka keep time by the cycles – the cycles of the moon, the cycles of the sun, and the cycles of stars – taking into account the calibration of these cycles (Nu‘uhiwa & Lincoln Maielua, 2021). Generally speaking, the mahina, or moon, was the most important star for our kūpuna in the wā kahiko. The mahina served as an important marker of time and is central to the Hawaiian calendar, or Kaulana Mahina (Tsuha, 2007).

Kaulana Mahina organizes time – days, months, and seasons – by the waxing, rounding, and waning of the mahina and organizes years by the cycle of twelve months (Kepelino, 1932). According to Pukui and Elbert (1986), Kaulana Mahina refers to “the position of the moon”. Kalei Nu‘uhiwa, a contemporary and foremost expert on Kaulana Mahina, expands on this definition in her master’s thesis, *Kaulana mahina: He ‘ōnaehana ‘alemanaka Hawai‘i* (Tsuha, 2007). Nu‘uhiwa (Tsuha, 2007) asserts Kaulana Mahina: 1) provides an explanation of the work that can be done on any given moon; 2) sets the phases - features and movements - of the moon on any given night, and; 3) is a type of system for counting the sequence and changes of the moon throughout the course of a month.

Po‘e kahiko (people of old) closely examined kaulana mahina for planning, organizing, and guiding their everyday work. According to Nu‘uhiwa (Tsuha, 2007):

> No ka po‘e kahiko, he mea nui ke kaulana mahina iā lakou i ka ho‘olālā ‘ana i kēlā me kēia hana ma nā pō mahina kūpono, ma ka malama kūpono, a ma ke kau kūpono. Ua hiki i nā kahuna kilokilo ke hahai pono i ke ka‘ina o nā kau, nā malama, a me nā pō mahina i mea e wānana pono ai i ke au a me ke ‘ano o ka honua a me ka lani. Me ka wānana ‘ana, ua hiki i nā kāhuna kilokilo ke alaka‘i pono i nā ali‘i a me nā maka‘āinana i nā hana kūpono e hana ai ma ka wā kūpono ho‘i. (p. 25)

The moon was especially important for guiding kāhuna and consequently, the ali‘i and maka‘āinana they advised. Essentially, kapu were established according to the days of the month. Kepelino (1932) explains:

> O ka poe i ke kapu (kahuna kii) wale no ka ike pololei loa, ma ka hooponopono ana. A mamuli o kekahi kahuna hoomanakii o ka wa kahiko i hooponoponoia'i nei; no ka mea, o lakou no ka i ike i ke ano o na manawa 'ha, a me na loina o kela malama keia malama, a me ke ano o kela keia malama, i mea e maopopo ai ka lakou oihana pule; no ka mea, noloko mai o na po he 30 i unuhiia mai ai na po kapu hoomau o kela keia malama. (p. 85)

Kāhuna held prominent roles in Hawaiian society and were attuned to the mahina as part of their responsibilities. Kāhuna would counsel aliʻi and makaʻāinana, and prescribe loina and other activities based on the phase of the mahina. Political decisions and cultural practices, such as fishing and farming, were largely dependent on the mahina, and the Kaulana Mahina calendar, for ensuring productivity, effectiveness, and appropriate maintenance and rest. Discussing the concepts of huna and mōhalu, which are names of particular moon phases, Pualani Kanakaʻole Kanahele (quoted in Nuʻuhiwa & Lincoln Maielua, 2021) explains that things stay huna, or hidden, until ready to mōhalu, or bloom or be birthed. As conveyed by such practices, time relates to the readiness of things within a cycle (Nuʻuhiwa & Lincoln Maielua, 2021).

As explained in this section, how we understand time informs the very structure of knowledge organization and society, at least insofar as time and seasons influence the practices and behaviours of humans and other life (in relation to the former). To better support research on (and according to) these structures, areas of practice, and associated behaviours, a knowledge organization system should be able to represent time as meaningful for Kanaka, and seek to organize information and represent relationships according to the structures and categories of time that cultural practitioners and other researchers recognize and function within. For example, lifeforms grouped within a single wā, the transmission of mana within generations of an aliʻi lineage, planting and harvesting times, and fishing seasons and other kapu informed by the seasons or cycles of time that guide and organize our society (and subsequently, research needs and interests).

Chapter Summary

This chapter reviewed literature pertinent to Hawaiian knowledge organization. While not an exhaustive review of ʻike Hawaiʻi, the survey of written literature provides examples of the cultural context to knowledge that are most applicable to the present study. The methodologies and classifications discussed operate from Hawaiian epistemologies and provide prospects for

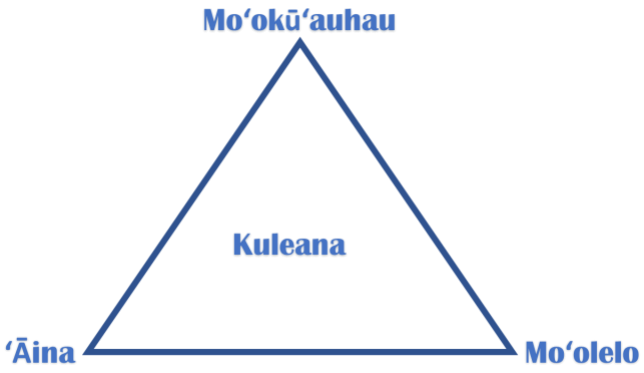
frameworks and infrastructure for the organization and dissemination of knowledge in libraries. Insofar as these endure, and are spoken and perpetuated from generation to generation, we will continue to honour and maintain balanced relationships with ʻāina. Moreover, like our kūpuna before us, we will continue to create, apply, and communicate these maps for future generations so that they too can understand and uphold our responsibilities to ʻāina and to the succession of ʻike.

Chapter 6: Patterns of Knowledge

This chapter presents the results of focus group meetings and is organized into three parts according to focus group representation. This enables participant narratives to be woven together in conversation and locates the discussions within the context of each group. Following introductions to participants, the data is presented thematically to contextualize the narratives shared by participants. As mentioned previously, a consensus was not an objective for this study. Therefore, the focus is not on the quantitative significance of responses but rather on the quality of data and intensity of responses. There were clearly shared themes, nevertheless the ways in which each group, and each participant, interprets those themes may differ. Oversimplification or generalisation of these themes as being exactly the same or of holding equal importance across groups has been intentionally resisted.

Having conducted two gatherings with each of the three focus groups, an overwhelming amount of rich data was collected that was more than sufficient to meet the goals of this study. After thorough review of the data and conducting a thematic analysis, the following themes were selected and named: moʻokūʻauhau, moʻolelo, ʻāina, and kuleana.

Figure 1 - Methodology for Analysis



Using the activities and discussions from our gatherings and participant familiarity with regard to the intended outcomes of a KOS, each participant skillfully articulated Hawaiian concepts and values of significance for the creation and design of a Hawaiian KOS. Every attempt has been made to accurately represent and honour the stories that have been shared with me. To provide

context and maintain the talk story style conversational method used, I chose to use significant direct quotes highlighting the participant voice.

Ka Pā Hula o Kauanoe o Waʻahila

Ka Pā Hula o Kauanoe o Waʻahila was formed in 1991 by my grandmother, Mae Ulalia Long Loebenstein. Our hālau is named in honor of the misty rains of Wa'ahila, where our ʻohana has lived for the past 70 years. This hālau is based on a simple philosophy that hula is not just a dance we do once a week, but a lifestyle. The disciplines, values and ethics we teach and learn in hālau are things that our haumāna are able to use in everyday life.

"We believe that all our young women are beautiful inside and out, and that they can accomplish anything that their heart's desire." Our focus is not on competition, but on forming and developing the total person, and in maintaining a positive attitude in all that we do. It was my grandmother's firm belief that "dance is the showcase of your soul!" … and so, we dance!

This focus group was composed of Kumu Hula Maelia Loebenstein Carter and four poʻe hula in Ka Pā Hula o Kauanoe o Waʻahila - Kalehua Tolentino, Gery Maa, Shirley Amundson, and Hōʻolu Cravalho. The passage above is an introduction to Ka Pā Hula o Kauanoe o Waʻahila, as provided by Kumu Hula Mae Ulalia Long Loebenstein on the hālau website. This serves as an introduction to the hālau and hula as their cultural practice.

The majority of our time together focused on how poʻe hula approach their cultural practice – this being inclusive of research as applicable to hula and the values, teachings, and perspectives that underpin participants' understandings of ʻike Hawaiʻi. Thus, a significant portion of this section will share this focus.

As was expected, our discussions were informed by past experiences in libraries, archives, and museums. There were a handful of comments concerning challenges and frustrations with using particular archives on Oʻahu. Interestingly, participants made special mention of a museum in Aotearoa that they had visited together within the past two years or so. They shared genuine excitement about being invited to the museum to visit with cultural artefacts from Hawaiʻi that were preserved there.

*Kalehua: You can liken it to our experience in New Zealand. We went to the museum and **we were actually able to touch things**, under supervision of course. But you know, I found some great things about Queen Emma there that I didn't find at Bishop Museum because **it's locked away and you have to have permission to go and do and all of that**. So, **as a resource you, you create building blocks, right, to educate**. So, it'd be nice to have that opportunity. And we had to go to another country to learn about our own.*

Facilitator: How did you locate the collection? Or, how did you know they had items from Hawai'i?

*Kumu Maelia: **We were in invited**. Oh, yes. So, it was a cultural exchange and then some of us were able to go into the vault because they needed – they were doing this whole repatriation of artifacts, so they knew each country. So, while we were in there, they asked us to help."*

From the way that these po'e hula reflected on this particular experience, it was apparent that they felt valued as practitioners and, at the same time, a shared respect for the museum personnel and policies that had allowed them access to these collections. Through this study, I sought to create a similar experience and pilina between libraries and communities, which is why it was vital to include cultural practitioners and community members in my research approach.

While it may seem trivial to point out that members of the public were allowed to access a public institution, it is not always the case that Indigenous peoples are welcomed, nonetheless invited, into cultural heritage institutions. Furthermore, that a museum asked cultural practitioners to contribute their expertise toward enhancing collections is a refreshing change when compared to the decades, and in some cases centuries, of white males assuming subject expertise, conveying our lands and cultures, and instructing Indigenous peoples about our own histories. While not the focus of this study, this is an area worthy of further examination.

Mo'okū'auhau

One of the stations for the individual description activity included printed copies of 3 versions of a mele called Kaulana Nā Pua. The group periodically referred back to this mele to enhance discussions in the large group format. Some of the things highlighted in regard to the presentation of mele in this station included: the benefits of being provided multiple versions of the mele, the ability to see mele side by side for comparison and to see changes in the mele over time.

Kumu Maelia: Kind of along those lines, like what you have on this last station here with the three different versions of the mele is really important because sometimes it's like, okay, so this was used for what it has done, but a lot of it is incorrect and it's just one version. But we know, like for He'eia, there's about 12 different versions of the mele. Some have four versions, 12 some. So, it's like if you're going to take mele, if it were to pull up all the versions line by line – Oh that'd be awesome. You know? And be like, okay, these are all the versions of He'eia, and then it's up to whoever it is to read through all of it and be like, this is the tradition that we come from. This is the version that we're going to reference. As opposed to, I got it, like as a judge [at Merrie Monarch], I get it and it says huapala.org and that was it. Infinite. That's it. So, whoever turned in mele with whatever, across the world that's He'eia, and that's the 'Bible' of He'eia, you know, not looking at all the different versions. And so, for those of us who are well versed in mele, we understand that to the greater lehulehu that's going to type in AI and all they get is huapala.org, that's the 'ike that they're taking. And I think if anything it should show how that fits.

Kalehua: I really enjoyed that because it came from three different sources. I recognize the first, and I recognize the third, but I got to get familiar with the second. But for transition, and just for history, it was a nice show of history of how it has transitioned over a period of time. And, being visually challenged, I really liked the last one because it was easier to see and read. But the last one gave you a little mo'olelo at the top and I think for people of now, it's nice to have that story.

Expanding on this point, Kalehua pointed out that being able to connect to other related resources would benefit researchers. Participants agreed that this could be done via links that illustrate the pilina (relationships) between the composer and mele, between two or more related resources, and between resources within or across designated time periods.

Kalehua: It would be nice if you had other references to other resources if you wanted to know. Cause you know you cannot write the whole mo'olelo I mean, you're just highlighting, right. But if there was somebody who had the time and wanted to do more research, say they're doing research on Lili'u and they want to know why she wrote that down. ***I mean if there's other resources or references that's always helpful - with hyperlinks.***

Kumu Maelia: Yeah the ***pilina****.*

Kalehua: And give them other things. Cause it's not just about that. There was a lot of meaning in that mele. Yeah, the hope for the future. So, it'd be nice to just even like right about that time that Hawai'i was experiencing - what they were going through.

The number and extent of relationships that could be represented is perhaps never ending.

Kalehua: Well you want to know composer - composer information. You want to know not like a timeline but what was going on in there. So, Hawai'i as a territory and you want to, those kinds of levels and if there is links from a hula perspective... you know if that's what it is that you're trying to offer them, maybe you can just do it at a high level and then use the hyperlinks as quick feeds.

Participants were asked to consider the relationships deemed most essential to represent in a KOS, and to identify any high-level categories or priorities for inclusion.

Kalehua: That's kind of a subjective question, in a sense. If I was given it as an assignment, I would be told what I needed to do. If I was doing it for my own pleasure, then it would be like what's most interesting to me, what do I want to learn about it. But I think if you start from who wrote the mele - That's their mele, That's their story. That's that one moment in time that they're bringing to life. No matter what mele it is, I think That's a good beginning. But, I don't know how, I mean I think you're going to have a variety of links.

Kumu Maelia: Okay, let's use this mele as an example. So then, it should be linked to political climate at the time. It should be linked to the powerful players.

Kalehua: You should link it to the ali'i.

Kumu Maelia: Yeah to mo'okū'auhau. It should be linked to, just to throw a monkey wrench in the game, let's say you're having po'e haole that are trying to look at it from a Western/American point of view. Well, what was the economic climate in Hawai'i? You're going to have people who want to know what was going on then. And so why the Americans were justified in doing what happened. To me those are all key points. And then it's like composer – what was her pilina to the queen? What was the reasoning? What was the link? You could divide it into those kind of major research areas. And then from there you could have photographs of the time - photographs of the land, of the people, of the ali'i. That could be like the hyperlinks.

Kalehua: Certain things that they write in here, if you can link it to a resource whether a picture, another video, audio – because that's another resource.

Kumu Maelia: It's a huge graph… the genealogy graph!

As illustrated in the above exchange, there was a lot to unpack from our discussions. A few things stood out in terms of how this conversation might inform description and knowledge organization. First, the aspects of information that are important for researchers depends on the type of research being done. Rather than picking a single access point (i.e. title of mele), a variety of starting and connecting points is preferred (i.e. composer, performer, time period, inoa ʻāina, etc.). Second, knowing the composer, or the author, is necessary and could be one possible starting point. Underpinning both of these is the concept of pilina and, how representing pilina is critical to understanding context and truths. Furthermore, the concept of the KOS as being a sort of genealogy graph speaks not only to the importance of this work, as the role of moʻokūʻauhau has been discussed earlier, but also to the expanse/extent of the system and the weight it could hold – it is huge!

Later in the conversation, another analogy was made that ascribed the KOS as constellations. I asked the group, "How is it that we can help someone best navigate mele?" To which, Kumu Maelia described the density of the interrelationships within and between the numerous "galaxies" of ʻike that can be linked to a single mele.

> *Kumu Maelia: They would be linked. So, all of those are like little sublets underneath. Okay so if it's this galaxy – because that's really what it is – you've got writings that go with everything, you've got pictures, you've got video, you have audio.* ***One simple song can be attached to a gazillion things. But, all of those gazillion things are important to me*** *because when I am trying to choreograph or to see, 'is this an appropriate mele for the group?', all of those elements come into play. So, I am going through all the books that I have, all of grandma's notes that I have, and you're trying to get the best, I don't know… the best version of information.*

In this description, she points to the expanse and the types of pilina inherent in ʻike Hawaiʻi and, by extension, the need for appropriate representation within the KOS. This is a significant contribution to this research enquiry.

Kuleana

It is both a privilege and responsibility to hold and be able to share ʻike. Sometimes the kuleana can be kaumaha (heavy). This makes following protocol even more important and is one of the

reasons for proper levels of access to ʻike – for the safety and protection of those who are not adequately prepared and ready to carry the kaumaha and appreciate the kuleana.

> *Kumu Maelia: I am pretty much resonating what everybody said. I am excited for the project. As somebody who researches and, you know, gets frustrated with what's out there or what isn't out there, the idea of correct accessibility and a broader accessibility is exciting. My worry, on the flip side, is protecting the ancestral knowledge and that people understand the kuleana that goes with it. Sometimes too much knowledge can be dangerous, and I always remember grandma saying that. We have to be careful and know the reason why that information is being given, and that whoever is accepting that information understands the kuleana and the kaumaha sometimes that goes with it. Because a lot of things that we have accessible right now, like with anything, there's good and bad. So, we just have to be really mindful of that. I applaud you for doing this.*

It was clear that the group had a foundational recognition and understanding of mana and the subsequent importance of loina. While not always directly referred to as loina, the group discussed various activities which could be broadly categorized as protocols for interacting with things that hold mana: protocols for accessing places, protocols for sharing and receiving knowledge, and protocols for gathering resources.

Because the group was composed of poʻe hula at different experience levels and statuses within the hālau, there was some nuance as to how they understand and relate to protocol. Kumu Maelia discussed the importance of respecting the mana of things and that one way of doing so is to follow the associated protocols tied to that mana.

> *Kumu Maelia: For me, I think it's protocol from a kumu perspective. I am thinking of when I was young that I was always told "don't touch it", right, because I am thinking that it's full of mana. Everything is. Like this lole, this kapa was on somebody's body, that somebody formed this and then there's mana and there's protocol that goes with it. So, as a poʻe hula, I respect that. But, I also want people to know they cannot be mahaʻoi… So, education on protocol is what I think of as being important to know.*

The need for greater education on protocols was reiterated throughout our discussions and arose as a dominant theme. Kumu Maelia eludes to the importance of not being mahaʻoi. In doing so, she signals the need to recognize and focus on the kuleana given to you, and to avoid insolent or

intrusive behaviors, especially regarding the kuleana (including practices and possessions) of others.

As the youngest in the group, Hōʻolu reflected on protocols for the transmission of ʻike within hālau – from kumu to haumāna – and explained that information in hālau is shared when you are deemed ready by your kumu.

> *Hōʻolu: I mean information, like whatever Kumu tells me, it's just give it to me at the point where I am now and I have to be okay with that, and I am okay with that. But, I can imagine there's others that are not because they want to know more and they're hungry for more. How they take that information or how they get it, it might be up to them, but then what they use it for is also up to them as well.*

Differing from philosophies of intellectual freedom in the predominant U.S. education system, access to information in hālau is granted as deemed appropriate by the kumu hula. Hōʻolu alludes to the respect, discipline, and patience required of haumāna in this style of learning. It is no coincidence that the majority of the direct quotes included from this group are from Kumu Maelia – as the respected leader and kumu hula of their hālau, she holds the most mana.

In our discussion about access, Kumu Maelia acknowledged that there are, and there will continue to be, limitations to access.

> *Kumu Maelia: Well, I think depending on where they come from. Let's take you to music, for example – that's the biggest access – everything that we want to see is hidden. And, most of us don't get access to it. So, I think if we're looking at it from a librarian or a library resource kind of thing, it's like, okay, when items like this come up, there should be* ***a need to talk about the protocols***.
>
> *And I look at it from grandma's point of view, you know, that's the way our kūpuna kept things quiet.* ***And they didn't blast and hoʻolaha everything*** *because people will take that. Because everything is so accessible now on the web and everything, and they're gonna just ʻaihue that and make it theirs, yeah.* ***All of a sudden everybody's an expert on hūnā and on kapa and all of this, why? Because they were able to read, to gather and then to recreate in a modern way.*** *So, for me, I respect all of these items, but* ***I would like to see people being educated at every opportunity.*** *So, if you're gonna get a pōhaku kuʻi ʻai or a papa kuʻi ʻai - a picture of, or access it - something that links as well to what are the protocols of it, what's the work that goes into it, what's an ʻōlelo noʻeau that can be linked to it.* ***I think those are so important to be able to interject at every point that if***

> ***you're going to access a picture or information on it, it should also access the 'ōlelo no'eau and the protocols****, boom.*

She points out that some of this training in protocol cannot be learned from books. Kūpuna were referenced several times as a source, or model, for interacting with mana and for providing access to ʻike.

> *Kumu Maelia: And I get that, you know, I get that we are malihini, that* ***there are some things, even if we were in wā kahiko, we would not have access to it****. But too, for us, because it's such a waihona and there's so much 'ike in it [discussing music].* ***Even for our own people, those protocols and those ways are missing because they haven't had the opportunity to learn about it. You don't read about it in any of the books.*** *But,* ***it's there. We just need to find a way to have that pilina on it so that whether people access it or not... it's there.***

In our gatherings, there were multiple instances that participants did not initially touch items that were intended for them to pick up, review, or analyze. This behavior wasn't something that was blatantly obvious or mentioned directly so I didn't realize it until the meeting was nearly complete. But, as it turned out, participants waited for permission to touch the items provided as part of focus group activities. Hōʻolu put it quite simply:

> *Hōʻolu: I was like, don't touch it Hōʻolu. Don't touch it… It's ingrained you know, it is. Cus we're like, don't touch it… cause if you didn't tell me to look at the book [in the first activity], I didn't look at it. I just looked at the cover [without picking it up] and then I was like, okay. Like, 'don't touch anything, just look with your eyes'.*

The example above talks about a particular instance concerning permission to pick up a book but this sort of reverence for things can be applied elsewhere and can tend to be overlooked by those unfamiliar with these protocols. After reflecting on it more, I realized participants in the other focus groups also showed hesitation to touch or pick up items without prior permission or before the appropriate moment in our discussion. Nevertheless, the poʻe hula group can be said to have exhibited this behaviour, or followed this protocol, most intently/earnestly.

Participants suggested protocol should be made explicit when providing access to "ancestral intellectual property". The video used in the description activity included a copyright notice that played for 10 seconds at the start – it states:

> This is a shortened clip of the original archival footage.
>
> The contents of this video may be protected under U.S. copyright law. It is made available for research purposes only and may not be duplicated or broadcast or otherwise transmitted without written consent from the appropriate copyright owner.
>
> U.S. copyright law (title 17 of U.S. code) governs the reproduction and redistribution of copyrighted material.

Participants agreed that a similar practice could be implemented to inform people of proper protocols and their kuleana to that ʻike. As alluded to in the following quote, the offensive and potentially highly damaging misuse of ʻike Hawaiʻi and cultural practices continues today.

> *Kumu Maelia: That's why I really liked what was on the video, you know, that whole 'stay for 30 seconds' on that whole tile* [referring to the copyright notice above]*, and not that it didn't turn, you know, because people are going to be screwed up or not, whatever their integrity is. But I think when you make things accessible, that intellectual property and not just to individuals but to the lāhui, and what that means has to be before everything. So, that focus on it for a minute before you let anybody access... And for some people, it will resonate; with some, it will not. But we need to repeat that* ***because it's not just rhetoric****. It's really important for all of us who remember and that should go on top of it in front of any, anything and everything to me, because* ***that's our biggest problem – is people using ancestral intellectual property and then rewording it.*** *I think coming up with the book and then all of a sudden they're a kahuna or something, right. Where we all know that kahuna never identified themselves. You just knew, right. So, that's where* ***we need to reclaim our knowledge****.*

It was a significant realization for me when the group casually acknowledged the copyright notice, as a type of Western (legal) protocol, to be in a similar vein as a Hawaiian cultural protocol. Analyzing this from a decolonizing perspective, it is a profound understanding on the one level, and yet, at the same time, our protocols should be at parity with or of greater significance in Hawaiʻi. As with current practices that provide users information and warnings concerning Western protocols, like copyright, a similar practice could be implemented to educate and caution users about pertinent Hawaiian protocols.

Extending this discussion of protocols to collection management leads us to question – Who is it that is granting the necessary permissions to access? More generally, how are we navigating and being intentional about protocols for access? Like the discussion above indicating the importance of being invited and welcomed to cultural institutions, as experienced by the poʻe hula in Aotearoa, how are these institutions making it known that they have Hawaiʻi collections and how are they engaging with Kanaka to invite us to come in to access and work with collection materials?

Moʻolelo

The group shared about the research they undertake to inform their hula and ʻohana, making little delineation if any between their ʻohana and hālau. Though they refrained from explicitly using the term ʻresearch', there is no doubt in my mind that the actions they described were anything less than. This points to the historic harm and trauma caused in the name of research, and the effects of which we are still very much dealing with individually and collectively today. It further highlights the need for us to name, describe, and claim our own notions of what research is.

The group discussed many aspects of moʻolelo. Being as they belong to a hālau hula, the focus was usually on moʻolelo as conveyed through or otherwise related to mele and hula.

> *Facilitator: How would you describe these things to someone? What is important to know?*
>
> *Hōʻolu: Maybe what it was made from and what it took to make it in the way and the form that it is now.*
>
> *Kumu Maelia: Were they made with modern tools and materials? Or, are they organic?*
>
> *Kalehua: I think if you go to the W's – why are they doing this? What is it made of and how? and all of that... And, for what purpose?* ***I think if you start with purpose, that's always important. People want to know all the other things, but really about what's your intention, why are you doing what you're doing and how does that happen and what's that protocol for it to happen?***

As has been mentioned, moʻolelo have multiple layers, and sometimes access to those layers or to the moʻolelo is restricted for reasons that have yet to be revealed. Within the context of a Hawaiian KOS and libraries, Kumu Maelia suggested looking to kūpuna to provide insight as to what appropriate levels of access to moʻolelo may be.

> *Kumu Maelia: Well this is just an aside, you know,* ***for me, and it might be something you folks might want to consider as you're doing your project is that you talk to kupuna as well*** *because, for us, we're hungry. Yeah. The generations of us, this generation is so fast food, so drive through, they want everything at their fingertips. But then the kupuna can also tell you there are limitations. If you look at the old way, it's sometimes that information may not be meant for you today. Yeah, maybe it's later. But I think if you get fellow ʻike kupuna and get their own opinion as well in your project* ***because we don't want to hoʻolaha everything, but I think things that are out there already, you cannot restrict. So, to educate what is already out there and make that more, not more relevant, but maybe controlled a little bit better - deepen their education.***

She also repeatedly underlined the benefits of education. In this case, education about moʻolelo and information that is "already out there" – seeming to refer to things viewed as "common knowledge" or readily available in print or online, but perhaps lacking context – whether purposefully disregarded or mistakenly discounted.

> *Kumu Maelia: … when you look into Peter Buck's book, it's not going to say that, right. But* ***then again, do you want everyone to know that****, you know, so that's that whole thing. That's the thing.* ***How much, how deep to give, right? That's the balance.***

Referring to Sir Peter Buck's work, *Arts & Crafts of Hawaiʻi*, Kumu Maelia discussed the need for balance in the information that's made accessible in libraries. She shared a personal story of the process of making a pahu and made specific mention of steps and ceremonies required which are not mentioned in books like Sir Peter Buck's. Whereas some might see this omission as an oversight or downright failure in research or publications, Kumu Maelia suggests this may have been intentional and indicates this practice is sometimes necessary to preserve and safeguard ʻike. For these same reasons, I have chosen not to go into detail about the ceremonies and process mentioned here.

Of course, this served to refocus our discussions to the research questions and provided a natural opening to delve into ‘what aspects of moʻolelo are *appropriate* to document and also make freely available?’ and ‘who shall we look to for insight as to the bounds?’ The poʻe hula deferred to their kumu – reiterating that when they have questions, they check with their kumu for direction. Kumu Maelia talked about her kumu and returned to the role of kūpuna in preserving and perpetuating moʻolelo and cultural practice. It was readily apparent that as poʻe hula, Kumu Maelia and the group as a whole understood the significance of moʻolelo and performance, but also the deep connection the aforementioned have on behavior and wellbeing – each in their unique ways but at the same time, they share a passion for hula that ultimately informs their worldview and lifestyle.

ʻĀina

In the individual description activity, there were lots of comments on the map so we decided to start our group discussion around that station. Standing in front of the map and reviewing the terms that participants had added, we began to discuss the importance of ʻāina and the value of place names.

Place names provide for layered understandings of places and the moʻolelo associated with those places. Kumu Maelia talked about changes to place names and the beauty and benefits of being able to see original names.

> *Kumu Maelia: I think the use of correct names for the little places. Like for me, Kalaipohaku, Waʻahila, ... nobody calls it that – it's "Saint Louise Heights". So, to see those original names of what we should be calling them, and then the timeline; so, it's like 'oh in 1913, this was called "Roundtop"'. You know, it wasn't called 'Ualakaʻa back in 1913, so when did it change? ... Place names are important.*

This has implications for historical research because ʻāina names have indeed changed over time. So, for researchers trying to tell the story of particular ʻāina, they need to be able to find any names for the ʻāina, otherwise their research will be limited and the story left incomplete.

As our conversation progressed, the group discussed the use of maps and the benefits of having visual and spacial representations of moʻolelo.

Kumu Maelia: Totally! Because our mind is so conditioned now to just Google everything and you're going to get like a picture of O'ahu, and you're just gonna see this little thing of point A to point B without realizing the ginormousness of what that feat was, you know. And when you start seeing all of these 'ili and all of these ahupua'a like this, and then to actually see the journey, it's... I think it brings a little bit more oomph to the message. So yeah, it should attach to mo'olelo.

Hō'olu: Even as a younger person, right, like for myself or even younger, how would we know that this [map] exists, right? They would have to start looking and keep going until they find something like this. Because if not, we're just gonna go to Google Maps, pull it up and then we'd just take it for what it is... we won't look for that or know 'does it even exist? Do we even have access to it? Can we even see it? Can we get it printed?', you know, that kind of stuff.

Kumu Maelia: And then, I think when you start looking at when it's kuleana land or 'ohana land. You know because everything is so Google, they're gonna satellite drop it. But, what if we had a bone to pick with somebody or about something... and we had to go back. If people don't have access to this [map], then how are they going to progress in their attempt to reclaim that.

Kalehua: Or even awareness. If you're looking for a place, everybody goes to Google Maps, right. But, maybe if there's a way that there can be a link that's available to these [archival maps], so people now have an option.

Kumu Maelia:
Or, even if they look in place names because everybody always goes into the Place Names book, which is really helpful and it's really good that she gives all the mo'olelo of the place, the literal names, the poetic names, whatever it is. But, sometimes when you're just reading it in print… I am a visual person. I need the visual so that I can connect 'oh, it's at this point' not like 'okay well I am reading words but I don't have a picture'.

In a similar way to their reflection on past research experiences in brick-and-mortar institutions, participants reflected on their experiences with researching online. Google seemed to be the search engine used most commonly by participants. Therefore, a lot of references and comparisons were made to how it worked (or didn't work) to the benefit of their research activities. As you can see from the excerpt above, mentions of Google apps moved fluidly but Google search, Google Maps, and Gmail were referenced most frequently.

Another interesting topic that emerged related to the methods we now use for land divisions. The specific example used in our discussion was the division of land into voter districts and how this colonial categorization informs our spatial understanding. Whereas our kūpuna came to understand the pae 'āina in terms of mokupuni (island), moku (district), and ahupua'a (smaller

land division), most of us generally recognize divisions of land today based on towns and cities or zoning districts (e.g. conservation, agriculture, business, etc.). How do these categorizations of land impact our understandings and relationships with ʻāina?

It was pointed out by multiple participants that ʻāina research isn't just about the places themselves but about our connections to these places –

> *Kumu Maelia: For those of us that live on familial property, okay what was it like when my grandparents were there? You know, what were the names?*
>
> *Kalehua: Anyone doing their moʻokūʻauhau would benefit because from there there's names, there's places that are linked sometimes to that. Or, if you want to know where you come from or where you're living.* ***I think if you're doing it with the intention of educating your ʻohana, that it's really about sharing this with them so that they have an idea of those that came before them, right. And you can show progression.*** *This is 1913 so this is the year that my grandfather was born. So, if we were to start from there. But yet that's all archives, so you can't get [digital access]. Right, so building from there, and even before, if it's available, then you can see progression. My family is from Nuʻuanu – all of that Kawānanakoa area – and they know it's generationally here but they don't really know the history. The house has been there so the generations have lived there and that's all they know. But there's more to that, right.* ***You can bring life to the stories.***
>
> *… Or even* ***awareness****. If you're looking for a place, everybody goes to Google Maps, right. But, maybe if there's a way that there can be a link that's available to these [archival maps], so people now have an option.*

Other information that participants expressed interest in learning included the history of places, place names, and changes in the landscape over time. They want to know the land features – mauna, pali, nāhele, etc. – and where the resources are located – "picking" resources, fish, food, etc. The discussion left me wondering how granular the KOS would need to be. The need for greater specificity beyond the county and island levels is quite obvious to me, but are ahupuaʻa and ʻili names sufficient or is it preferable to include wahi pana (sacred places), or mountains, hills, and rivers? And, how will the KOS balance access and protection of the resources themselves?

Scholar-Practitioner Hui

The Scholar-Practitioner Hui was composed of Kanaka living on Maui, and working at the University of Hawai‘i Maui College, who were doctoral candidates at the time of this study. It is worth noting that for all three participants in this group, the focus of their respective doctoral research centres on their cultural practices. This group included Lori Lei Ishikawa, Ryan ‘Ōhai Daniels, and Aubrey Matsuura. The following introductions for each participant were transcribed from our initial focus group meeting and subsequently edited by participants for inclusion here:

Lori Lei Ishikawa
Aloha, my name is Lori Lei Ishikawa. I am here at the college, working with Ka Hikina o Ka Lā. Maui girl, I am able to trace back eight generations on my mother's side here on Maui, so I am really happy. And then my father's father and his parents are from Okinawa. I was raised in Lāhaina and moved to Pukalani after marrying my husband, Wayne.

Ryan ‘Ōhai Daniels
I am Ryan 'Ōhai Daniels. I am actually from Kaua'i, where my mother was born and raised. I grew up in Kapa'a, which was also my mom's hometown and where my parents still live. I guess I would say that two things got me to Maui. First, is Sheri, my wife, she's a Maui girl and although we met and lived on O'ahu, she always wanted to come home. I followed her here, like they say, 'Happy wife, Happy life" and I gotta agree. The second thing that got me here was getting hired to teach at Maui College. If it wasn't for my wife and this campus, I probably would have taken a really different path.

Aubrey Matsuura
Aloha, I am Aubrey Matsuura, from Hali'imaile here on Maui. My mom's side is from Honokohau and Germany and my dad's side is from Hali'imaile and Maryland. I am excited to be here too.

Mo'okū'auhau

The participants represent different ages and stages in life which inform their responses and the group's dynamics. Aubrey is an alumnus of Kamehameha Schools Maui and completed Master's and Bachelor's degrees in Hawaiian Studies at the University of Hawai‘i at Mānoa. After graduating, Aubrey returned home to Hali‘imaile on Maui. Lei and Ohai are both married and makua (parents). Lei and her husband, Wayne, have four children – two of whom are graduates of Kula Kaiapuni o Maui (a Hawaiian language immersion school) and live and work on Maui –

and ten moʻopuna (grandchildren) – 8 of whom attend Hawaiian immersion schools. Ohai and his wife, Sherri, have four children – the oldest of which is in high school – and all attend Kula Kaiapuni o Maui.

Each participant shared their kumu and their moʻolelo of how they came to their cultural practice. The group agreed on the importance of knowing the moʻokūʻauhau of your learning and teaching. We revisited several items in the description activity and the group repeatedly called attention to the importance of knowing the artist or creator of works.

> *Aubrey: Yeah. I think for me, for everything is – Who made it? Where is it, where is it from? What was the intention for it? What do these motifs mean? Like, they weren't stamped, you know, you can tell that it's fresh and… fresh and newly born, you know? And then even when you were talking about practitioners and like, the genealogy – that's something that my kumu always stresses is knowing the genealogy of your learning and your teaching. Who did your kumu learn from and who did they learn from? What was their practice and what's being passed on? So, knowing that that's that person's way of teaching and learning and you're receiving that, but it's not the same, or it might not be parallel to someone else's teaching and learning.*

Aubrey highlights the importance of knowing your moʻokūʻauhau and describes here how moʻokūʻauhau serves as a method for understanding a cultural practice, or even more specific than that, any given style or approach to cultural practices. Sometimes that knowledge isn't documented in a book but still we must know and maintain our moʻokūʻauhau. This is inclusive of the moʻokūʻauhau of cultural practices so that the origins and tradition can be known.

> *Aubrey: You have to know. Or if you know the person and then you have to do your own research on, okay, who did they learn from? Or maybe they had multiple kumu – then* ***you have this huge genealogy of 'ike that contributed to that one person's work****… Yeah, I think it is important to know where your style or the way you do a certain thing comes from.*

Validation may not be an appropriate term to describe why moʻokūʻauhau are important, however, our group discussion suggested that it can lend credibility and provide for a foundational understanding of ʻike Hawaiʻi.

> *Aubrey: I think it's extremely important. I don't necessarily know if it's for validation, but maybe just to have an understanding… because who is to determine what should be done a certain way. It's just that's the way that that person did it and that's the way they were taught. But I think it is important to know because these people were involved in*

pushing these things that weren't common at their time out and continuing to teach people that didn't have access to those kinds of "arts" I guess or hana no'eau.

Lei also commented on the importance of connecting with the mo'okū'auhau of her practice. Similar to the experiences of other hana no'eau practitioners of other hana no'eau that have been mostly dormant for a generation or two, Lei didn't have just one kumu but learned kapa from a variety of sources and methods. She includes books among these sources and firmly believes in "ma ka hana ka 'ike", or a hands-on practical learning method. She also mentions calling upon her kupuna in times of uncertainty for guidance.

Lei: I think it's really important. I kind of feel like it's one of the main things about how we know where we are at this moment. Because if my kumu didn't tell me this or show me this or give me all this information of how to do it, then I couldn't make the decisions on how I want to do it. So, for all this information that has been put forth to me through books or hana, you know, I can make my own decision of how I am going to do this, if I am going to pound the kapa this way or to make that decision for myself. But, using all that information there and then also calling on my kupuna that wasn't there to hold my hand and pound. But to call upon her, or them, so that I can decide on how I am going to do this.

Ohai: It's, well yeah, where that 'ike comes from.

Lei: Yeah. So, it's that, because for some of the practitioners now, we don't have that authentic kumu that has done that practice or process. So, we're calling upon all these other kumu to help us decide how I can actually do this.

Lei described the ability to tap into 'ike kupuna spiritually and through ancestral memory, in order to revitalize cultural practices like hana kapa. She described her efforts to revitalize hana kapa with her 'ohana and the ways that this cultural practice connects her to mo'olelo and uplifts her mo'okū'auhau past, present, and future.

Echoing comments from other participants, Ohai discussed wanting to know more about the pōhaku ku'i 'ai – the practitioner, the materials used, and the 'āina associated with it. Ohai distinguishes between a "superficial", or surface level, knowledge and "deeper knowledge".

Ohai: I think as a practitioner slash novice researcher, that kind of, that whole thing, you know, I am trying to put this together, the idea of that there's that superficial knowledge – those things that you can find in any of the literature, the Kamehameha Schools [publications], whatever those kinds of – and then there's a deeper knowledge, that deeper wanting to know. I mean, almost very similar to the portrait… not just who it is,

but what are the deeper layers that go along with it? What is the moʻolelo that goes with it? What about the practitioner, the artists, etc. I mean, then the same thing with these objects. Te Rangi Hiroa says, okay, well yeah, these pōhaku are pili, the stirrup and the ring ones are pili to Kauaʻi, which is meaningful for me. But who made it? Keʻeaumokukapu made it. And, where did that pōhaku come from? I am going to say it probably came from Lahaina, from Kauaʻula, and those kinds of things. And as a researcher, as a practitioner oftentimes it's that moʻolelo that I want to know about.

Lei: Well that's exciting because that's where my ʻohana is from too. So, that made a connection to me – that this pōhaku is from there? Ooo, this is my kūpuna, you know. This is my kūpuna right here.

Ohai: Get mana now… Then we get into all those, you know that moʻokūʻauhau and the moʻolelo and the mana and then kuleana that goes along with it and all those kinds of things.

In the exchange above, the pōhaku kuʻi ʻai (rock used for pounding taro into poi) being discussed took on new meaning for Lei when she learned that the pōhaku came from the ʻāina where her family is from. Lei referred to the pōhaku as her kūpuna and ascribed mana to the pōhaku. In so doing, she underlines for us the significance of moʻokūʻauhau in meaning-making and the interpretation of nā mea Hawaiʻi or Hawaiian materials; which would also then inform proper care and access for these materials.

Moʻolelo

As with the other groups, participants in this group conveyed the ways moʻolelo can have various interpretations, depending on differences in perspectives attributed to a person's one hānau or the place you were raised. As an example, Ohai made multiple references to his one hānau of Kauaʻi and pointed to differences he has come to recognize while living on Maui. The term moʻolelo itself can be used inclusively to refer to many types of stories and versions thereof. Having heard the term used frequuently throughout the day, I asked participants to discuss what comes to mind when they hear the term "moʻolelo".

Aubrey: Histories. Whether it's a story that holds different parts of a history instead of "history". Moʻo is succession - it's constantly building upon. That's what I think of when I think of moʻolelo. It's like we're just adding to existing.

Lei: When you say moʻolelo, I think about the Kumulipo. That's the first thing that I would think of is the Kumulipo.

The idea of moʻolelo as history was a common thread and led to discussions about moʻolelo and time. Time provides context and can therefore serve as an important aspect of moʻolelo. It is important to note here that how we conceptualize time may also differ – while some reading this instantly think of years, or cycles of the earth around the sun, time can also be represented by the cycles of the moon, dry and wet seasons, tides, or even periods within a single day (i.e. kakahiaka, auinalā, ʻahiʻahi).

As practitioners, each participant brought unique insight and shared moʻolelo particular to their cultural practices and teachings that added depth to our discussion. For example, Lei shared that while it may take her 15 minutes to make a piece of kapa, she shifts the focus not on those 15 minutes but on the years of applied practice and experience she has.

> *Lei: It's like somebody tells me, 'Oh, can you make me one of these pieces of kapa? How long would it take you?' Oh, it's going to take me about 15 minutes to make a piece of kapa but you know what, it took me 15 years to make this piece of kapa, you know what I mean?*

The reference to time, in this case, is not concerned with the current instance but is the culmination of the time and energies she's put into her cultural practice. She explained that this is truly what goes into the 'making' and believed this should be taken into account in the request for kapa, and in recognizing the fullness of its waiwai, or richness, to include inter-generational, cultural and spiritual evaluations.

> *Aubrey: In relation to time, there's this idea of, on a physical level, tradition – what is tradition and what determines tradition. That's something too that I think is constantly being built upon. What we might think of as traditional now, wasn't traditional at that time? Or was it?*

Highlighting the significance of language, participants brought into question other terms, like 'expert' and 'tradition', which may take on different meanings or particular criteria within certain contexts. As Aubrey's comment exemplifies, we examined the role of time in establishing tradition or what is considered 'traditional'. The topic of discussion was more focused on the use of certain implements and media as opposed to practices themselves. Each participant could point to tools or materials they use that may not be considered "traditional", however, they spoke about it in a way that seemed almost inconsequential to the ʻike and

practice itself. It was obvious they remained steadfast in their understanding of their cultural practices, the teachings shared by their kumu, and their own experiences. It seemed helpful to have access to information about differences in materials or methods used in order to understand an "object". However, none of them referenced this type of information in such a way as to seek to validate or degrade the object or its creator.

Looking at, reviewing, and interacting with items used in the focus group activities brought to mind personal experiences that participants shared openly. There was one particular item that launched participants into sharing their own experiences and moʻolelo – that item was a video about the island of Kahoʻolawe. The video, titled *Kahoʻolawe Aloha ʻĀina*, is about the history of the bombings that took place on Kahoʻolawe by the U.S. military and the efforts of George Helm, Kimo Mitchell, and the Protect Kahoʻolawe ʻOhana (PKO) to make the U.S. stop the destruction and to return the island to Hawaiʻi.

Kahoʻolawe can be seen from Maui. There are many stories from people, like Lei, who remember the loud booms and the ground and houses on Maui shaking each time the military would drop bombs on neighboring Kahoʻolawe. At the time, there wasn't much information or education about Kahoʻolawe, and even today, there are different moʻolelo about events. Perhaps the most disputed history surrounds the disappearance, or murder, of Kimo Mitchell and George Helm – two activists and leaders of the PKO movement during the Hawaiian Renaissance. As we continued to share moʻolelo that we've heard about their disappearance, I asked participants: "Why are these moʻolelo about Kimo Mitchell and George Helm important? Those moʻolelo that you're mentioning, are they important for your ʻohana to know?"

> *Lei: It's really important, yeah. When I was little, all I got was that was just an island and that there were just bombings. I had no idea what was actually happening there. And, for us to know what is happening now, it's like 'what has happened to it?' because of all of those things that we now know. So, we need to know as much information about that island, and what was happening on that island, and to the people, and to the resources, and all that kind of stuff. I think it's critical that we know what that is so that we can kind of protect, like George says in the video – to protect the people, the resources, the ʻāina itself.*
>
> *Ohai: Growing up on Kauaʻi, you know, not being familiar with it, whatever it is. For all of these things [referring to the items used in the description activity], this is probably the one item that I am most familiar with because I've gone over [to Kahoʻolawe], because*

> *I've worked with Paul, because I've… and that side of it. But prior to that, having grown up on Kaua'i, there was just… an ignorance, you know, there's like, 'oh yeah, well that's the island that got bombed'. I mean, but it wasn't until I got here and then understanding the mo'olelo and hearing those stories and putting those pieces together, yeah. So, I think that definitely there's an ignorance in the bigger picture – who was PKO? What was that resistance? What is the conflict between PKO and KIRC? I mean we get all of those, I mean we enter those political discussions and those things too that are tied to it as well.*

Mo'olelo informs our understanding of current circumstances, in this case Kaho'olawe, but this can be applied to any ongoing, or seemingly new, occurrence or struggle. Aubrey agreed it was important and talked about the need to understand the fuller history of the island, not limiting its mo'olelo to the history of the U.S. military occupation through to the ongoing clean-up still needing to happen today, but including the mo'olelo before the military and how the island was used for a penal colony, ranching, navigation, etc. Overall, there was an agreement in the group that it is important to know the history – what (and who) was there before and what is there now, and why. This discussion aligned with goals of decolonization. It has been the case, for centuries, that histories have intentionally started with Western arrival or influence/interference thereby omitting or erasing entire histories and peoples.

It should come as no surprise that a lot of the mo'olelo that participants shared in our discussion were missing from this video's catalog record. Furthermore, there isn't space for them to contribute these mo'olelo to the record even if they wanted to. Whether or not these types of personal experiences are central or peripheral to the KOS itself was left open, however, participant engagement during this activity suggests this is an area for further consideration. For example, Lei connected the video with her personal experiences visiting Kaho'olawe with her keiki and with school programs that she's helped chaperone.

> *Lei: The other thing I was thinking about when I was watching that video is that, because we've taken our kids so many times to Kaho'olawe, I thought about the things that actually happened while we were there – where the military came down and filmed the kids or you know, us carrying the water from the zodiac all the way up, or going to places where it's totally destroyed. Or even seeing the wiliwili tree over there that was shot at, you know. So, all of those things bring up those feelings or those memories… so I guess it's that it connects to the mo'olelo of what I know of Kaho'olawe, or I experienced, and the kids that we took there before.*

Lei's reflections illustrate the personal experiences and memories that can be brought about by library and archival resources – in this case, a video – and the value of being able to elicit those personal connections.

All participants' comments shed light on the ways personal experience adds relevance to mo'olelo – visiting and providing service to a place or community versus watching a video or reading a book about it. Greater weight and respect is granted to those with firsthand and sustained experience. Hence in community meetings, everyone may have an opportunity to speak but those who live, or fish, farm, or gather and spend prolonged time in the area will receive special attention and their testimonies privileged depending on the resource in question, or the purpose of the meeting. Our communities recognize that kūpā and practitioners hold such mana and are regarded at similar levels to PhDs in Western societies, and are oftentimes more highly acclaimed and trusted than an outsider with a college degree.

Kuleana

Access to information can be understood within the lens of kuleana. If you have kuleana to someone, something, or someplace, then you probably also have access to pertinent information to mālama and uphold that kuleana. To this end, Ohai mentions an inherent understanding of the importance of kuleana and mālama in Kanaka worldviews. Without an understanding of these values, one might've overlooked the significance of his comment.

> *Ohai: Even I see the way you were handling the pōhaku [on the table] and you're putting it down very gently like, "Oh, we should get something to put it on" or whatever it is. Inherently in us as Kanaka, there's that kuleana that goes along with it. And you know, that reverence or that appreciation for it that we care for and honour those things.*

The greater your ability to grasp the layers of understanding and grow your 'ike, the greater your kuleana becomes. Kuleana can be inherited through mo'okū'auhau or earned and is often specific to varying kūlana, part of which is based on the former and can be evolving.

> *Lei: I think for all of us here, we are trying to just make sure that we can give as much information to our lāhui and build them up to what we know. And, they can use that information or don't use that information, and that's cool too, you know? But I think we're at a part in our life that we want to make sure that we get that information out, that that information is shared and is used if they need to be used.*

Facilitator: When you share, and when you are teaching, is there information that you choose not to share?

Lei: Sometimes. Yeah, because sometimes you're just not ready for it. But, if it was a more intimate place and space - space and place, right – and the person is ready to receive that information then yeah, I would try to share as much as I can. But, if they're not… if they're just… general – I don't know what that word is – just there, then no because they don't see the value of it.

Thus, even in cases where we have kuleana, there's a strong trust relationship between kumu and haumana to protect the wellbeing of the ʻike and those involved in (or otherwise affected by) the transmission of that ʻike. There is a general awareness that curiosity and inquiry must be balanced and respectful of the protocol and process of knowledge transmission, lest a person be labeled as "niele" or nosey and the story or learning be cut short.

ʻĀina

Like the Waʻahila focus group, this group's discussion also underlined the importance of ʻāina. In line with what has been discussed in the previous section, the importance of place names was significant. Building on this, we reflected on the differences in perspectives based upon the island, and even on the particular location on an island, that someone was raised or lived. As an example, Ohai made mention of his one hānau of Kauaʻi multiple times and pointed to differences in approaches, understandings, and language that he has come to recognize now living on Maui. Essentially, the ʻāina you are tied to or that a moʻolelo comes from provides contextual understanding.

Part of knowing ʻāina is having an awareness of the status and availability of resources. Having this knowledge is beneficial to cultural practitioners needing to gather resources, whether it be harvesting wauke for kapa making or surrounding akule to feed your community.

Lei: I always try to look at the watermark. So, look at the different colors and why was this color more prominent than the other colors? Why did we use wauke versus ʻulu or whatever? Or, why was ʻulu even in these areas? These are things that I constantly think about, but also, ***I understand about the resources that sometimes you just can't get certain things in certain areas. So, you've got to go and seek out other needed resources.***

In addition to knowing where to gather, and following protocols for proper access, relations to ʻāina are important to the intention and mana that goes into cultural practices. Lei acknowledges the importance of knowing and honouring the mana of ʻāina. For example, she shares how knowing and being familiar with the ʻāina where her tools, supplies, and kapa pieces were gathered, or made, informs the making process and outcome.

> *Lei: You know, for me, just as a person that loves to make kapa, it's always important for me to know where the pōhaku is from or the kua is from, where the wauke is from, where the dyes are from. Especially if the intentions… where the intentions are going so that I know that, like Ohai brought up, just making sure that the mana is also acknowledged and we actually honour that too. So yeah, the kapa came from Paeloko, oh yeah the ʻalaea came from Paeloko or that pāʻū was made at Paeloko or wherever it is, you know, Honokōhau or wherever that area is that when the intentions of making – the hana of it – is all of that stuff is going into the piece that you're making.*

The depth of knowledge suggested, and deemed requisite of cultural practitioners, helps us to get a glimpse of the interconnectivity of all things in a Kanaka worldview. According to Lei, an expert kapa maker must not only know the practice of pounding kapa, but also how and where to grow wauke, where to gather resources for tools (taking into account the health of these ecosystems), the akua associated with each resource and each step in kapa making, as well as the chants and protocol required for permission and safety, etc.

> *Lei: I think it is important, say for instance when Ohai is doing his cordage, you know, knowing that right now it's really hard to find ʻolonā because the resources are not actually there. I mean very, very small pockets are there. But, we know the importance of ʻolonā and how strong it is and why our aliʻi loved that and why it was of great trading quality, you know. Knowing that kind of stuff is important. And then, maybe even the decline of the use of ʻolonā – knowing that now we don't have ʻolonā, we need to transition to using more hau or wauke or niu or whatever it is.*

If one were to accept this as possible criteria for becoming an expert, then one could argue that researchers seek to achieve this level of understanding and familiarity with ʻāina as well, and it would be important to connect researchers to ʻāina within the KOS.

> *Lei: I would say yeah. Let's say for instance, if I had to do a dye workshop, I wouldn't pull a person that has just done dying maybe two or three times to teach dying to a class. I would look for that person that knows, that can identify these plants, knows when the plants are best to harvest, the process of dyes, and so on. That entails a different level of*

intentions, and that's how I would elevate that person to having that understanding of that hana.

Aubrey: Okay, yeah Aunty. I think it's like the relationship that the practitioner has with all materials and resources. And, knowing it intimately in a way where, you know the whole process, but you know everything that's needed for that process and when is the best – when you pick your wauke is important, or how old it is. Or, you know your plants and you know, right? Because you grow your wauke, you're out there picking off the little leaves and the whole time your intention for that plant is like, okay, when you're ready, you're gonna become kapa. And, I think it's that relationship that makes a practitioner or a person ready to teach their practice. Because I remember seeing all your wauke in your yard…

As both Lei and Aubrey described, understanding the multitude of relationships is necessary to achieve this level of knowledge and practice. It is difficult to separate ʻike Hawaiʻi into a distinct set of categories as has been done in Western KOSs.

Ohai: I think that that's hard even for me in my research because it seems like everything is related and yet everything is scattered and so how could we categorize and understand and put it together.

Lei: Yeah. How are you going to categorize this, yeah you guys?

Ohai: And because really it's the idea of the makawalu.

Aubrey: Yeah, it all overlaps and it all intertwines.

Ohai: Yeah. It's not linear. It's very much just very abstract. And I think that that's where, even in what we've done so far this morning, there are so many different aspects and perspectives and places that we are looking from and everything else that I think that's a really, from the Western mindset, that struggle of, oh yeah, you cannot come up with just 10 categories that everything falls into. When it comes to Kanaka ʻike, it's just something different.

For ʻike Hawaiʻi, it is in the multiplicity of relationships and perspectives that you gain through understanding a resource. The KOS should be able to represent these relationships and provide a network of resources for researchers to gather expertise.

Hui Kumu

The Hui Kumu was composed of faculty at the University of Hawaiʻi with varied academic backgrounds. After some initial discussion at the start of our first meeting, the group reached a

consensus that they would remain anonymous. Because of the small number of Kanaka faculty at the University of Hawai‘i, I have chosen to provide a brief description of the group, as opposed to the individuals, to maintain their anonymity. I also provide general background as to the nature of my relationship with these kumu to offer further context.

Serving as kumu and mentors, the participants have been familiar with my research interests for some time and have generously contributed their time and energies to shaping my understanding and ideas about a Hawaiian KOS and ‘ike Hawai‘i. We have had multiple discussions about a Hawaiian KOS during my master’s thesis research and have continued informal conversations since then. I share this background to help convey how they have served as my kumu since before the start of this research and that their teachings don’t end at the conclusion of our focus group meetings. This gives transparency to the relationships between researcher and participants in the context of this study.

All participants in this group are Kanaka who were born and raised within the pae ‘āina. Each of them holds a Master’s degree (some hold PhDs) and are recognized experts in their field. After some discussion in our first meeting, the group opted to remain anonymous. They also opted not to have our discussions audio-recorded and as such, the discussions are largely presented as my summary of their spoken words and intertwined analysis. Their decision to have the discussion recorded in oral memory is somewhat reflective of their conviction in our ancestral methods of teaching and learning. This challenged my abilities to store and retrieve our discussions in memory alone, but perhaps more importantly, this allowed for the comments and ideas most appropriate for this research to surface, based on the portions of our discussions that resonated most. It is important to note too that this process of knowledge transmission was not limited to researcher and participants but all-encompassing of the ever-present guidance and assistance from our kūpuna, who we acknowledged as being on this journey with us.

Mo‘okū‘auhau

The group emphasized the importance of knowing the past. They shared a deep understanding of and passion for learning and teaching about the past and how it continues to guide us today. As the oft-cited ‘ōlelo no‘eau states, “I ka wā ma mua, ka wā ma hope.” We need to know our

history and what came before us, as this information helps us to understand our current state and guides our behaviours and actions for continuing to improve ourselves and our circumstances for the benefit of future generations. So, there was a definite undertone and at times, explicit mention of moʻokūʻauhau and building the capacity of the lāhui into the future.

There are very practical benefits to knowing our past. As the group discussed, many issues we are currently facing today are not new. We can learn a lot from our past and we benefit from knowing these moʻolelo; we need to know the backstory to identify its relevance and to better understand the history and current situation. Similarly, one participant pointed out the relationships between "causes" in the pae ʻāina and globally as relates to the local. The participant proceeded to share a moʻokūʻauhau of movements in Hawaiʻi which included the Kalama Valley land struggle, the Protect Kahoʻolawe ʻOhana's efforts to stop the bombing of Kahoʻolawe, and the ongoing movement to protect Mauna Kea from further desecration due to yet another proposed telescope. She then pointed to events that happened around the world and how they relate to Hawaiʻi, like the bombing of Hiroshima after the attack on Pearl Harbor or how the Vietnam War and Civil Rights Movement as events that informed the Hawaiian Renaissance of the 1970s.

The group recognized the importance of knowing the moʻokūʻauhau of aliʻi and other ancestors. They made specific mention to particular moʻokūʻauhau and koʻihonua, principally the Kumulipo, and suggested these somehow be included in the KOS. In terms of knowledge organization, moʻokūʻauhau presents an opportunity to have discussions about categories that are dynamic, rather than prescribed as fixed or finite categories, as is commonplace in the Western system. Participants agreed that moʻokūʻauhau offer opportunities to "organize things in different spheres."

As we circled the different stations around the room, participants discussed people that could be identified in a Hawaiian KOS, such as the author or photographer of a particular work. Inspired by the *Kahoʻolawe Aloha ʻĀina* video and the actions of the Protect Kahoʻolawe ʻOhana, they repeatedly underlined the importance of moʻokūʻauhau. They talked at length about the significance of identifying and recognizing the actions of leaders – noting aliʻi, a handful of modern political leaders, and then delving into conversations about leaders in Hawaiian

movements. There was a clear recognition of inherited mana through moʻokūʻauhau though participants also noted that leadership and mana were not solely based on aliʻi rank or moʻokūʻauhau but that it could be earned as a result of their leadership.

But, how do you catalogue the impact of a person, organization, or event, and their historical significance and relevance to contemporary times? Can this be captured in a controlled vocabulary or even conveyed in a single field in a KOS? The group's conversation highlighted the need to represent people and events in a KOS with the added benefit of being able to connect between these to gain an understanding of the intersecting moʻokūʻauhau of social and political movements.

Notably, politics was something we kept returning to in our conversation. The other groups also discussed politics, in terms of language and culture, but with this group, it was a common thread throughout our discussions. We talked about the politics of language, such as the supplanting of place names and the changing interpretations and connotations of words. This included issues of translation between languages but it also happens within a language itself as well. Farming, for example, was a term discussed because of the changing politics of being a farmer and how society has viewed farming as a livelihood over time. Becoming a farmer may not have been an enticing line of work for youth in the recent past, especially because it is usually associated with a lower socioeconomic status, but farming is increasingly being recognized as a positive path for self-sufficiency and sustainable food networks for Hawaiʻi. More generally, the practice of mālama ʻāina, is also being portrayed in a positive light as a way for Kanaka to (re)connect to ʻāina and moʻokūʻauhau. This led to a larger group discussion of how values of aloha ʻāina, mālama ʻāina, lāhui, nationalism, consciousness, and patriotism have been characterized and understood at different periods of Hawaiʻi history, and subsequently, problems with attempts to identify singular definitions, or to limit the meanings of such foundational and grand concepts.

Adding to the complexity, participants referenced the Kumulipo and other creation stories which demonstrate that moʻolelo are not limited to humanity, but are inclusive of all life and environments we are fortunate to live in. Interestingly, participants expressed an awareness of how things happening in nature relate to socioeconomic or political events, and discussed how natural disasters can serve as hōʻailona, or signs, predicting or otherwise indicative of these

events. Examples shared were volcanic eruptions and shark attacks as they relate to the Thirty Meter Telescope and the bombings of Kahoʻolawe. If the system can help us to draw correlations between these events rather than siloing them into Western disciplines like natural science, sociology, and political science, we can deepend our understanding of the intersections with nature and learn from them.

Moʻolelo

The group agreed there's value in linking moʻolelo by format and by subject matter. Pointing to differences in black and white versus color video, one participant talked about the impact of media and technology in memory and meaning-making. The participant pointed to how video, and technology generally, "becomes a weapon for the lāhui but it can also hurt us." An example of how media has negatively impacted Kanaka is how the local media has and continues to depict and label Kanaka as "angry Hawaiians" without acknowledging the trauma that our people have endured and instead perpetuating stereotypes of violence that work to dehumanize Indigenous peoples.

The group also discussed variations in the formats of moʻolelo and the changing credibility of certain media types. One participant described how pictures can be staged or faked whereas a person can be speaking themselves first hand in live video. Their comments seemed to focus on issues of authenticity concerning the source material but also to shed light on how the decisions of which formats are privileged and preserved impacts knowledge transmission and understanding now and into the future.

Kuleana

Sometimes we're presented with kuleana that we may not recognize the purpose or the weight of, or at least not at first. This group reminded me that accepting and fulfilling kuleana entails understanding the purpose and outcome, intentionally visioning, and working toward fulfilling it. Like the other groups, this group recognized the power of intention and the role of protocol.

The participants talked about consciousness – both explicitly and implicitly in multiple ways. For example, a participant shared, "We see what we know, what we've learned… so some things we

see, some things we don't." We are each on our own journeys and at our individual places in conscientization. As our consciousness grows, our ability to see and know also expands; just as there may be changes in our mana as we take on, fulfill, and seek different kuleana. Returning to the Kumulipo, we discussed how a mo'olelo can hold multiple meanings within a single wā, within a single line, and within a single word. Kaona was referenced here, as an example of how conscientization, or ao, may affect a person's depth of understanding when terminology and names hold multiple meanings, or otherwise call our attention to other relations or reference points.

When discussing the degree to which a KOS could, or should, surface layered meanings, one idea was to represent those relationships similar to the way recommendations as automatically suggested in other systems by the "you might also be interested in…" options, with little context as to the reason or the relationship represented by the terms, concepts, names, etc. that are being suggested. The term loli was used as an example – where loli refers to sea cucumbers while the kaona of loli can also be used to refer to a male reproductive organ. Participants agreed both interpretations should be represented in a Hawaiian KOS.

Furthermore, in the example above age was not identified as a possible concern for access, at least not within the scope of our conversation. One participant questioned the basis of the assumption that age would be a concern – pointing to Western societies and their educational systems that portray sex as shameful or restricted to those who meet certain criteria prescribed by religions (i.e. as occurring only between male and a female, or requiring a marriage as a precondition for sex to somehow be sanctioned), or somehow place sex on a pedestal that makes it seem less natural of an act. Perhaps at the most basic level, the Kumulipo itself is a story about procreation and regeneration. Participants agreed that consciousness is the indicator of whether a person will understand the links and relationships between any terms presented in a KOS. Age, or maturity level rather, may very well be a factor in a person's consciousness, but more research is needed to ascertain possible impacts on access (if any). Essentially, the consensus in the group at this moment was: 1) it is more advantageous to present a researcher with as much information and related links as feasible in a KOS and, 2) a researcher may or may not grasp the nature of these relationships until which time they are ready (meaning until they have developed their

consciousness to a capacity at which they are then able to recognize these layered understandings).

ʻĀina

Like the other focus groups, participants in this group discussed the importance of ʻāina. The significance of place names was a recurring theme throughout. Place names are referenced in mele, kiʻi, video, and other formats. Each participant acknowledged the benefits that would come from being able to retrieve these resources through place names as an access point.

The ways in which we refer to land names (i.e. ahupuaʻa, ʻili, moʻo ʻāina), or divisions of land, was offered as a framework for understanding ʻāina. Moreover, one participant described how the KOS itself can be understood within the context of an ahupuaʻa. She went on to explain that ahupuaʻa have different resources and, in this same manner, a repository "isn't supposed to hold everything." Reminiscing on this now, it seems such an obvious observation but at the time this was flabbergasting. As a librarian, I often find that I need to explain to people that we may need to check multiple databases or sources to meet their information need and this is usually met with a type of despair or confusion as to why we can't simply search in one place as with other services, like Google. The analogy of the KOS being like an ahupuaʻa applies and, much like the way this participant explained it so matter-of-factly, the perceived limitation of any KOS may be something we accept rather than an issue to be evaded or solved within a single KOS. In a way, it speaks to the need for multiple KOSs which, like ahupuaʻa, can be managed locally to meet local needs and also for greater efficiency and abundance.

Having expertise in ʻike Hawaiʻi, the group was also able to hold in-depth discussions about the cultural, historical, and political implications of place names and of naming in general. Participants discussed changes in place names over time, as referenced by maps and other source materials. The use of "false names", or names given to ʻāina by "overtakers", was discussed with specific examples of how those false names are sometimes used more commonly than the "original" names. As an outcome of colonization and occupation, many in our communities are unaware altogether of these Hawaiʻi place names. Even in cases where the place names are known and used, the boundaries of those areas have sometimes shifted. For example, today

Waikiki is commonly understood as referring to an area near the shoreline of Oʻahu where millions of tourists visit annually. However, Waikīkī is the name given to an entire ahupuaʻa in the moku of Kona on Oʻahu – not just the coastal area. This difference in understanding changes our mindset and approach – even for Kanaka, some of whom avoid that shoreline altogether because of the inundation of tourists and overwhelming commodification of our culture.

Having expertise in ʻōlelo Hawaiʻi, the group was able to have a more detailed discussion of linguistic considerations surrounding ʻāina and place names. Participants pointed to challenges that may arise when including ʻāina in a KOS, namely variations in land names (e.g. kalana vs. moku) and other terminology as well as differences in dialects between islands. They questioned how this nuance might be accounted for in a Hawaiian KOS. This extended into a broader discussion of ʻōlelo Hawaiʻi resources in libraries and archives and the potential role of ʻōlelo Hawaiʻi in providing access to ʻike Hawaiʻi within these institutions. Still, there seemed to be the consensus among participants that a Hawaiian KOS would need to include English if it were to serve the general Kanaka community, at least for the time being.

Chapter Summary

In this chapter, I presented the stories and experiences shared by focus group participants in this study. Within each subsection, I wove the narratives of the three groups together as analysed through four significant themes: moʻokūʻauhau, moʻolelo, kuleana, and ʻāina. As is evident, there were both shared and unique approaches to the ways these themes were understood and experienced by each group. Some themes garnered more interest and discussion than others.

A diversity of experiences and viewpoints was intentional in the study design and welcomed, if not actively encouraged, as this materialized in discussions. Further, because of the semi-structured approach employed, variations in findings were an expected outcome. After all, a consensus was not a priority in this study. Nevertheless, as described above, there were related themes and values surfaced by all groups. And, for this reason, the four themes offered in this chapter can be considered foundational to a Hawaiian KOS, and will be covered in more detail in the next chapter.

Chapter 7: Facets of Hawaiian Knowledge Organization

This chapter begins to set out the architecture for a Hawaiian knowledge organization system grounded in Kanaka epistemologies. The facets introduced in this chapter were identified in the focus groups and further developed through analysis of focus group data. In the sections below, I outline the facets and how each could be implemented to improve representation of ʻike Hawaiʻi and the relationships inherent to ʻike and Kanaka, in order to better meet the needs of Kanaka as envisioned within the scope of this study.

Participants contributed a wealth of descriptive terms as part of the activities in focus group meetings. As evidenced by the examples below, terminology varied and were in both ʻŌlelo Hawaiʻi and English. After an analysis of the data, the preliminary findings were presented to participants in the second round of focus group meetings for review. Table 10 lists a sample of these facets. The ʻŌlelo Hawaiʻi terms used for the facets were either explicitly mentioned by participants or broadly discussed. It is important to point out that focus group discussions were sometimes granular, particularly around terminology that might be applied. Nonetheless, there is still opportunity to examine the terminology devised. My primary focus currently is to expand on the function of each of these facets – which will inform the terminology used in the iterative development of the KOS.

Table 10 - Facets of Hawaiian Knowledge Organization

Haku*	**Creator; Author**
Kanaka	**Subject - People**
Au	Time - Political eras
Paʻi ʻia	Publication date
Inoa	Title
ʻAno ʻenehana*	Format - Type
	Format - Style
Mana*	Version; Issue; Edition
Akua	Subject - gods
Kinolau	Subject - manifestations of akua
ʻĀina*	Place; Location
Kumuhana	Subject
ʻŌlelo	Language
Kūmole	References - Citations
	References - Cited by

Lālani Mua (no nā mele)	First line (for songs)

Some of the facets that focus groups discussed are already represented in existing descriptive schemes, like Marc and Dublin Core. These facets, some of which are included in the above table, are more clearly shown in Table 11 below with mappings to the closest version in English systems. While these may appear to be appropriately represented in existing KOSs, it should be noted that group discussions offered nuance to the ways these facets are usually used and interpreted, and eventually led to descriptions of dynamic facets that provide more complete or appropriate representation.

Table 11 - Facets of Hawaiian Knowledge Organization mapped to closest equivalents

Lau Ā Lau Ka ʻIke	**Closest Equivalent**
Haku	Author
Inoa	Title
Paʻi ʻia	Publication date
ʻAno ʻenehana	Format (type/media)
ʻŌlelo	Language
Mana	Issue; Edition
Lālani Mua (no nā mele)	First line (for songs)
Kūmole	References; Cited by

It could be that these facets came to mind for participants because of past experiences using existing KOSs in libraries and archives, or because of their disciplinary training in English-medium education institutions in general. Still, because participants expressed interest in these facets, they are included here. With the exception of haku, which is covered in the section on Kanaka, and mana, which warrants further explanation, this set of facets is not discussed in this chapter as they are fairly straightforward.

Kanaka

Participants expressed a strong interest in knowing more about the haku – creator or author – and the translator, if that work has been translated into another language. While being able to view the author's name within a bibliographic record is important, it is insufficient for Hawaiian research and should be considered the bare minimum. Like protocols when meeting someone for

the first time in Hawai‘i, we want to know “who you?” – Where are you from? Who’s your ‘ohana? This is how we connect to you, or in this case, the resource.

Table 12 - Pilina Categories

‘Āina	Where are they from? Where do/did they live and spend time at?
‘Ohana	What is their family names? Who are they related to?
Kumu	Who were/are their teachers (formally and informally)?
‘Oihana	What is their (cultural) practice(s)?
Hālau / Hui	Are they part of a specific hālau or hui?
Kūlana	What roles do you have (i.e. kumu)? Did you already ‘ūniki?

Some of the principle relationships that were viewed as critical to knowing the author included ‘ohana, kumu, ‘oihana, hālau/hui, and kūlana. While not an exhaustive list, Table 12 shows some of the questions that would be considered under each of these Pilina categories. Participants discussed at length the ways in which we come to know an author, or any person, by the relationships they have and maintain with places, people, and practice (whether cultural, personal, professional, or otherwise).

Au

Time, as a linear concept, is not always an important aspect of mo‘olelo. In English-medium institutions, English courses usually instruct us to answer the 5 Ws – who, what, when, where, how/why – in writing. However, sometimes the ‘when’ is not a static point in time but can be thought of as a recurring event, which invites us to reexamine linear understandings of time and embrace more cyclical understandings.

Au, used here to refer to ‘eras’, is another facet to consider in a Hawaiian knowledge organization. This facet points to differences in conceptualizations of time between Kanaka and the Western world. As evidenced by mo‘oleo in the nūpepa, there are different ways to reference time. As introduced by foreigners and widely used today, chronological time is based on the earth’s rotation around the sun. Systems like the Library of Congress depend on chronological time for noting things like publication date or author birth and death dates. As will be discussed

below, focus groups discussed other ways of referencing time, such as the mahina (moon) and recognized periods of aliʻi.

When working with subjects like fishing and farming, it becomes obvious how having a subdivision for mahina would be helpful to researchers. Just as a monthly moon calendar assists in planning fishing and farming activities so too would a KOS that mimics this way of organizing activities.

Moʻokūʻauhau present another method for representing and understanding time. Essentially, moʻokūʻauhau invite generations as a conceptualization of time. An obvious way of using this as a framework for time periods is by reference to the generation or reign of particular aliʻi. Nūpepa articles sometimes begin moʻolelo with "I ka wā o Kamehameha" or "I ke au o Piʻilani…" which lets readers know the aliʻi who was in reign at the time of the moʻolelo. This way of organizing time periods by moʻokūʻauhau helps audiences to recognize the state of the lāhui during the rule of particular aliʻi and situate the types of policies and/or events that were happening while the moʻolelo takes place or when the creator was born and/or authored that work. While not the same, similar references to time periods are made today when referring to government officials, like the president of a country or state governor, in discussions of historical or contemporary events. For example, rather than referencing the specific years of the Vietnam War, it is sometimes referred to as happening during U.S. President Nixon's term because he was in office at the time of that war.

Mana

Participants described how knowing the author and edition of a text is helpful but that they also wanted to know the version or source of the moʻolelo. Another way of framing this is 'where or who does the moʻolelo come from?' This is particularly important for moʻolelo that are known to have multiple versions. Is the moʻolelo from Maui or Oʻahu or Hawaiʻi? Does the moʻolelo come from a particular island, or district, or moʻokūʻauhau (in the broadest sense – inclusive of moʻokūʻauhau of cultural and professional practices)? Is this moʻolelo meant to honour the mana of a particular person or place? Essentially, we want to know the perspective(s) being privileged in the moʻolelo or, to put it another way, to whom the moʻolelo is giving mana to.

Akua

One of the core relationships is the ancestral connection between Kanaka and Akua. Akua and ʻaumakua continue to guide us, allowing us to glean knowledge from them when we properly prepare ourselves to receive that knowledge. Our kūpuna relied on Akua for the intellectual organization of the environment thus, it makes sense to organize a Hawaiian KOS according to Akua to allow for the organization (and attribution) of knowledge, just as our kūpuna did.

Kinolau

Kinolau are (physical) manifestations of Akua, most often in the form of plants and animals. As should be evident by this point in the discussion, the interrelationships between akua, environment, and kanaka is complex, and inherently engrained into Hawaiian knowledge and being. This poses a challenge when trying to limit our understanding to one-to-one relationships. Kinolau cannot be limited to a 1-to-1 relationship with Akua. For example, a single plant like niu (coconut) could be the kinolau of multiple Akua – the tree is a kinolau of Kū and the water within the coconut is a kinolau of Kāne. Therefore, akua and their respective kinolau exemplify multiplicity of physical and spiritual relationships within our environment. The idea of representing these multiple relationships in existing library and archival knowledge organization systems (and catalogs) is both challenging and exciting in terms of the possibilities it introduces for better representation and for the education of users of any such system.

Kumuhana

Kumuhana was perhaps one of the most complicated facets raised by focus groups. The multitude of kumuhana, or subjects, discussed led me to question which topics should fall under this seemingly umbrella facet and which warranted separation into distinct facets on their own. For example, the Au facet, as discussed above, could be attached to a kumuhana field much like the way subfields are used in Marc. In this case, the Au could be joined to subjects like Aupuni (Government/Nation) to provide further specificity without requiring a separate field.

As another example, Akua could form the core of a kumuhana facet as the foundation for ʻāina and all natural elements. Operating under the understanding that all things relate to and/or derive

from Akua, it makes sense that Akua would be represented at the highest level in a subject hierarchy. Alternatively, as described above, Akua could be separated into its own facet, with kinolau and other interrelationships.

Another area discussed as potentially being sheltered by a kumuhana field was ʻoihana, which is commonly defined in English as "occupation" but used in our conversations to refer to 'cultural practice', such as lawaiʻa (fishing), mahiʻai (farming), lāʻau lapaʻau (medicine), hula, etc. Such a controlled vocabulary seems to replicate Western disciplines at face value, however the paradigm from which these ʻoihana arise is distinct from Western philosophies. Including ʻoihana within the controlled vocabulary has the potential to assist cultural practitioners with their research, including current and ongoing efforts to reclaim and revitalize cultural practices as is the case with Lei and her passion for establishing a hālau kapa.

Clearly, additional research into the need for and make up of a kumuhana facet is needed.

ʻĀina

As discussed earlier, inoa ʻāina, or place names, are prominent in moʻolelo, so it is not surprising that ʻāina kept coming up in discussion. References to ʻāina were made in regard to the ʻāina hānau or kulaiwi (birthplace) of authors/creators, the place of origin of a moʻolelo, the ʻāina the moʻolelo takes place in, and the ʻāina that are otherwise mentioned in a moʻolelo (i.e. where a character lived, visited, or were somehow associated with).

Inoa ʻāina may have changed over time and so it would be helpful for a Hawaiian KOS to be able to account for these variations. Within our focus group discussions, Kumu Maelia talked about name changes and the beauty of being able to see the original names on the map used in our descriptive excercise.

> *Kumu Maelia: I think the use of correct names for the little places. Like for me, Kalaepōhaku, Waʻahila, ... like, nobody calls it that – it's "Saint Louis Heights". So to see those original names of what we should be calling them. And then the timeline, so it's like 'oh in 1913, this was called "Round Top." It wasn't called 'Ualakaʻa back in 1913, so when did it change?*

This has implications for historical research. If a researcher is looking for information about a particular ʻāina, the KOS should be able to present information for the inoa ʻāina entered by the researcher in their search query as well as by the various inoa ʻāina that may be utilized in the source materials. In other words, the KOS should have the capacity to link to materials about an ʻāina via the various inoa ʻāina that may exist. This would provide a solution to the current burden on researchers to have to find the variant names and enter each into separate searches to try to piece together the moʻolelo of ʻāina.

Adding to this, an authority list of inoa ʻāina would provide the added benefit of specificity within inoa ʻāina searches. This would help researchers to decipher between places with the same inoa ʻāina (i.e. Wailua on Kauaʻi, Oʻahu or Maui) and improve relevancy – which points to a need that has not been met by existing KOSs.

Such an inoa ʻāina list would help to account for spelling variations and changes to inoa ʻāina over time (including nicknames), taking into account that spelling of inoa ʻāina do not always include diacritic markings. Moreover, use of an inoa ʻāina field would benefit research on inoa ʻāina that are not only place names but also have meaning as nouns, verbs, or other parts of speech in ʻōlelo Hawaiʻi (e.g. Hāna, Maui vs. hana: to work, etc.). For novice researchers who may be unaware of older names for places, their research will continue to be limited unnecessarily and the moʻolelo of that ʻāina left incomplete. While not ideal, existing software systems could potentially achieve this with a "see also" reference. Still, an authority list for inoa ʻāina would hugely benefit research and scholarship, particularly place-based research.

Another consideration that arises is the way in which to represent ʻāina. How shall we locate ʻāina? As illustrated by the examples above, it would be beneficial to be able to add greater specificity to the inoa ʻāina facet so that it is not just the name itself, but includes other descriptors that differentiate each ʻāina. One possible approach could be to use the ahupuaʻa system to locate ʻāina within the mokupuni (island), moku (district), and ahupuaʻa (smaller land district). This moves us from organizing ʻāina in terms of voting districts or even towns and cities, to a more cultural and holistic view of ʻāina.

Still, even prior to the Mahele, inoa ʻāina changed and the boundaries of ahupuaʻa were sometimes reorganized as well depending on the aliʻi in charge of the mokupuni, moku, and ahupuaʻa. This presents a challenge and may require getting specific so as to declare which map maker or map is to be privileged in the creation of an authoritative inoa ʻāina list. Ideally, a Hawaiian KOS would represent all inoa ʻāina textually and visually – including geographical references to help researchers locate ʻāina spatially (which seems promising given advances to GIS technologies). There is huge research benefit to being able to search a KOS by any inoa ʻāina or time period, and be provided with a list of inoa ʻāina and links to the resources that refer to that place by the various inoa ʻāina ascribed to it. Databases like Papakilo Database and Kīpuka, which are funded and maintained by the Office of Hawaiian Affairs, illustrate how GIS technologies can be utilized to link resources with ʻāina and to represent multiple understandings of land types and boundaries.

Delving further, how granular could or should the KOS be? Many moʻolelo refer to mountains, surf breaks, hills and other physical features of the land and sea by name. There is no doubt that having this level of specificity within the KOS would be helpful to researchers. The question becomes how practical it may be for those cataloging. Still, if the benefit is that much greater to the end user, does it then justify the added effort in cataloging? Perhaps the KOS could start with wahi pana (places of significance honoured in moʻolelo) and progress from there.

Chapter Summary

The facets presented in this chapter are meant to provide a foundation for a Hawaiian KOS as shared by focus group participants. In providing explanations of each, this chapter offered a glimpse at the practical application of a Hawaiian KOS and presents a basis for the next phase in the creation of a Hawaiian KOS.

Given the limitations to this study, the facets provided are in no way meant to be comprehensive or restrictive. More consultation and engagement is required to determine how these facets could be implemented in a Hawaiian KOS – to include further consultations with Kanaka scholars and experts, catalogers and/or metadata specialists regarding scope notes and the practical application in cataloging, and systems librarians or software engineers who may be able to outfit or create

library management software or other content management systems that will better align with the functionality required for the Hawaiian KOS envisioned.

Chapter 8: Ao Framework for Research and Knowledge

In setting out with moʻokūʻauhau as my methodology, I sought to nurture and deepen relationships, or perhaps more accurately, reveal relationships that were previously suppressed or otherwise rendered invisible as a direct outcome of colonization and occupation. These relationships did not cease to exist in the world or lose meaning, however they were either misrepresented or omitted altogether in dominant KOSs and therefore remained concealed/veiled within libraries, within academia, and within research. Recognizing this injustice, I view it as a responsibility of librarians to collaborate and consult with Indigenous peoples and communities to address the unnecessary barriers to knowledge and learning that this poses.

Ao Framework

There are various ways of interpreting and representing the way a KOS functions. Wilson (2008) explains that "a metaphor, because it describes a relationship, is just as "real" as whatever it stands for" (p. 124). For Wilson (2008), the metaphor he was referring to was of research as a ceremony – that "research isn't just like a ceremony, it is a ceremony" (p. 124). In this chapter, I present a framework for both research and consciousness through the metaphor of ao.

Ao can be defined as enlightenment or consciousness. Becoming an aokanaka, or enlightened person, involves a "process of seeking ao (enlightenment) via hākilo pono (close observation)" (Oliveira, 2014, p. 95). Along these lines, aʻo is 'to teach' and 'to learn', as demonstrated by the phrase, "kōkua aku, kōkua mai, aʻo aku, aʻo mai," which can be translated as, "help others and be helped, teach others and you too will learn". Thus, you can appreciate how the entire research journey within our own contexts can fit into this metaphor, or the lived experience of our own dynamic journeys of learning and teaching toward consciousness. Of course, this is all spatially situated in our own respective locales – the mental/naʻau and the literal 'āina you stand upon.

Adding to our layers of understanding, ao is used to refer to a 'realm' or 'world'. It was mentioned earlier that there was a transition from pō (night, darkness, spirit realm) to ao (day, light, life on earth) that is described in the Kumulipo, wherein ao identifies the birth and era of human beings. Silva (2004) notes, "its meaning is free of the connotation of Western

civilization" (p. 100) and its use in the Kumulipo, within the context of Kalākaua's reign in particular, is an act of resistance to the foreign discourse of civilization. Bringing our attention to language and critical consciousness, Silva (2004) asserts, "The use of these terms ['pō' and 'ao'] in the Kumulipo asserts the presence of ao thousands of years before the arrival of the missionaries" (p. 101). This lends further meaning to the Ao Framework, placing it within a mo'okū'auhau consistent with the Kumulipo, and within what we can refer to as a Kanaka realm of consciousness.

As a pedagogical tool for 'ike Hawai'i and ultimately, ao, the Ao Framework provides a conceptual model of a Hawaiian research methodology, and likewise, provides a basis for KO. Represented with the symbolism of a circle, the Ao Framework provides a lens for entering Indigenous KO work. It may help some to think of it as an atom – being the thing that all life equates to or emanates from. Or, it may help some like myself to think of the symbolism of a piko – a source or focal point – from which life, ideas, 'ike, etc. are birthed and emanate from, thereby connecting past, present, and future generations.

The framework is not intended to be a comprehensive representation nor a limiting interpretation of Hawaiian research methodologies. The metaphor and visual representation offer a means to grasp how the components operate and interrelate in Hawaiian systems of knowledge. While the portrayal of the model here is limited to a 2D representation, it should be noted that the sphere is understood as constantly being in motion – a "rotating, oscillating sphere" as a participant in the Hui Kumu described it. Dashed lines are used to signify movement and intersectionality. The hope is that it can be used to help practitioners form a shared understanding of knowledge organization that can serve as a foundation in the creation of a Hawaiian KOS. While it may inform others in Moananuiākea and elsewhere, the aim for this framework is to inform the approach of Indigenous and non-Indigenous peoples with responsibilities to respect and care for 'ike Hawai'i.

Some may view the need to explain the framework and its components as counterintuitive or, ironically, as a circular argument, being as I set out to utilize Kanaka methodologies at the same time trying to ascertain Kanaka methodologies that underscore knowledge organization. Some may view the framework as overtly obvious which is understandable given that these concepts

are generally referenced and understood within Hawaiian communities and within the field of Hawaiian Studies. Still, I provide it here not to bridge Indigenous concepts with Western concepts but rather to reassert Hawaiian ways of knowing and understanding for the benefit of Indigenous knowledge within colonial institutions. Admittedly, it seems counterproductive to *define* ʻike Hawaiʻi and Indigenous methodologies. However, because we are still contending with colonization and its consequences, it is important to articulate our methods until which time the occupation of Hawaiʻi and of our minds ceases, and the goals of decolonization are achieved. Or, until we achieve liberation through other means and there is no longer an express need to resist and reclaim but only to practice/perform wellbeing.

Moreover, our ancestors absolutely categorized their environment in the sense of placing things in relationship with each other. So, the act of categorizing moʻolelo and the ʻike contained within expressions of ʻike Hawaiʻi can be understood as an extension of this custom/tradition/practice of recognizing interrelationships. The framework provided here is merely a tool to affirm and achieve this practice within libraries which, at the time of this writing, remain colonial institutions notwithstanding recent efforts to "decolonize" and beginning to center Indigenous knowledge and the peoples (and lands) that knowledge systems spring/derive from.

The framework contains five central components: moʻokūʻauhau, ʻāina, moʻolelo, ʻike, and kuleana. In the sections below, I provide an introduction of each of the four components that structure this framework – moʻokūʻauhau, ʻāina, moʻolelo, and ʻike – and locate kuleana at the center. Being as four of these components have been discussed at length earlier, I provide an overview of each and then focus on kuleana in order to provide more detail as to its function within the framework.

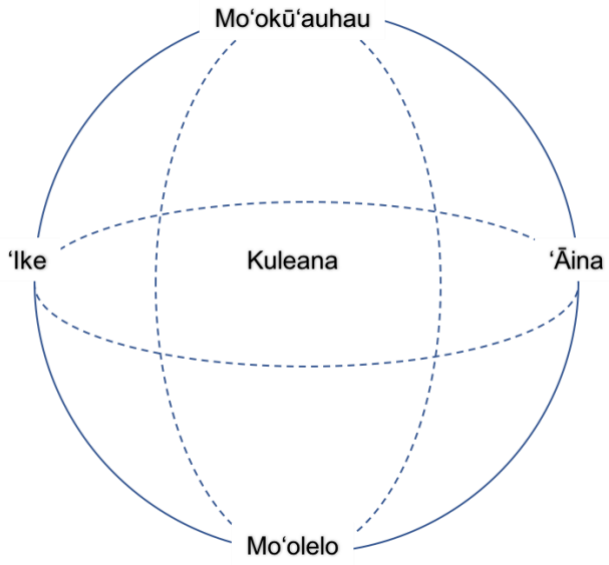
Before entering that discussion, I include a mapping of the framework as relates to research and to KO. It makes sense that KO would follow the same (or at least similar) framework in order to fit/meet the research process and in a sense, embody it – inclusive of ethics and values. Table 12 summarizes each component as meaningful for research and KO. Again, I emphasize that each component is interrelated and, while I present them in a sort of sequential and cyclical order here, it is not meant to be prescriptive nor are the categories meant to be distinct or independent.

Table 13 - Ao Framework for research

Ao Framework	Research
Moʻokūʻauhau	Knowledge Organization System
ʻĀina	Search query
Moʻolelo	Resources (in library/archive); Information to meet research need
ʻIke	ʻIke
Kuleana	Researcher carries with them – their purpose for researching

Rather, they are all interrelated and interact with one another. It is important to remember that each of these blends together with the next. Think of them not as separate quadrants or ideas but rather as equal parts interacting within the sphere. Each component is significant, even more so when understood in relation to each other, yet the whole is greater.

Figure 2 - Ao Framework



There is a cyclical relationship that exists between components in this framework. A change in moʻokūʻauhau or in any other point will effect change in the others ultimately resulting in change to the original. It is through this relationality that the cycle operates, and the entire sphere is animated. Within this framework, relationships are established with each of the components to perpetuate and advance ʻike personally and communally. As we repeatedly progress through the components in the cycle over time, we develop ao – we develop our intellect, inclusive of

emotional and spiritual intellect (Meyer, 2008), and consciousness as human beings. In this way, the Ao framework parallels Meyer's (2008) statement that "specificity leads to universality" (p. 217).

With each component, there is also kapu. All components within the framework essentially inform the kapu appropriate to whichever space you seek to enter – physical, mental, or spiritual – and it then becomes part of our kuleana to respect and abide by those kapu.

Moʻokūʻauhau – as Continuity & Relationality

Moʻokūʻauhau is called upon to represent the KOS. Similar to the ways moʻokūʻauhau informs the structure and represents the relationships within a society, a KOS provides for the organization and representation of resources in libraries. Like moʻokūʻauhau, the KOS effectively provides the hierarchical structure for relationships (of knowing), locates all things birthed into existence (inclusive of non-living things which can be considered as being birthed from Kanaka) within those relationships, and provides for the transmission of ʻike. Insofar as it serves as a foundation for management and access of collections, a knowledge organization system can be described as the iwi kuamoʻo (backbone) of libraries.

In this way then, a KOS can be understood as both a container of mana and a representation of mana. Insofar as it can transmit ʻike, a KOS can also serve as a kumu, or source, through which mana can be attained, if tapped into with the proper protocols and know-how. In setting/establishing order and relationality, a KOS establishes and substantiates authority. In other words, authority is recognized, generated by, and functions through moʻokūʻauhau – inherited through birth and/or through hānai. Where this becomes curious is to what degree we want to ʻpin down' moʻokūʻauhau and to what degree it is appropriate. Perhaps another way of thinking about this is for what purpose – which/whose mana are we wanting to honour and to what end or to whose benefit.

ʻĀina – as Environment & Knowing

ʻĀina refers here to the places that feed you (physically, spiritually, intergenerationally, and so on) – the places where you spend time at, whether it is the ahupuaʻa you grew up in, a shoreline

or ocean, at university, or so on. The places you spend time at and experience inform your perspective, your values, and your (understanding of) wellbeing. Wilson (2008) notes:

> … we as Indigenous people have a literally "grounded" sense of identity… our continuing connection to the land, and fulfilling our role within that ongoing relationship, is centered on our specific environment and the relationships that it holds, rather than on events that may be seen as historically important to others but hold only tenuous connection to our land. (p. 88)

Wilson highlights the role of ʻāina for Indigenous peoples, particularly in regard to identity, and I would add that the same is true of ʻike. ʻIke is inextricably/intricately tied to ʻāina. ʻĀina holds a prominent role in ʻike and in moʻolelo, which is another reason why ʻāina should be respected and honoured in the research process.

ʻĀina contributes to the context through which ʻike is gathered and understood, and is therefore critical to the advancement and perpetuation of ʻike. Thus, within the Ao Framework, ʻāina represents 'context'. ʻĀina itself provides significant context, if not the primary context, however it is employed here to also represent other contexts that the researcher brings with them and that the search inquiry or research topic may additionally require. In this way, ʻāina within the scope of knowledge organization, includes the kūlana of the researcher, the papa (foundation) that the researcher stands upon, including any hālau they may be part of and the pae (mastery level) that they have achieved. Access to the next component, the moʻolelo themselves, will depend on these circumstances, the context and perspective that ʻāina provides the researcher.

On the other hand, ʻāina also provides the needed context to be able to retrieve moʻolelo. Within research, ʻāina represents the search itself and provides for the layers of understanding that extend from it. Wilson (2008) states:

> Existing relationships can be used to establish a context upon which new relationships can form. It is the forming of healthy and strong relationships that leads to us being healthy and strong researchers. (p. 86)

This has literal implications for the KOS as well. In this way, the knowledge organization system must be able to account for the various ʻāina – the hālau and kūlana, as well as any other things deemed important for providing context in the representation and understanding of a topic area. These could be represented by various fields within knowledge organization and warrant further

inquiry. Still for now, it is clear that an ʻāina field (or fields) is necessary. The more relationships that can be represented, the more context the KOS can provide for researchers to make connections. Starting from people, things, or ideas they themselves have relations with (or are familiar with), they may be introduced to new relations as they navigate through the KOS. As such, the KOS becomes a learning tool.

Moʻolelo – as Knowledge Transmission

Moʻolelo, in its various formats, are a method of knowledge transmission. As has been discussed earlier, moʻolelo refers to the wealth of Hawaiian literature and is inclusive of, but not limited to, literature as defined in the Western sense. Within the research process, and within libraries and archives, moʻolelo are the resources – rich with ʻike Hawaiʻi, kuanaʻike Hawaiʻi, and nohona Hawaiʻi.

In breathing life into the stories, and saying the names and speaking the words (and language) of our kūpuna, we also find ourselves within the moʻolelo. And, in this way, moʻolelo become more than a text or a video, but the cyclical nature of time and experience relived through moʻolelo and activated with every performance and utterance.

ʻIke – as Knowledge and Intelligence

ʻIke is the knowledge which springs from moʻokūʻauhau, ʻāina, and moʻolelo. Following the cycle, researchers are able to access moʻolelo and then take it upon ourselves to attain the ʻike stored within these literatures. The more we develop and strengthen relationships with all the components of the sphere, the better researchers we become and the greater access to ʻike we gain.

The authority or value of ʻike is in part determined by the application. In other words, it is in the application of ʻike that a deeper understanding is achieved and enlightenment can be attained. As discussed earlier, the hana kaulike, or justified physical labor, assures balance and accountability which, as Kanakaʻole Kanahele et al. (2009) explains, is "the principle, code, and essence from which practitioners are made" (p. 21). Thus, hana, or the practice or application, is a necessary part of ʻike and the active participation of coming to know. This component may lie slightly

beyond the scope of knowledge organization in that it is in this stage of the Ao Framework that the researcher applies what they learn in moʻolelo and attain deeper understanding. However, when the application results in knowledge production, that new knowledge is infused back into the cycle as it informs moʻokūʻauhau and ʻāina but in particular, as a new moʻolelo, thereby contributing to the accountability and pono embedded in ao and in the framework.

In a way, it can be said that ʻike is validated over time, or perhaps more accurately, it is according to the context of the time. Notwithstanding external forces, like colonization and occupation, knowledge will continue to be transmitted and/or built upon within the cycle of the framework as needed at a given time. This is not to say that ʻike that isn't transmitted is any less valid or authoritative, however it may be put to sleep temporarily until which time there is an application for it; again emphasizing the function and application aspects of ʻike. Moʻolelo, like the Kumulipo, contain significant ʻike and continue to be performed and passed down generation after generation. When a person gains ʻike, it becomes part of their moʻokuʻauhau and in return, they become a kumu, or source, of that ʻike for their lāhui, thereby entering into another cycle of the framework. In this way, the framework is able to grow and expand with ao; or, perhaps it is that the cycle never actually changes but it is the researcher that develops, as we gather ʻike and attain deeper levels of ao.

Kuleana – as Relational Accountability

Kuleana is at the center as it situates/represents our relationships within the sphere. We have relations with all components on the circle, whether rendered visible or not (yet). Because of these relations, we have kuleana to all points; and to varying degrees, kuleana to everything in the sphere – ʻohana, lāhui, environment, etc.

Placed at the center, kuleana is the energy or animating force within. In this sense, kuleana can be understood within the context of mana; and, with greater mana comes greater kuleana. Some who understand mana as an energy, or essence, may even supplant kuleana with mana at the epicenter. Still others may interpret this as aloha. However, I choose to highlight kuleana here to emphasize active agency and responsibility, and subsequently encourage the performance of research in accordance with a Hawaiian paradigm. Fulfilling kuleana involves an inherent motivation and active relationship informed by moʻokūʻauhau and the kuleana identified for, and

by, you. What you understand as your kuleana becomes the driver for shaping ao and excellence. Put simply, within the context of research, whatever your research topic and/or your reason for researching becomes part of your kuleana. The more you research and develop pilina with that topic, person, ʻāina, etc., the deeper your ʻike and the greater your accountability to that kuleana. Wilson (2008) refers to this as relational accountability; I understand it as kuleana.

The moʻolelo of Hāloa, referenced in an earlier chapter, teaches us this relational accountability, or kuleana. First, the story tells of the moʻokūʻauhau of Kanaka – that Kanaka are genealogically connected to ʻāina. Second, it demonstrates how moʻokūʻauhau carry kuleana and that some kuleana are tied to birth order. According to this moʻolelo, Hāloa is the first born and accepts the kuleana of feeding or providing for his younger sibling, Hāloanakalaukapalili – the first Kanaka. Hāloanakalaukapalili, as the younger sibling, is also given kuleana within this relationship – his kuleana is to respect and show generous aloha to Hāloa and, by extension, to the ʻāina. As descendants of Hāloanakalaukapalili, Kanaka inherit this kuleana to mālama ʻāina. Through this, we see how kuleana are bestowed on us through moʻokūʻauhau. The moʻolelo of Hāloa and Hāloanakalaukapalili also explains our genealogical relationship to ʻāina, while illustrating how kuleana can be communicated through moʻolelo.

For researchers, the stronger the pilina to each of the points on the sphere – the moʻokūʻauhau that you belong to, the ʻāina that provides context to your approach, the moʻolelo that have been shared and experienced, and the ʻike that has been entrusted to you – the more you will be able to access each, and the deeper your understanding of kuleana. Put differently, it becomes part of your kuleana to build pilina with moʻokūʻauhau, ʻāina, moʻolelo, and ʻike. This changes the premise from ‘what access do I have?’ to ‘what is my kuleana?’ The divergent holds implications for researchers and for the field of information science. Essentially, there’s a paradigm shift that occurs between Western librarianship which prioritizes Western ideas of freedom of information and open access, and Indigenous librarianship which understands access to ʻike (and to all things) as kuleana – both a privilege and responsibility.

At the same time, certain knowledge is withheld for those deemed worthy by kumu. As Oliveira (2014) notes, “Masters of trades do not always have an open-door policy that allows anyone and everyone to study with them... Only those who the masters feel are worthy of such knowledge

are given the opportunity to learn" (p. 99). In other words, interest alone does not warrant access to information, rather it is your kūpuna and/or other kumu that select you as a haumāna and decide when is appropriate to pass on which knowledge. Oliveira (2006) notes that "no matter how much you might seek information, if you are not ready, invisible doors preventing access to knowledge remain in the closed and locked position" (p. 114). This was something that all three focus groups touched upon in various ways – including the role of kūpuna past and current in guiding learning and permitting, or assisting with, access to knowledge. Oliveira (2014) expands on the kuleana we have as Kanaka, in the following ways:

> As Kanaka, we have an obligation to our kūpuna to retain as much ʻike about ancestral ways of knowing as possible. We have a responsibility to be lovers of wisdom who are ready to accept the hikianakopili (spittle passed from a dying master) as it comes our way and to be the stewards of ancestral knowledges and ancestral places for future generations.
>
> We have a kuleana to care for the ʻāina and the legacies created by our kūpuna. Highly sophisticated fishponds, agricultural irrigation systems, and grand heiau are all footprints that map Kanaka existence. When we care for these sites, we honor the heritage and ancestral places bequeathed to us over thousands of years by our kūpuna. (pp. 113-114)

The relationship to kūpuna, inclusive of ʻāina, and sense of kuleana as part of the succession of lineage and knowledge, are central in Kanaka methodologies related to knowledge transmission. The greater your relationships, the more invested you are, and the more you develop your kuleana.

For malihini who may want to enter a hālau hula, for example, it is necessary to build pilina with your kumu and the moʻokūʻauhau of the hālau, with the ʻāina in the hula and the ʻāina your hālau has kuleana to, with the moʻolelo of and within hula, with the ʻike that is offered to you through this practice, etc. The more you build pilina with each of these, the tighter the connections with the points on the sphere become and the more focused the sphere and your kuleana within it becomes – almost as if the sphere itself becomes smaller. However, the sphere hasn't changed in size, rather in realizing the interrelationships coexisting, we are better able to grasp and realize the sphere to access additional points within it and subsequently becomes more comprehensive and ceremonious.

This is a reciprocal relationship wherein the pilina established means others are invested in you as well. The greater the ʻike entrusted to you, the more kuleana you hold. Eventually, some reach a point at which part of their kuleana involves passing on the ʻike they've attained; and, as Hōʻolu indicated in our focus group discussion, your kumu will likely be the one to let you know when you're ready to take this step. When this happens, you are no longer just a consumer of ʻike but become a source yourself. And, as part of transmitting and perpetuating ʻike for future generations, you are part of the moʻokūʻauhau to ensure the continuity of the cycle.

Moreover, as part of the giving and receiving of ʻike, the aʻo aku, aʻo mai, we "enjoy positive relationships with others" (Chun, 2011); this practice of aloha is vital to education and to the Ao Framework. Chun (2011) states:

> The cultural practice of being in a relationship with another person is central to the idea of "belonging." A native people are a people because they have an identity and culture that distinguishes them from others. By belonging to and identifying with this group, they also are able to receive, contribute, and be valued. (p. 2)

Building on the notion that contributing is part of a kuleana that is important to belonging and identity, Goodyear-Kaʻōpua (2016) highlights the role of the collective, she states "Becoming a contributing member of the extended family and community is an essential part of processes of learning and research" (p. 15). Thus, in the interdependence of teaching and learning, we fulfill our kuleana to ourselves and to our lāhui by contributing in meaningful ways that further serve to strengthen our relationships, activate ea, and enliven ao.

These ideas can be understood within a metaphor of a fishing net. Growing up in Hāna, I would regularly see uncle Blondie and other fishermen from our community gather at Kaʻuiki (even before there was an "akule hale" structure), to prepare to surround akule in the waters off Kapueokahi below. I draw from these observations, and from my own experiences helping to take the fish out of these very large nets with my grandparents and countless others in our community, to expand on how we as researchers can understand our kuleana in terms of the fishing net and in the process of surrounding akule. First, the more maka (knots) in the net, the more fish you can catch. You need to prepare and have the right tools to gather ʻike and the more pilina you're able to establish with each of the points on the Ao sphere, the more maka you are able to tie and secure (the stronger the pilina, the better the maka). Second, the more fish you

catch, the heavier the net becomes, or the more ʻike you collect, the more kuleana you hold. The bigger the net, the more people you can feed just as the more ʻike you have, the greater your kuleana to the lāhui and to feeding your community (feeding in this case is used as a metaphor for teaching). At some point, your ʻike and experience enables you to transition from being the person laying the net in the water to the kilo (expert) at Kaʻuiki ensuring the net is ready and guiding the lawaiʻa to the fish, via your handy walkie-talkie. In other words, there is a point at which you shift from a haumana feeding themselves, to feeding their families, and eventually to the kilo, or kumu, feeding their lāhui. The entire process of gathering akule centers community – the purpose, the method, the ʻike, etc. all center on the interrelationships within the akule hale extending into community and connecting us to ʻāina. In discussing fishing and the practices of fishing families, Vaughan (2019) explains the kuleana and role of maintaining relationships in abundance:

> Abundant harvests depend on maintaining mutually respectful, harmonious, and interdependent relationships with families, including with resources considered family. These relationships are integral to living in sustainable balance with the natural world. (p. 20)

We are dependent on the continual health of our environment to be able to provide for and sustain lāhui. Knowledge of resources, including human resources, comes through relationship with them – it comes through continued and respectful presence in a place over time – and entails reciprocal relationships, which is a kuleana that requires great care.

Chapter Summary

This chapter introduced the Ao Framework as a way to honour relationality and the kuleana that it entails within the research process and within knowledge systems. Some may see this as a process for hoʻokanaka (which is an idea loosely related to indigenizing), but I have chosen to represent this as a strengthening of your naʻau or your piko (which, in no small way, is part of hoʻokanaka as I understand it). As we develop relationships with moʻokūʻauhau, ʻāina, moʻolelo, and ʻike, we cultivate ao, we develop our consciousness.

As outlined here, these same components inform knowledge organization. Put simply, moʻokūʻauhau organizes relations while ʻāina contributes to the context (for the moʻolelo and as

pertains to the researcher). Moʻolelo contained within the resources transmit ʻike, which is gathered through the process, and feeds back into the cycle for the perpetuation of knowledge and the creation of new knowledge. Kuleana is the relationship and responsibility of Kanaka to all components within a Hawaiian paradigm (thus including relationships and responsibilities of researcher to the researched). Kuleana is part of belonging and identity, and underlines the need to contribute to lāhui, through development of our personal and collective ao. Kuleana is what motivates us to research and to participate in the teaching and learning cycles.

Use of multiple metaphors for understanding kuleana and ao shows the depth and complexity involved, illustrates how metaphors can be used to organize complex information for better understanding, and demonstrates the significance of multiplicity as well as the concept of makawalu required in the cycles of ao (hoʻomanawanui, 2017). hoʻomanawanui (2017) states "there are multiple, layered, and sophisticated ways to view, analyze, study, interpret, and even create Hawaiian literature" (p. 88). The more we accept this kuleana and ready our nets, the greater our ʻike will be, individually and collectively, and the sharper our abilities to continue to work towards and realize ao.

Chapter 9: Conclusions

The purpose of this final chapter is to highlight notable findings and possible implications for theory and practice, but it is primarily focused on appropriately closing this study and acknowledging that it is part of a larger project of Hawaiian knowledge organization and Indigenous librarianship. Guided by the methodologies of moʻokūʻauhau and moʻolelo, I reflect on my research journey and the advancements toward a Hawaiian knowledge organization system that this study has achieved.

This study is a response to the recognized need for improvements to access to libraries for Kanaka and other Indigenous communities. It highlights the significance of libraries and the power of the intellectual organization of knowledge, as well as the implications this has had on Indigenous peoples, as explained in Chapter 1. Like the majority of the research it represents and privileges, knowledge organization in libraries continues to misrepresent our cultures, stories, and worldviews according to Eurocentric definitions that function to legitimize and serve white men and their (imperialist) interests. As discussed in Chapter 3, knowledge organization systematizes the misconstruction and misappropriation of Indigenous cultures in libraries and education, and effectively helps to misinform our own peoples and the world about Indigenous peoples, independently and as a collective. Further, as sanctioned by the formal state-sponsored education system, complete with its limiting form of approved literacy, knowledge organization systems provide pathways that are not only inadequate but dangerous for Indigenous peoples. This has particularly materialized in the ways that Indigenous knowledge is classified according to the lens of the colonizer, and subsequently marginalized and historicized, in libraries. Moreover, that knowledge organization systems are upheld within the same educational institutions we have been taught to trust in and 'educate' us about our own histories and identities, further contributes to the intergenerational trauma caused by colonization.

As evidenced by the collaboration and design of other Indigenous knowledge organization efforts discussed in Chapter 4, mainly in Aotearoa and amongst First Nations, inclusion and leadership of Indigenous peoples in the development process is critical and hugely valuable. To this end, I sought to initiate respectful research with Kanaka, engaging communities with which I have an established pilina, in order to gather our collective knowledge and experiences, as is an

important part of our Indigenous methodologies. Recognizing the implications of knowledge organization, and the power it exerts, this study set out to survey knowledge organization within a Hawaiian context, as a pathway for knowledge dissemination and production within the current movement toward decolonization and consciousness in Hawai‘i. Relevant literature from Kanaka perspectives in Chapter 5 introduced Hawaiian concepts, values, and understandings of ‘ike that lay a foundation for the development of a Hawaiian KOS. Kanaka methodologies and frameworks were subsequently outlined to inform a Hawaiian KOS. These cultural understandings and knowledge systems provide models that can be employed for the preservation of and access to knowledge.

The literature reviewed as part of this study provided the necessary background information for the discussion of knowledge organization, as conceptualized and applied by Kanaka scholars and cultural practitioners, and to enter the mo‘olelo so generously shared by kūpuna and focus group participants as part of this study. This approach of weaving or tying in together mo‘olelo – both written and oral, both past and contemporary – is part of learning intergenerationally. This approach honors ancestral knowledge systems of the past while also acknowledging and giving credence to the ‘ike and experiences of contemporary scholars and cultural practitioners.

The mo‘olelo and perspectives of focus group members provided in Chapter 6 offered in-depth insight into Hawaiian knowledge systems. With each of the focus group members expressing their own experiences and representing diverse perspectives, the groups contributed varied insight and yet common threads, which brought forth meaning to ‘ike. In broad and deep ways, the focus groups addressed the questions this study sought out to answer: How is ‘ike conceptualized and transmitted by Hawaiian scholars and cultural experts? What elements, categories, and/or values inform Hawaiian knowledge organization? And finally, how can a knowledge organization system be developed to better support scholars and to provide a foundation for discovering cultural relationships and understandings?

Among the many lessons and experiences shared within focus groups, the prominence of mo‘okū‘auhau, ‘āina, mo‘olelo, and kuleana were revealed as shared themes within Kanaka worldviews. Analysis of these distinct and ubiquitous mo‘olelo led to the development of facets of Hawaiian knowledge organization presented in Chapter 7: Kanaka, Au, Mana, Akua, Kinolau,

Kumuhana, and ʻĀina. While not meant to be comprehensive nor restrictive, these dynamic facets provide examples of the specific and nuanced relationships that could be represented in Indigenous knowledge systems to provide more complete or appropriate description. Together these facets begin to form the architecture of a knowledge organization system that would improve representation of, and accessibility to, ʻike Hawaiʻi for Kanaka.

The themes that the focus groups called our attention to ultimately informed the development of a conceptual model of a Hawaiian research methodology presented in Chapter 8. The Ao Framework provides a tool for research and understanding of the values and relationships within Kanaka epistemologies. Represented by a rotating, oscilating sphere, the Ao Framework identifies five central components as necessary for orienting us as Kanaka: Moʻokūʻauhau, ʻĀina, Moʻolelo, and ʻIke. Meanwhile, it is Kuleana that remains the central driving force as we grow our pilina with Moʻokūʻauhau, ʻĀina, Moʻolelo, and ʻIke. Essentially, the Ao Framework centers consciousness, honours relationality, and underlines the importance of strengthening our naʻau; as we embrace our relationality, our consciousness matures.

As a research methodology and framework, Ao has the potential to advance the field of Indigenous librarianship in meaningful ways that foreground and give greater voice to Indigenous knowledge systems. Ao offers a theoretical framework not just for research but for the creation of a knowledge organization system that mirrors that research methodology as well. Focus on the consciousness and wellbeing of Kanaka is critical to the Ao Framework, just as it must remain foremost to a Hawaiian knowledge organization system and to any meaningful attempt to improve access to ʻike for Kanaka.

Reclaiming Research

While it may be out of the ordinary that research should respond to the needs of Indigenous peoples during, or as part of the process itself, this decision-making is aligned with the intended outcome of this study and contributes to a broader aim of reclaiming and empowering Kanaka relationships and ea. This includes reclaiming and redefining Kanaka relationships with research, so that the research respects, and benefits, us.

All participants shared positive feedback on their experience, agreeing that the activities and conversations in the gatherings flowed well, that their contributions were valued by the other participants and the facilitators, and that their own personal takeaways from the discussions were valuable. One participant commented, “The trust among the focus group members and facilitators was key for me!” Others added that, “Participant composition was comfortable which made it easy to contribute to the discussion,” and “I think that being familiar with each other also contributed to the comfort we all had in sharing manaʻo.” This feedback confirms that the kuleana, kūlana, moʻokūʻauhau and pilina held by and amongst participants contributed to more comfortable spaces for engagement; thereby affirming the appropriateness of the methods employed in this study.

The talk story approach, and the creativity incorporated into focus group activities, not limited to photovoice and the description activities, fostered discussion in ways that an interview or electronic survey could not have achieved. One participant commented that the gatherings “Felt comfortable, inviting and rejuvenating.” Another shared that they enjoyed “the ethical nature of the information and the combination of the varied search terms (layers) of how to allow for access, searching, and identifying. I also love the wrestle with the varied ways we approach and view of ʻIke.” Referring to the ease with which activities were revised at the request of participants during our gatherings, one of them commented that they “appreciated that the facilitators were open to our ideas about revising planned activities in the focus group.” And, another participant noted that the aspect they liked the most was, “The time and effort to allow for dialogue and listening;” they explained that they appreciated the “mix of conversation with gathering of data which made it feel like a visit more than a research project.” Again, this demonstrates the dedication to centering community, which was an intentional approach throughout this study.

Participants succinctly summarized what they view as the outcomes of this research and the potential impact it has on our communities:

> I can see this project inspiring research that may seem unattainable. I see that this project will support our Hawaiʻi in their research and having it organized in a Hawaiʻi way will only make the process more for Hawaiʻi vs. the existing structure.

> I think the outcome to offer a search "engine or best practices, terms, new system" informs my research, my students, my field, and our ike. I can see huge impacts right away for our academic community, but also huge impacts for the archival, gathering, collecting/combining of our ʻike for education, social justice, and the next generation.
>
> As a practitioner and a researcher, this project will provide me greater opportunities and pathways to learn as an Indigenous worldview.

Notably, all participants indicated that they'd be willing to participate in future phases of the study in order to realize the aim of a Hawaiian knowledge organization system. It was a participant in the Hui Kumu that shared a piece of advice that I kept reading and re-reading throughout this process – they said: "trust the complexities of your vision/s." The support from participants, which is really the support of my community, and their trust in working toward this vision, is encouraging. But, more than that, they've invested their energies and mana into this endeavor, and it remains my kuleana to respectfully follow through, even after this thesis is complete and submitted. This is part of Indigenous research, the pilina remains long after the research, and in trusting me with their moʻolelo, I have a kuleana and remain accountable to my community.

Limitations due to COVID-19

There were a number of constraints or limitations on this research due to the coronavirus (COVID-19) pandemic. Health and wellness needed to remain a top priority throughout this time, and still today as the COVID-19 pandemic is still ongoing at the time of this writing. First, face-to-face gatherings with kūpuna and focus groups were not possible due to health and safety guidelines in Hawaiʻi as of March 2020. A third meeting with each focus group was originally planned for later that spring, however we were not able to hold these gatherings due to quarantine restrictions in effect in Hawaiʻi. Hawaiian, Pasifika, and kupuna populations were among the most vulnerable to COVID-19 in Hawaiʻi – which meant that even if quarantine was not in effect, we still would not have chosen to gather. Second, because of travel restrictions, I was not able to meet face-to-face with my thesis supervisor and cohort. However, we increased our synchronous meetings via videoconferencing and, as a result, we were able to meet more during quarantine than in previous years. Third, there was increased difficulty accessing print resources from libraries that had instituted COVID-19 policies that effectively limited circulation and interlibrary loan services (for health and safety reasons). Luckily, I was able to get ahold of

resources thanks to librarians who were willing to scan and send select chapters, as well as friends who lent me journals and books from their own personal collections. Finally, to say COVID-19 posed an ongoing challenge to mental health and to the writing and completion of this study would be an understatement. The short- and long-term health effects of COVID-19, particularly for those of us who caught it before receiving the vaccine, and the social and economic disruption of the pandemic on people's livelihoods, healthcare, and food systems are undeniable, but being as we are still in the pandemic, the full impact remains unseen.

Future Research and Practice

Hawaiian methodologies and knowledge systems have been explored and a framework for Hawaiian research and knowledge organization presented in this study. Still, there remains significant opportunity for further understanding, development, and implementation of Indigenous knowledge organization. Research and practice of ancestral and contemporary knowledges will allow for increased breadth and depth within any system seeking to organize and describe knowledge.

Continued consultation with the Kanaka community remains crucial to both the success of the process and the cultural rigor of the resulting system. Discussions with Kanaka scholars and the larger community, and libraries and other cultural heritage institutions, particularly those with significant collections of ʻike Hawaiʻi, remains important to the development, implementation and maintenance of a Hawaiian knowledge organization system. Representation from each island and from various age groups would lend even greater scope. Nevertheless, the dynamic nature of knowledge remains a limitation to this research; this is not to say that it isn't a worthy endeavor rather to the contrary, the work must be ongoing. To this end, consultations and discussions about knowledge systems with Kanaka communities could lead to additional opportunities for relationship building between Kanaka communities, libraries and other cultural heritage institutions that hold (some of) our ʻike. This would be a positive outcome for all involved. Moreover, this process and project could serve as a beacon of transformation within library and information sciences practices, and lead to further systemic change with regard to research practices.

The moʻolelo shared in this thesis presents numerous opportunities to improve the representation and organization of ʻike in libraries. Consistent with the methodological framework used throughout this thesis, these recommendations for future research and practice are supported within the Ao Framework and recognizes both the varying kuleana to knowledge organization and the significance of pilina for, and with, Kanaka research and communities. Further analysis of the Ao Framework as a possible framework for knowledge organization will benefit the development process and ensure the long-term viability of this framework. Among the next stages of development, it will be important, and no small task, to perform a critical examination of possible structures for KO, some examples of which have been presented in this thesis and which warrant further investigation.

Chapter Summary

This study contributes to the fields of Indigenous librarianship and Indigenous studies. As such, it seeks transformation and positive movement for Kanaka that empowers our moʻokūʻauhau, moʻolelo, and lāhui. In responding to a recognized need for improved access to ʻike in libraries, which remain largely colonial institutions, the underlying aim of this research is ea and ao – moving toward a time where we transition from resistance to ea.

This chapter summarized the concluding findings and underlines the theory and practice of Hawaiian knowledge organization in ways that animate Indigenous research methodologies, language, cultures, knowledge, and vision and creates a space for consciousness and empowerment. The study examined Hawaiian epistemologies toward the development of an Indigenous knowledge organization system that centers Indigenous knowledge and the peoples (and lands) that those knowledge systems spring from. We know that our ancestors categorized and gave names to their environment – often placing things in relationship, as exemplified by the Kumulipo. This study – the moʻokūʻauhau and moʻolelo research methodologies utilized and the Ao Framework produced by this study – merely affirms these practices of naming and relationality. Further, the development of a Hawaiian knowledge organization system within libraries seeks to extend this practice.

This cycle of research is coming to a close, and with it this iteration of what a Hawaiian knowledge organization could encompass, nevertheless the development of a Hawaiian

knowledge organization system will continue. This is not the conclusion of the moʻolelo, but a moment in between, just before the revolution of another cycle of ao.

ʻAʻole i pau.

Glossary

This glossary of ʻŌlelo Hawaiʻi terms includes a mixture of definitions from the Pukui and Elbert dictionary (1986) and my own interpretations. I have chosen to arrange this glossary in alphabetical order according to the Pīʻāpā, or Hawaiian Alphabet – A, E, I, O, U, H, K, L, M, N, P, W, ʻ.

Ao: Day, light; life on earth; enlightenment.

Au: Period of time, age, era, epoch, cycle, the passing of time.

Akua: Gods, manifestations of our environment; nature and natural processes; high ranking aliʻi.

Inoa: Name.

Inoa ʻĀina: Place name.

Kanaka: Human, specifically an Indigenous person of Hawaiʻi.

Kānaka: Plural of Kanaka.

Kinolau: physical manifestations or representations.

Kuleana: responsibility, privilege; relational accountability.

Kumu: Source, origin; teacher; foundation, base.

Kumuhana: Subject, topic.

Kupuna: Elder, ancestor.

Kūpuna: Elders, ancestors. Plural of kupuna.

Loina: Protocol, custom, manners, code, law.

Māhele ʻĀina: Land division.

Mana: Power, energy, authority; empower, authorize, privilege.

Mele: Song, or chant of any kind; poem, poetry; to sing, chant.

Moʻokūʻauhau: Genealogy.

Moʻolelo: Historical account, narrative; literature, tradition, record.

Pilina: Relationship, union, connection; relationality.

ʻĀina: Land; that which feeds.

ʻIke: Knowledge; to see, know, experience, understand.

ʻIke Hawaiʻi: Hawaiian knowledge.

ʻŌlelo: Language, speech; To speak.

ʻŌlelo Hawaiʻi: Hawaiian language.

ʻŌlelo Noʻeau: Proverbs or wise sayings.

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Appendix A: Ethics Approval Letter

Ethics Research Committee OUTCOME

Student ID: [redacted] Shavonn-Haevyn Matsuda

Tena koe Shavonn

Tena koe i roto i nga tini ahuatanga o te wa.

The Ethics Research Committee met on 29th November 2018 and have confirmed the following action:

Application EC2018.01.016 APPROVED

If you have any queries with regard to this action please do not hesitate to contact us on our free phone number 0508926264 or via e-mail to ssc@wananga.ac.nz.

Naku noa na Marama Cook» Student Administration - Te Whare Wananga o Awanuiarangi

Appendix B: Participant Consent Form

Consent to Participate in a Research Project
Researcher: Shavonn Matsuda

Project title: *Indigenous Knowledge Organization: Accessing Hawaiian Epistemologies*

Aloha mai kāua!

My name is Shavonn Matsuda and I would like to invite you to take part in a research study. I am a doctoral candidate at Te Whare Wānanga o Awanuiārangi and conducting this study as part of my doctoral thesis. I am asking you to participate in this study because you are a Hawaiian scholar and/or cultural practitioner in Hawai‘i and have valuable experience with and perspectives on Hawaiian culture and research.

Why is this study being done?
The purpose of this study is to examine Hawaiian epistemologies and the research experiences of Hawaiian scholars and cultural practitioners to identify a foundation for a Hawaiian knowledge organization system that could better support access to this knowledge for Hawaiian researchers and better represent Hawaiian knowledge in libraries. The hope is that the results from this study may help libraries and archives in Hawai‘i to improve access to Hawaiian knowledge in their collections and to better support Hawaiian research.

What will happen if I decide to take part in this study?
If you participate in this project, you will be asked to participate in 1-2 focus groups. Each focus group will be approximately 1.5-2-hours. You will be one of about 16 people participating in focus groups - there will be 2 separate focus groups with 5-8 participants each. As part of the focus group, you will be asked about your experience with Hawaiian culture and methodologies as well as your research practices and needs. With your permission, I will take notes and audio-record the focus groups so that I can perform analyses of the responses later. You will have the opportunity to review and provide feedback on how your words are included in the published research findings and any parts that you want to clarify.

Following the focus groups, about 3-5 focus group participants will be asked to meet with me individually for a 60-90-minute audio-recorded interview to gather additional information about your experience with Hawaiian culture and methodologies. The interview will be semi-structured and consist of open-ended questions. You will have the opportunity to review your interview transcript and edit/redact any parts you are uncomfortable with sharing or parts that you want to clarify. You will also have the opportunity to review and provide feedback on how your words are included in the published research findings. With your permission, I will audio-record the interview so that I can later transcribe the interview and analyze the responses.

What are the risks and benefits of taking part in this study?
There is little risk to you for participating in this research project since you will have the opportunity to review and revise the information you share during the interview and review how your words are included in the published research findings. You may become stressed or uncomfortable answering any of the interview questions or discussing topics with me during the interview. If you become stressed or uncomfortable, you can skip the question or take a break. You can also stop the interview or you can withdraw from the project altogether.

Benefits of participation include the opportunity to engage in a reflective assessment on your research process and experience. An indirect benefit is the knowledge gained may inform improvement efforts

for intellectual access to library and archival collections, as well as library services generally, that can help better meet the needs of Hawaiian researchers.

Privacy and Confidentiality:
All study data will be secured in a non-networked folder on a password-protected computer. Only the researcher will have access to the information. Other agencies that have legal permission have the right to review research records.

There are mechanisms in place that allow for your review and feedback the information you share and how your words are included in the published research findings. I also want to provide you with the opportunity to have more agency and accountability over the words you share by giving you the option to waive confidentiality. The option to waive confidentiality is completely optional. If you do decide to waive confidentiality, you will be publically acknowledged as a participant and the interview responses you want associated with your identity will be linked to your name in the published research findings. The responses you do not want associated with your identity will remain confidential by using a pseudonym (fake name) and will not be linked to personal identifying information that could identify you to protect your privacy and confidentiality to the extent allowed by law.

If you choose not to waive confidentiality, your name will not be linked to your interview responses at any time. A pseudonym (fake name) will be immediately applied to your focus group contributions, interview transcripts, and audio recordings. The published research findings will invoke you by pseudonym and will not include personal identifying information that could identify you to protect your privacy and confidentiality to the extent allowed by law.

The study data including consent forms, audio recordings, focus group notes, interview transcriptions, coded interview transcriptions, and key to identifiers will be kept after the completion of the research project and stored as digital files in a non-networked folder on a password-protected computer. After I finish publishing on the research findings from this study, I will erase or destroy all the study data mentioned above.

Ethics Committee Approval Statement
This project has been reviewed and approved by Te Whare Wānanga o Awanuiārangi Ethics Committee, ECA # eg. 09/001. If you have any concerns about the conduct of this research, please contact the Ethics Committee administrator as below:

Contact Details for Ethics Committee administrator:
Shonelle.Iopata@wananga.ac.nz

Postal address:
Private Bag 1006
Whakatāne

Courier address:
Cnr of Domain Rd and Francis St
Whakatāne

Questions
If you have any questions about this study, please call or email the researcher at [redacted] and [redacted]. You may also email the researcher's supervisor, Dr. Mera Penehira ([redacted]), with any questions.

Consent
If you agree to participate in this project, please sign and date the attached Consent Form.

Consent to Participate in a Research Project
Researcher: Shavonn Matsuda

Project title: *Indigenous Knowledge Organization: Accessing Hawaiian Epistemologies*

If you agree to participate in this project, please sign and date this signature page and return it to me in-person or by mail at: [redacted]. Keep a copy of the informed consent for your records and reference.

Signature(s) for Consent:

I give permission to join the research project entitled, "*Indigenous Knowledge Organization: Accessing Hawaiian Epistemologies*." I understand that my participation in this project is completely voluntary and that I may choose to stop participating at any time with no penalty or loss.

Please initial next to either "Yes" or "No" to the following:

___ Yes ___ No I consent to being audio-recorded during the focus groups and interview.

___ Yes ___ No I consent to waive confidentiality and be publically acknowledged as a participant and having a portion or all of my responses linked to my identity in the published research findings, as determined by me.

Name of Participant (Print): _____

Participant's Signature: _____ Date: _____

Mahalo!

Appendix C: Focus Group Guides

Focus Group Guide
Session 1

1. **Welina** [15 min]
    a. Participants introductions – Please briefly introduce yourself
    Prompting questions [Moʻokūʻauhau / Kūlana]
        i. Can you tell us about your cultural practice(s)?
        ii. How did you come to your work?
        iii. How would you like to be described in the research? (kupuna, "cultural expert", etc.)?

    b. Intro to research project
        i. Project goals & timeline
        ii. Participants' role & researcher's role
        iii. Questions or comments?

2. **Activity 1a: Individual Review** [15-20 min]
    Items: Palapala ʻāina; Kiʻi pena; Nūpepa; Wikiō; Mele

    Displayed around the room are examples of items commonly found in library/archives collections. **Drawing from your background, expertise and experiences, think about how you'd describe these items to others or what keywords you'd use to search if you were researching these items or topics.** We encourage you to move around, touch, and pick-up items.

    Use the post-its to note any words that come to mind and stick those to the large pieces of paper next to each item. **We aren't looking for consensus and there are no wrong answers.**

    Questions:
        i. What is it?
        ii. How would you describe it to someone else?
        iii. What would you want to know about it? What's important to know about it?
            1. What does a practitioner need to know about a piece to learn from it?
            2. What does an academic need to know to learn from it? (if any differences here)

3. **Activity 1b: Group Review and Debrief** [15-20 min]
    Let's review the words you came up with –

a. Are there any other words or categories that weren't discussed yet that are important for _____ to be aware of:
    i. your community of practice
    ii. researchers
    iii. your ʻohana

b. Relationships / Hierarchy of Terms
    i. Are there relationships between any of these words that are on the notepad?
    ii. Are any of these important to pull out or represent in order to gain an understanding of the item or topic?

4. **Break** [10 min]

5. **Activity 2 – Group Discussion** [30-40 min]
Items: Physical "artefacts" (e.g. Pōhaku Kuʻi ʻAi); Puke

Place all 3 objects in the center of the table and discuss as a group:

Again, drawing from your background, expertise and experiences, let's discuss how you'd describe these items to others or what keywords you'd use to search if you were researching these types of items or topics.

Identify and clarify any themes that arise to determine possible categories and relationships. Key questions for this part of this discussion:

a. How would you organize all of this information? Are there any patterns in the terms that are there? If so, reflect on and comment on these themes and terms and why you agree/disagree those are important themes or terms.

b. How do you prioritize the information? Are there some aspects that are more important than others?

c. How are you negotiating which pieces of information are more important?

6. **Panina** [10 min]
    a. Recap of session and lessons learned
    b. Next steps in project (what researcher will do between meetings)
    c. Photovoice assignment
    d. Any questions?

Focus Group Guide
Session 2

1. **Welina** [10 min]
    a. Reflection on our last gathering
    b. Overview of session activities and goals

2. **Photovoice Discussion** [30 min]
   Participants use their photos to illustrate and explore the following:
    a. Can you talk about what ʻike means to you?
    b. Are there any bounds to ʻike Hawaiʻi (in terms of content or subject)? If so, describe those boundaries?
    c. What qualifies something as ʻike Hawaiʻi?
    d. What are some of the ways your kūpuna talked about ʻike Hawaiʻi?

3. **Break** [10min]

4. **Present draft fields** [60 min]
   Gather feedback on draft fields – Does this capture what we came up with in our first meeting? Is there anything missing? Are there any that you feel would be most appropriate/helpful for you/researchers?

5. **Panina** [10 min]
    a. Recap of session and lessons learned
    b. Any questions?
    c. Mahalo participants and explain next steps in project (and how findings will be shared with participants and with community).