Care for the Land: Restoration as Interspecies Care Labor and Emergent Activism at the Hawaiian Fishpond-scape

Cynthia Ruimin Shi , '23
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Cynthia Ruimin Shi

Advisor: Professor Alejandra Azuero-Quijano

Swarthmore College Department of Sociology & Anthropology

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Abstract

In the last two decades, environmental NGOs on the islands of Hawai‘i have been leading efforts to restore traditional land practices and foodways, among them fishpond, or loko i’a, which are traditional aquaculture infrastructures that ensure a stable production of fish protein. This ethnographic study of loko i’a restoration projects is informed by four months of fieldwork grounded in participant observation at Paepae O He’eia, a non-profit organization on the windward side of O’ahu heading the restorative effort at He’eia fishpond.

My thesis addresses the ethics of care, labor, and Indigenous worldmaking emerging from ecological and cultural restoration of fishponds that have been neglected and disrepaired due to colonialism and climate disasters. The project explores fishpond restoration at He‘eia to understand their centrality for community building for all beings, for human and other-than-human actors, as well as creating more expansive frameworks of Indigenous sovereignty and activism. By investigating the role and contradictions of environmental “care” practices, I illuminate multispecies collaborative survival, resistance, and Indigenous world-making practices in the age of the Anthropocene.
Acknowledgements

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informants, whose participation, experiences, and insights are paramount to this research. These conversations have so largely transformed my personal relationship to this topic as well as the fishpond landscape. This thesis would not be possible without their stories and reflections. I am grateful for their trust to have them share their vulnerabilities with me.

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In writing a thesis about care, I feel loved and cared for exceedingly. I am a stern believer in the idea of collective caring and relationship-building, a fundamental belief that carried me through this process. This work serves as a testament to the power of collaboration and the profound value of exchanging ideas and dialogues.
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Introduction

I hopped on the 60 bus at 7:00AM amid the urban bustle of downtown Honolulu as I witnessed the election campaigns of Josh Green and Duke Aiona pervading the cityscape of O'ahu. The bus traversed Likelike highway, and I watched as the vibrant metropolis gave way to the lush mountains, dressed in a shroud of morning mist. While on the bus, serendipity struck, and I engaged in a conversation with a stranger. I shared with him my eagerness to learn about Hawaiian culture and that I was interning at a fishpond this summer, to which he replied with genuine astonishment “wow, so you’re going deep into Hawaiian culture!” Upon arriving at Kāne’ohe on the windward side of the island and getting off at Kamehameha Hwy and Ipuka Street stop, I walked through the tranquil and peaceful neighborhood until my eyes fell upon a wooden sign bearing the inscription: kapu, sacred, no fishing. It was only then that the fishpond's visage almost materialized before me. Once I entered the gate and proceeded down the steep hill to get to the base, I was greeted by the mellow chirping of native birds and the cheerful banter of people congregating in the garage. Keahi Pi’iohi’a, our supervisor, amiably circulated amongst the workers, pressing foreheads together in the customary Hawaiian greeting of honi that symbolizes sharing the same breath. And so, commenced a day of restoration labor at the fishpond.

At last, the fishpond unveiled itself to me in all its grandeur, a dazzling monument of tranquil magnificence, impervious to the hustle and bustle of the outside world. Loko i’a, or Hawaiian fishpond, is a spectacular structure and represents a remarkable aquaculture achievement of the ancient Polynesian world. In Chapter 1, I delve into an exploration of the diverse variants of fishponds. However, for the purposes of this thesis, I direct my focus towards
the Loko kuapā (seawall fishpond), which are typically located along the coastline. The structure is massive. Made entirely of basalt rocks and dried corals, the fishpond can encircle up to a hundred acres of brackish (mixture of sea and freshwater) water. Analogous to a “fish farm”, the fishpond’s brackish water environment nurtures indigenous algae, which lures herbivorous fish into the pond. This ancient technological marvel endures the passage of time, thanks to its ingenious architectural blueprint, and its unparalleled communal resource management model. Despite forces of colonialism that have left the majority of the fishponds devastated, over the past three decades non-profit organizations and Indigenous-led movements spearheaded the revitalization of fishponds, as an essential facet of the native Hawaiian cultural and spiritual lifeways.

* * *

Throughout my time in Hawai’i, one of the most common phrases that I heard was mālama ‘āina, or sometimes aloha ‘āina, “care and love for the land”. I became increasingly captivated by this notion that appeared to be everywhere and particularly associated with all endeavors that champion sustainability and environmentalism. Its popularity has even led to corporations like Hawaii Tours, who notoriously and inaccurately portray Hawai’i as a tropical utopia, offering a two-day ecotourism excursion, marketed as “Traditional Hawaiian practices of Mālama ‘Āina”. In part through its ubiquitousness, the idea of caring and caring for the land became the focus of my thesis research. Specifically, this project explores the centrality of care in fishpond restoration projects in Hawai’i and deploys it as an analytical lens to engage in scholarly conversations around ethics of care, labor, interspecies relationality, and Indigenous sovereignty.
Accordingly, my motivating research questions are: What is the role of care work in fishpond activism? What type of “care” relations are generated in the fishpond restoration of He’i’ia? How is human and other-than-human sociality with the environment formed and transformed through multispecies interactions and affective encounters at the fishpond landscape? What sets of relationships between care, and sovereignty emerges from the Hawai’i fishpond movement? What is the relationship between restoration and other modes of decolonial activism in the present?

The object of study for this thesis is not the geography of the fishpond nor the people who engage in fishpond restoration or even the fish themselves. Rather, I study the set of relations that encompasses restoration care labor as well as the social and ecological processes that shape the current cultural landscape of fishpond restoration. I examine how different modes of being, becoming, and relating have become intricately entangled with fishpond restoration as a form of labor, care, and activism. In many ways, my analysis of non-profit-driven restoration also glimpses at the political implications that colonialism and global capitalism have on Indigenous communities as well as the profound complexity of labor at the intersection of all beings and the possibilities for collaborative survival in a precarious world.

**Part II: Keywords and Concepts**

In this section, I situate my analysis of fishpond restoration within an existing constellation of scholarship including Sociology and Anthropology, Philosophy, and Science and Technology Studies (STS). In each chapter of the thesis, I am thinking with a range of scholars who profoundly shaped the formulation of my argument. Here, I present an overview of the theoretical and conceptual frameworks that I critically engage with in my thesis.
Chapter 2 opens with an overview of emerging scholarly attention to the use of the term “biocultural” in the field of ecological conservation and restoration, particularly in Hawai‘i. My description of the types of labor involved in fishpond restoration builds on Sarah Besky and Alex Blanchette’s works on the “naturalization of work” (2018), specifically referring to a process whereby work is perceived as a natural and unquestioned characterization of human and other-than-human existence despite the fact that work is inevitably shaped by social, economic, and political factors. In developing my own definition of “restoration labor”, I find their work particularly helpful for my analysis in the context of ecological labor, where work is portrayed as inherently positive and necessary to maintain the well-being of an ecosystem.

Care

There is a copious amount of literature that deals with the ethics of care, many of which articulates care as gendered (Ruddick, 1995; Fraser, 2009; Federici, 2014), affective (Noddings, 2013), essential yet often underpaid and undervalued (Tronto 2013; Fraser, 2009; Folbre 2001) as well as classed and racialized (Parreñas, 2018; Held, 2006; Duffy, 2011). My project finds its grounding in Marxist feminist scholars who theorize care work as part of social reproduction and capitalism’s accumulation of care (Fraser, 2016). Additionally, I use studies on repair and maintenance as a starting point to see care work in this seemingly routine and unexciting light and recognize the inequality that perpetuates the common narratives around care. My analysis seeks to disrupt and challenge some of these basic assumptions about care.
Although care work as an interspecies problem space is left out from these accounts, I turn to the work of ecofeminist and Indigenous scholars' conceptualization of care to emphasize the interconnectedness and relatedness of all beings (Simpson, 2020; Watts, 2013; Whyte and Cuomo, 2016). Exposing the ways in which colonialism, capitalism, and patriarchy have devalued and exploited both women and nature, this approach seeks to dismantle these systems of oppression through a holistic and relational ethic of care. More importantly, there is a need for collective and community-based care through recognizing that the well-being of people and the planet are interconnected and that caring for one requires caring for the other.

I do, however, follow iterations of care that emphasize the “doing” of care, in other words, the practical labor of care at the fishpond that creates and sustains life. Particularly, care in my discussion calls to attention Tronto and Fischer’s conceptualization of care as a practice: a species of activity that includes everything we do to maintain, contain, and repair our ‘world’ so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all of which we seek to interweave in a complex, life-sustaining web” (Tronto and Fischer, 1990, 40).

This definition, while not explicitly mentioned in later chapters, sets the stage for elements of care such as attentiveness, responsibility, and responsiveness. Their definition, which I find compelling, does not assume that care work is carried out by women over men, nor an all-embracing standard to maintain and repair life. Rather, they understand care as a life-sustaining activity and hint at the contradiction and complexity of care that is decidedly violent and entangled. This ‘messiness’ of care is parsed out in the second half of chapter 3. Nonetheless, what I conclude from this array of definitions is that, in relation to multispecies care at the fishpond, care should not be romanticized as a virtue or individual disposition such as
benevolence and compassion. Rather, care and activities around care are embedded in social relations and have larger personal, social, and cultural implications.

Political Ecology

Whereas care was a huge staple through my work, the fishpond also taught me that restoration is also about power. The last chapter is grounded in the theoretical frame of political ecology to approach the political dimension of care and wrestle with the ways in which power relations shape environmental degradation. I consider fishpond restoration as a form of activism that works within the confines of power relations with the state, corporations, and the ongoing effects of settler colonialism, which leads me to investigate sovereignty in the context of fishpond restoration. Specifically, I look at the works of Audra Simpson (2014), Leanne Betasamosake Simpson (2017), Yarmiar Bonilla (2015), and Juno Parreñas (2018), who provide critical and nuanced examinations of power relations. They examine the ways in which different actors, such as the state, corporations, local communities, and transnational networks, negotiate and contest power over the environment. I build on these scholarly works on issues related to decolonization and sovereignty to develop my own vision of restoration activism that emphasizes the complex and often conflicting power relations that shape the politics of care, often involving the rights and interests of local Indigenous communities. These works highlight the emergence of new forms of governance that challenge the traditional notions of state sovereignty and blur the boundaries between state and non-state actors.
Part III: On Methodology

This research is based on ethnographic fieldwork carried out in Hawai‘i during the summer and fall of 2022, winter, and spring of 2023. In total I spent 4 months interning and participating in a fishpond restoration non-profit organization, Paepae O He‘eia. I participated as a volunteer in regular and community workdays. These duties involved weeding invasive species, facilitating mangrove tree cuttings, learning and helping to stack rock walls, and interacting with community workday and educational groups. My close relationships with the workers allowed me to continue to interact with them even when work ended, which in turn enhanced my sense of community and fishpond care work.

During work, I kept detailed field notes of the activities that we did, encounters, or my interactions on a given day, which I used to analyze in this thesis. I used the winter break to travel back again to Hawai‘i during Makahiki. This time around, I have already sustained a traumatic brain injury, which prevented me from fully participating in the work at the fishpond. However, I still showed up to most of the workday, assisting to the best of my ability and chatting with the workers casually after work. In addition, I visited two other ‘āina restoration projects based in O‘ahu: Papahana Kuaola and Loko I‘a Pā‘aiau. I was given a tour of the site and had the chance to speak to representatives from each organization.

In writing this thesis, I conducted informal interviews with 12 people, 6 of whom are full-time employees at Paepae O He‘eia. The others were current and former interns and employees, as well as workers from Panahana Kuaola and Loko I‘a Pā‘aiau. In addition, I conducted 2 interviews with marine scientists working for the National Estuarine Research Reserve (NERR) of He‘eia. During these breaks, I was able to carry out the bulk of my
interviews. Therefore, most of these interviews were conducted in person and outdoors at the fishpond after work; the remaining were done over the phone or Zoom.

Thanks to Paepae O He’eia and their generosity, I was able to access archival documents that hugely informed my historical understanding of fishponds. These are documents written by anthropologists in the 20th century about the archaeology and mythology of the fishpond. Lastly, I also examined documents specific to He’eia fishpond management. Access to these historical documents allowed me to analyze, in the first chapter, the transformation of the fishpond landscape and management of the He’eia fishpond in both pre-and post-contact Hawaiian history. I noticed that the perspectives from early archaeologists, ethnographers, and anthropologists are narrow and limited. My work, centering the voice of my interlocutors, aims to poke holes in these narratives by honoring and constructing a different past, present, and future of He’eia fishpond, and attending to perspectives that emphasize relationality and collaboration.

*Multispecies Ethnography*

My journey began with my enthusiasm and concern about other-than-human species and the fascinating cross-species intersections, which are characterized by the recent turn to multispecies ethnography. In anthropology and related fields, scholars turned to explore the ways through which nonhumans participate in aspects of human life and problematizing human exceptionalism and the ontological separation of human and animal, nature and culture (Livingston and Puar, 2011; Latimer and Miele, 2013; Ogden, et al. 2013).

Kirksey and Helmreich (2010) introduced the term “multispecies ethnography” to describe the studying of “the host of organisms whose lives and deaths are linked to human
social worlds” that “centers on how a multitude of organisms’ livelihoods shape and are shaped by political, economic, and cultural forces.” Even though the turn to multispecies ontologies seeks to break down the separation of nature and culture, theorists are also challenging and rejecting the term, proposing alternatives such as “anthropology beyond humanity” (Ingold, 2013), and “anthropology of life” (Kohn, 2007) to encompass all beings and relations in meaning and worldmaking, by avoiding to conform with the categorization of beings based solely on the Western taxonomy of “species”. While I see my project aligned with these critiques of the use of the term “multispecies”, throughout the thesis I still adopt the use of the term. And because of the problems with its connotation, I am markedly more attentive to the agency and relationships of other-than-human entities that are traditionally excluded from the Western and scientific classification of living beings.

Fundamentally, this thesis contributes to the larger discourse around interspecies relationality by refuting anthropocentric assumptions about care and constructing a social life that comprises a complex assemblage of beings and bodies. The work of Donna Haraway is an invitation to “becoming with” (2007), a concept she developed to describe the process of co-constitution and transformation that occurs in interspecies relationships. I return in greater detail to this idea and its implications in the last chapter on activism.

Aside from these theoretical projects that shaped my understanding of the subject matter, Marianne Lien’s (2015) work on salmon domestication guided me to pay close attention to the limited yet expanding methodological toolkit for ethnographers. Thus, I hope to respond to Marianne Lien’s exhortation to probe our conventional ethnographic practice and explore what it means to be situated in non-human beings. While I aspire to Lien’s endeavors to create “embodied communication” as termed by Vinciane Despret (2013), the scope of this project
extends beyond just humans and fish at the fishpond. Through observations, participation, and conversations, I paid attention to the interactions practitioners have with nonhuman actors at the fishpond in order to understand the social and ecological processes that shaped restoration. To study other-than-human beings, I sought to be a part of other people’s lives and discovered new ways of knowing and relating in this world.

Through these engagements, I learned the importance of existing in a new place: I learned about the ways workers and other entities support each other through their arduous labor and life, and how they push back against legacies of colonialism through care and make possible certain relationships and ways of life. I learned to slow down. I find myself spending time sitting on the fishpond wall watching fish move, listening to birds chirping, reading the clouds, observing the tidal movement, and so on. By doing so, I became attuned to the possibilities of responding and acting to the immaterial forces that created the fishpond landscape. By doing so, this thesis adopts a praxis that subverts the historical exclusion of ontologies. I do not de-center the humans in my work, but I take all social and environmental contributors, knowledge producers, and relations into serious considerations

_Situatedness_

My educational, social, and cultural upbringing extensively shaped my own standing, and during fieldwork, I also paid special attention to power, including my own. Throughout my academic journey at college, I have had the opportunity to take several courses in food and environmental justice. Not only did I start engaging more critically with Environmental Justice, Indigenous studies, and critical race, gender, and sexuality studies, but through these courses, I made
connections with different campus partners that eventually led me to receive a fellowship grant from the Office of Sustainability that allowed me to travel to Hawai’i. My keen interest in learning about Indigenous food systems and sovereignty movements led me to the fishpond and Paepae O He’eia. Yet I must also acknowledge the privilege that being a student at a private liberal arts college has granted me and confront the colonial experience that enabled this work.

At the time, I had not applied for research approval from the Departmental Research Committee (DRC) and was not able to conduct any formal research. Instead, I used the summer to fully immerse myself in the work of the fishpond while actively participating in activities that deepened my understanding of the Hawaiian language and culture. Throughout my internship, I kept a page of weekly journal reflections on top of documenting my day-to-day experiences, observations, and feelings. The work during summer exposed me to all facets of the restoration projects including non-native plant removal, dry stacking rock wall, taking part in various off-site field trips and work projects, leading educational programs, and participating in ritual activities.

My summer experience did not simply inform my approach to the thesis in meaningful ways, and it also granted me access to the community. Towards the end of my internship and during my fieldwork, I am beginning to develop a strong and close rapport with the workers, resembling a certain ‘ohana (family) feeling. Much of the nuances I gained are not through my summer experience, but rather spending an intense amount of time with workers directly during these school vacations that I was able to travel back. The workers are collaborative, open, and extremely passionate about their restoration work. I explore all different aspects of their labor, not to sympathize with or demonize the work, but to understand them better.
I am keenly aware of the coloniality and politics of mobility as this project was made possible by my ability to move freely across the globe. Engagement with species like mangroves, even further requires me to question: how do species move across space? What and how do they contribute to the landscape? When I looked back at the journals, they showcased my struggles to fit in and to keep up with the pace of the work as an Asian, middle-class international student who grew up in China. I had no previous exposure nor connections to Hawai`i.

Notwithstanding, when my interest in food, farming, archaeology, and mythology all brought me to one place, my uneasiness around my own identity began to disperse, and I am starting to understand also a bit more about myself and where I am situated not merely in the research, but the larger fishpond landscapes. Even though this thesis is to spotlight and celebrate the resilience of Native Hawaiian communities in the restoration of the fishpond, other ethnic groups who are displaced and exploited under colonialism and share the same history of oppression under capitalism also instilled their energy into the space. In the research process, I am slowly finding myself in place-making, having been welcomed by the ‘āina and her people.

The diversity not only made up complex social relations on the Islands but created extraordinary synergy for communities to strive for independence from an import-heavy food economy and for the resurgence of culturally relevant and significant food production. Over time, I solidified my own care for the land and the people. My ability to also connect with myself, my history, and my ancestors left me feeling grateful and energized.

Simultaneously, I was able to study from without and within; learning about others as well as myself. I situate myself in relation to my interlocutors and the landscape to recognize that there are no universal truths about human experience and that knowledge is constructed through and embedded in social and cultural contexts. My own engagement with other non-human
entities in a distant place is also crucial for producing ethnographic accounts that are particularly sensitive to the complexities and nuances of human experience.

**Part IV: Structure of Thesis**

Chapter 1 is an introduction to the historical and physical landscape of the fishpond and its development in Hawai‘i. I provide contextual information about the functionality and operational mechanisms of fishponds in general, as well as the management changes and development of He‘eia fishpond. This historical analysis offers insights into the special position that this cultural artifact has in the Hawaiian consciousness that motivates restoration projects nowadays.

Chapter 2 analyzes the politics of biocultural restoration in Hawai‘i by examining a particular fishpond restoration project at He‘eia. I introduce the concept of restoration labor and the hard work associated with ‘āina restoration projects, both on a personal level and organizational level.

Chapter 3 focuses on the different facets of care work in fishpond restoration. I first provide a brief literature review of the ways that care work is conventionally conceptualized. Then I move into care work at the fishpond that challenges these traditional narratives around care. I draw on Donna Haraway and Maria Puig de la Bellacasa to show the multispecies care work as well as the violence associated with care that is often neglected.

The final chapter of the thesis moves into the terrain of activism and sovereignty. I present care work at the fishpond as a form of silent activism, exploring the meaning of radical care as justice and righteousness. Through rituals and collective care, I develop a notion of sovereignty that is “non-sovereign”.
Chapter 1 – Past and Present of Loko I’a

In this chapter, I delve into the dimensions of loko i’a, or the fishpond as a Hawaiian environmental institution, and trace the history of development since ancient Hawai’i. I introduce the architectural characteristics, function, and basic operational mechanisms of a fishpond, as well as discuss the social, political, and economic significance of fishponds in pre-contact Hawai’i and how they continue to illuminate certain aspects of contemporary daily life. This historical analysis casts light on care-work at the fishpond and how care was carried out and built into their functioning. These discussions are also part of the tumultuous and violent history of colonization and annexation of the Hawai’i Archipelago.

Part I: The Physical and Cultural Landscape of Fishponds

1. Different types of fishpond

Using archaeological survey analysis of prehistoric Hawai’i, William Kikuchi categorized fishponds based on four basic types: loko i’a kalo, loko wai, loko pu’unoe, and loko kuapā (Kikuchi, 1976). Loko denotes inside and interior or it can also refer to a lake, pond, pool, or any enclosed body of water. The second half of the word denotes the characteristic feature of the specific type of fishpond. The classification is largely based on the geography as well as the agricultural and architectural features of the fishpond. For instance, loko i’a kalo integrated the cultivation of kalo (Hawaiian taro plant) that is irrigated by freshwater in uplands with a limited amount of fish added. It was speculated that the originators of this practice observed how well fish did when they were introduced into the fresh water, and, thanks to the pruning of certain
fish, how kalo were able to grow with fewer pests. Since kalo are planted in mounds that left channels of the stream for fish to swim, fish are also able to feed on the insets and over-ripen kalo leaves that fall into the water. Already, a community and ecosystem of fish and kalo have emerged from the ingenious utilization of lo’i wetland irrigation technology and loko i’a aquacultural innovation.

He‘eia fishpond, which is the focus of this project, belongs to the type called loko kuapā. Kuapā in Hawaiian means fishpond rock wall, which represents the special feature of loko kuapā: it is usually located in shallow shoal areas along the coast, enclosing the pond with rock and coral walls. Loko kuapā is considered one of the greatest aquaculture achievements in Ancient Hawai‘i as it does not rely on natural environmental features of the land, but instead, the rock has been entirely manually constructed by human laborers. Since the beginning, the fishpond landscape already combines both natural and human-made features that made it so prominent and unique.

Ancient Hawaiians were attuned to the attributes of the environment to allow them to put these aquacultural infrastructures in place. Archaeological surveys of prehistoric Hawai‘i suggest a positive correlation between the location and operational size and type of the loko i’a. More specifically, favored by Ancient Hawaiian architects were locations near shores protected by patches of coral reefs or inland places that have natural bodies of water or barrier beaches that have trapped bodies of water behind them. Most of these places are also in close vicinity to sources of freshwater. In this sense, the construction of a fishpond is the ultimate demonstration of the utilization of the surrounding landscape.
2. Functionality and operation mechanics of loko kuapa

Most of these ponds are found on the island of Oahu, where the pond-building technology originated. Aerial view of the kuapā fishponds is magnificent as they are typically constructed along shorelines and close off a bay or stretch out the shore to form an arc. Construction of the kuapā can last for over a year and calls for a large workforce. The three main features of a kuapā fishpond include the kuapā (seawall), mākāhā (the sluice gate), and hale kia’i (house of guardian), each of which plays a vital role in the healthy functioning of loko i’a and in unison creates the unique ecosystem that allows human and non-human entities to thrive.
The sizes of fishponds vary from a few to hundreds of acres. For example, in the archeological survey that McAllister conducted in 1933, he notes that the length of the wall of a fishpond ranges from a few hundred feet to several thousand. The average width of the wall is around 5 feet with a height of 3 or 4 feet so that the wall will not be submerged by high tides. The wall separates the seawater and stream from the inner pond water but is loosely constructed so as to allow water to seep through and move in and out without stagnating the pond. Rocks are used to build the two sides of the wall, which is then filled with coral and coralline algae in the middle. The top of the wall is usually labeled as a walking pathway to the hale and mākāhā for the kia’i.

Figure 3: Kuapā of He’eia fishpond. Photo by the author

The mākāhā is considered the most distinctive and unique feature of the Hawaiian aquacultural food system. If one looks up the meaning of mākāhā in a dictionary, they would be given the definition: “outlet; sluice gate in a fish pond”. In conversing with fishpond
practitioners who introduce people to the space, the word breaks down to maka and hā. One of my interlocutors rendered a remarkable interpretation of hā and its implication for the function of the fishpond. He explains that hā is the breath one takes. Water movement is affected by the moon cycle and the tidal pattern resembles the act of breathing in and out of the pond. “That’s the basis of life in this pond”, and the intake of fresh and saltwater, regulated by the mākāhā, breathes life into the pond. The sluice is an intentional opening in the wall where the gates sit on slots on the side for them to be raised and lowered.

Mākāhā is thin wooden sticks lashed together upright with roughly half to a 1-inch gap, just small enough for infant fry to pass through. The calm condition and naturally grown algae from the pond lure these fish from the open ocean. The mākāhā allows small herbivore fishes like ‘ama’ama, awa, pualu, palani, āholehole, and moi, all of which are culturally significant and have been consumed as essentials of the Native Hawaiian diet, to be nourished in the pond because of the nutritional algae and brackish (mixture of fresh and saltwater) environment. In Chapter 4, I will further explore the water and ecosystem of the fishpond that created the optimal condition for fish. They are places where matured fish congregate and wait to be harvested by scoop nets. In the case of the He’ea fishpond, the mākāhā is a structure that requires regular maintenance, cleaning, and even replacement as the wood decays.
Oftentimes one finds a wooden house structure near each mākāhā called hale kia’i. Hale is the Hawaiian word for house. The ones found at fishponds are open, lashed together with wood, and thatched with dried plant leaves. The work of kia’i in ancient times entailed the daily maintenance of the pond, guarding the wall against any human and animal poachers, stocking,
and harvesting the fishpond. Harnessing the energy of the ocean, the pond uses a self-cleaning system from utilizes the tidal action as a natural circulatory system to wash out sediments, then the kia’i’s work narrows down to regulating and operating the condition of the pond, which includes washing and raking the silt and making minor repairs to the mākāhā. The kia’i is extremely knowledgeable, likened to “that of any doctoral degree in fishery biology and management” (Kikuchi, 1973). The ike, or knowledge, is passed down through generations and is highly respected and honored. A good chief took good care of the land, the sea, and his people, and he and his people were rewarded with bountiful crops raised by the farmers and multitudes of fish caught by the fishermen. In times of plenty, everyone is well. The principle of sharing continued to be practiced by the commoners long after the introduction of foreign economic practices. Once built, the walls of the fishpond had to be cared for. To take proper care of a fishpond meant that the walls had to be kept mended and from time to time any debris that might have accumulated in the pond had to be cleared away and the old limu removed. When these duties needed to be performed, those who shared the products of the pond were the ones who worked together on its maintenance.

Nowadays, this daily maintenance of the fishpond is still a part of the care work that gets carried out, as the requirement to care and maintain its functionality is designed into the pond’s operation since the time of its invention. However, as I shall argue in the upcoming chapters, the care work at the fishpond takes on a much more complex form and meaning in the present-day progress of restoration. The shift in meaning is an inevitable response to forces of settler colonialism and capitalism that have largely transformed the social and political landscape of Hawai‘i.
3. Symbolic Role of Fishpond in Precontact Hawai‘i

Anthropologists in the archaeological and linguistic world have long been intrigued by the geographic isolation of Hawai‘i Archipelago and their interactions with other major Polynesian groups and the continents since it is located 2,500 statute miles away from any other land mass (Miller, 1986). This special geographic attribute led them to speculate their exceptional co-existence with the surrounding natural environment, particularly the ocean. Complex fishpond and other incredible aquacultural achievements are no doubt the culmination of knowledge and expertise from an assemblage of skillful architects and builders and accomplished farmers and fishermen that characterize the lifeway of ancient Hawai‘i.
Yet, one has to acknowledge that the primary function of fishpond in precontact time was not for commerce or communal consumption for maka‘ainana (commoners). The ponds were rather utilized for the royal ali’i, or ruling chief, as a steady source and provision of fish protein. In absence of a monetary system, fishponds have been considered an elaborate exhibition of wealth that is represented in the form of acquisition of land and how much food is being produced. Moreover, fishponds play a crucial role in the social organization and political and economic system in precontact Hawai‘i. The power that the ruling the ali’i has over his people was physically manifested through fishponds. The sheer size of the labor force that is required for the massive construction of a kuapā fishpond serves as an indication of the great social organization. On the other side of the coin, their magnitude also often puts fishponds at the center of warfare and political strife and violence. Not only do they play vital roles in showcasing and concreting the status of ali’i, they are also at the center of destruction as a result of war and over intensification of the productivity of the land. For the ali’i, fishponds are a physical and visual display of his power along the shoreline and attracts him.

Destruction of fishponds during warfare disposed of fishponds to civil reconstruction projects to repair them. For instance, cited by Kamakau, restoring three large ponds in Kalepolpo, Haneo‘o, and Kiholo were the three large ponds under Kamehameha that required over ten thousand individuals (Kikuchi, 1976). In exchange for their labor for maintenance projects, many individuals and families relied on these community projects to obtain fish. Communal work created a network of procuring food by which maka‘ainana could benefit from their work. Additionally, conservation of natural resources was a result of the political and economic importance of the fishpond to the community. Food kapu was instituted to restrict access to certain species and number of fish both in the pond and in the open water in order to
protect them during spawning season and ensure sustainable food from year to year. Under the same kapu system, in addition to the ali‘i, konohiki and haku-‘ohana were co-managers of the pond, according to Kikuchi. Konohiki can be compared to a land superintendent. They oversee day to day operations and coordination of property, manage the health of water and land units, and make fair distribution of resources, and aquacultural and agricultural products in the land division, ahupua’a (Clifford, 1991).

Since the inception, fishpond landscape is entangled with not only the politics that governs the islands, but the complexity of community interactions that contains forms of power, control, violence, but also stewardship, collective responsibility, and restoration. It is important to note that the socio-cultural significance of fishponds for contemporary restoration projects have transformed and they define their own meaning of fish ponding practice in response to issues and the social environment that they face.

**Part II: A Cultural History of He‘eia and Its Fishpond**

1. *He‘eia Fishpond*

He‘eia fishpond is among the four major remaining fishponds found on Oahu, and one of the largest and in best condition. Highly visible from Pali and Matson point because of its relatively unaltered condition amidst urban development in the area, it is located on the Southern part of Kane‘ohe Bay and sits east of Kamehameha highway. He‘eia stream flows into the pond from the Northern to the Southwest of the wall.

While most of the other fishponds are either built in a straight line or a semicircle, the He‘eia fishpond’s kuapā forms a complete circle around the fishpond, with a wall on the inland
side next to Kamehameha highway, enclosing 88 acres of brackish water. The perimeter of the pond is measured to be 1.3 miles. Portions of the wall are constructed in a straight line whereas some other fishponds have mostly curved walls. Around the wall sit seven mākāhā, four on the seaward makai side and three along the makua He’eia stream, regulating the balance of salt and freshwater input of the pond. Due to the fully circled wall, He’eia fishpond requires even greater amount of care and attention as any other. Breaks in the wall would have to be mended in a timely manner as it can impact the water level of the pond.

On May 2, 1965, a heavy rainstorm hit the windward side of the island and affected the Kane'ōhe Bay area, including He’eia, severely. The storm ruined homes in several ahupua’a and caused devastating floods that also caused the He’eia stream to flood. The flood was so forceful that water rushed across the pond and broke the wall on the seaward side (Mertz, 1976). The puka (hole) was fixed in a community effort in 2015 that will be discussed later. Other physical damage to the wall was fixed temporarily by Mark Brooks and volunteering efforts in the 1990s, before the founding of Paepae O He’eia.

He’eia fishpond, like many others, have gone through transitions of ownership and management. Kamehameha I purportedly worked on the fishpond to provide food to his supporters when he first established his government. The land of He’eia has always been considered belonging to King Kamehameha, but through family interest in the area prior to the Great Mahele, a land division act that I shall discuss later, Chief Abner Paki was awarded the ownership of He’eia ahupua’a. Daughter of Paki, Bernice Pauahi Bishop, inherited the land. After the death of Bernice Pauahi Bishop, her estate was passed to Charles Bishop and four other trustees. By provision of her will, Kamehameha Schools for children with Hawaiian descendace
was established. Therefore, He‘eia fishpond is legally under the jurisdiction of Kamehameha Schools/Bishop Estate.

Since the early 1900s, there are mentions of three Chinese people who operated the pond: the Au family, Hee Kwong, and Hee Kwong’s son (Kelly, 1975). They leased the pond from He‘eia Agricultural Company which was formally He‘eia Sugar Plantation leased from the Bishop Estate. The Lease was given up during World War II due to the shortage of labor and the high cost of operation. How Yee Hee operated the pond was very similar to how it would be traditionally. For instance, Hee monitored the aquatic condition of the pond, such as proliferating the algae, a food source for fish, controlling the salinity, sediments, and temperature of the pond. Hee prides over the sweetness of mullet that came out from He‘eia fishpond because of the work he put in to keep the pond water clean. Past owners also attested to the amount of work that is required to maintain the operation of the fishpond from catching, transporting, and stocking the pond with small fry to harvesting fish with skill and good timing. Makaha have to be lowered and raised based on tidal actions. As detailed above, repairing the wall constitutes a large part of the work at fishpond, He‘eia fishpond is no exception. Yee Hee contends that it requires two people year-round and at times outside the family to maintain.

Others, however, chose to be more innovative with their approach. Documented in detail in the Honolulu Star-Bulletin in January 1932 by Gwenfreed Allen. Excerpts from this newspaper article points to an effort of increasing productivity and lowering the price:

Hau Hee, McKinley is trying to turn hit-or-miss methods into a scientific study of fish and bring the keeping of fishponds up to the level of the keeping of cows or chickens or any other kind of livestock…Hee has inaugurated several methods different from most of those in use elsewhere on Oahu. He has divided the pond into small divisions for various purposes, he feeds the baby fish instead of allowing them to hunt feed for themselves, he catches the fish only at certain seasons of the year, and he follows a marketing scheme in an attempt to take advantage of the best prices… The secret of a successful fishpond. Hee feels, is to
produce fish more cheaply…His pond could hold 10 or 15 times more fish than are now in it, with little additional production cost, but he is unable to get fish enough to stock it by the usual methods of relying upon natural propagation and replenishing the stock through transfer of young fish caught along the seashore…He also hopes to experiment with the artificial incubation of mullet eggs during the spawning season which is now in progress.

Hee also widened the wall, filled in certain spots with dirt, and planted Hau trees to prevent erosion. According to Hee, one of the obstacles in operating a fishpond is the cost, and the statement holds true in today’s operation. “I don’t know about deep sea fish, but there are many expenses to fishponds that most people don’t realize, including rental, taxes, and the upkeep of the walls. The price has been so low this year that we have lost several thousand dollars, but we hope that we will be able to make money next year.” It seems as though that Hee first piloted a model of operation that is somewhat similar to the non-profit today by employing 5-12 workers to assist the daily function of the pond. Hee fully realized that in addition to caring for the fish of the pond, there is constant work in just keeping the fishpond.

Figure 6: Aerial view of He’eia fishpond. Photo by Pacific Worlds ¹

¹ More information can be found on: http://www.pacificworlds.com/heeia/native/native1.htm
2. Fishpond Spirituality and Storytelling

Mo’olelo, or stories, are told and retold at the fishpond as they establish protocols and instill spirits to a place that is central to Hawaiian culture. Generally to fishponds, there is a spiritual shape-shifter mo’o. They are also referred to as kia’i, which means watch guard. Specific to the He’eia fishpond is Meheanu. According to the mo’olelo, she inhabits an area of land called Luamo’o. Meheanu can take the form of a lizard, ‘ama ‘ama or eel. Oftentimes, people find hau trees that shelter the home of Meheanu, and depending on the color of the hau tree, Meheanu can change into different forms.

Meheanu is not the only kia’i of the pond. There are other stories told about beings who reign in the ocean. A fascinating story that often gets the attention of students is that of Lupe-Kia’i-Nui. I was able to find a version of the story archived by the fishpond:

The konohiki (overseer) of He’eia fishpond knew that he needed to solicit the help of a squadron of stingrays (hihimau) that lived at Kekepa Island, near Mokapu, to watch over his fishpond. He paddled his canoe out to the island and prayed to the god of the hihimanu, “oh hihimau akua, I need your guardian serviced, I need you to help save my crop of ‘ama ‘ama (mullet). The kaku (barracuda) and ‘aihue loko (pond robbers) are stealing me blind! I will do anything to get your help.”

“Anything?” the voice from above bellowed as the konohiki bounced around in his little canoe.

“yes, anything,” he replied

“I want you to promise me that your fishpond will always be a fishpond and will always be a fishpond for your children and their children to come forever,” the voice resounded “ae, ae.” The konohiki answered. “yes, yes my fishpond will be a monument to the genius of my people forever!”

With that, the water started to churn and spin the canoe around as hundreds of hihimanu in the water rushed around and glided in a circle around him. The canoe spun around and around as he was dizzily sucked into the darkness of the wiliwai (whirpool) that consumed him.

When he came out of the whirlpool, the kohoniki was being pulled across the bay by a large hihimanu which was flying in the sky like a kite (which it resembled) the kite string, made of olona, was over a milke long. This special hihimanu was the legendary Lupe-kia’i-Nui, the super watching stingray.

Because He’eia fishpond was one of the largest ponds along the shore, it needed a special stingray to dwell there. That is why Lupe-Kia’i-Nui, the super stingray, was assigned to
At times, Lupe-Kia’i-Nui would visit his friends and family at Kekepa. He would wing his way between the reefs and coral heads. When returning, he would fly over the wall into the fishpond. Lupe-Kia’i-Nui would slash human pond robbers to death with his whip-like tail and tow the human carcasses to his mano (shark) friends that lived at Ko’amano reef, a short distance from the pond. After stripping flesh from the bodies, the sharpks would bury the bones from the ‘aihue loko in shallow holes along the sandy shore near the mouth of He’eia stream, Fisherman knew that this area was a good source of human bones to make their fish hooks. To this day, the word of the konohiki has been kept to the hihimanu akua. He’eia fishpond is still a fishpond. At times during the year, the waters of the pond will sparkle and glow in the night as it is whipped and lashed by the legendary hihimanu chasing kaku. Sharks still live at Ko’amano reef, bones of the ‘aihue loko are still being found at the mouth of the stream.

Figure 7: story of Lupe-Kia’i-Nui on print. Illustration as found at Paepae O He’eia. Author unknown

These stories were passed down to me during the first few days at my internship and are often told to K-12 educational groups that come to learn about the fishpond. Religion is essential to the conservation of resources at the pond. Morals behind a lot of the mo’olelo is how to conduct oneself to steward resources of the community. Spiritual beings in the stories hold people
accountable for managing their sacred resources with care. Spiritual beings reside in land and water and instill life into them. Native Hawaiians live in harmony, respect, and aloha (love) with these spiritual essences.

![Hau flower](image)

Figure 8: Hau flower. Photo by the author

3. **Kane‘ohe bay**

Kane‘ohe Bay is undoubtedly among some of the most fertile and productive land areas on Oahu. There also seems to have a balanced ecological system, irrigation system, and intimate
relationship Hawaiian farmers had with their land. There was a highly developed water system for fishing and aquaculture along the shore with fishponds, producing high quantities of fish protein (Devaney et al.1982). The land practices enhanced the environment and did not result in destructive changes.

Agricultural practices shifted largely across Oahu and Kane‘ohe Bay. Agriculture commercialization bears heavy responsibility to the land-use in He‘eia and Kane‘ohe Bay, with sugarcane, rice, and pineapple cultivation at the forefront of foreign plantations in the area, replacing traditional kalo (taro) cultivation inherited from ancestors. Traditionally, in the area, the bay possesses desirable conditions for kalo cultivation as the region was rich in soils, water supply, and had a suitable climate. Further, the kalo cultivation in Kane‘ohe followed a traditional method of irrigation based on ‘auwai (ditches) that channel fresh water to lo‘i (wetland) patches. While small patches of kalo cultivation continued throughout the 1900s, they were reported to be visibly replaced by sugar and rice plantations (Devaney et al., 1982). These changes in land translated into loss of fishery resources of the He‘eia fishpond as the ecosystem of the wetland, water, and fishpond are intimately connected.
Figure 9: Aerial view of Kane’ohe Bay. Photo by Cory Lum/Civil Beat

Figure 10: Partial map of O‘ahu. From Google Map
Chapter 2: The Labors of Fishpond Restoration

As we glimpsed into the historical past of Hawaiian fishponds and the immense efforts to design, construct, utilize, and maintain the fishponds in prehistoric times, this chapter pivots to the present and future milieu where the labor of restoration goes beyond the mere reinstatement of the physical landscape and functionality that align with the past. Rather, it reveals that the present-day restorative efforts look vastly distinct from the system of management that existed in pre-contact Hawai‘i as the meaning of work and labor has undergone significant transformations in light of the social, environmental, and political climate in the 21st century. I aim to situate the politics of restoration by presenting current and emerging scholarship on biocultural restoration. While acknowledging the efforts to challenge the paradigm of fortress environmentalism, I bring attention to the omission of the critical component of labor. Thus, I aim to contribute to the scholarship by emphasizing the necessity of acknowledging the labor and hard work that underpins biocultural restoration efforts.

Part I: Conceptualizing Restoration

The night before the Summer Solstice Ceremony, I sat around a small fire pit with Uncle Keli‘i, as we affectionately call him at the fishpond, while he was interviewed by another summer intern for her internship report. Keli‘i Kotubetey is one of the founders of Paepae O He‘eia, a non-profit organization seeking to restore the fishpond, and its current Assistant Executive Director. I listened attentively to Uncle Keli‘i’s account of how Paepae o He‘eia was founded; much of the information, he said, could be found on their website. Yet, as he pondered and
chuckled when I asked him about the mission of the organization, he shared an amusing story nowhere to be found on the web:

When there were the first eight of us or the eight individuals, we were all just sitting around in a room at a house. Down the coastline we had a retreat, and we said, Okay, we know we want to rebuild the fish pond, and we want to use the fish pond. But we need to have a vision statement. That's what they say. Organizations need to have [a mission statement]. So honestly, we put a bunch of words that we liked, and on a sheet of paper. And we said, “Okay, we all want to work with the community. We all want to do education. We want to do something that's sustainable because that's what fishponds are.”

We need to have a vision statement. That's what they say. They distilled and refined the statement throughout the years, but eventually the founders came up with a vision for Paepae O He’eia: “to perpetuate a foundation of cultural sustainability for communities of Hawai’i through education,” with a mission “to implement values and concepts from the model of a traditional fishpond to provide intellectual, physical, and spiritual sustenance for our community”. At the time, it seemed like a far-fetched idea to have the entirety of the fishpond restored as the wall was covered in mangroves, with a big opening in a section of the wall, and no other organizations had managed to fully restore a fishpond before.

Paepae’s vision to feed the community through education encompasses a range of activities. Even though the restoration of the fishpond was noticeably excluded from the original mission and vision statement, for workers at the fishpond Paepae’s mission entails, first of all, a commitment to hard work and labor, the main focus of this chapter. This brings me to the questions that guide this chapter: what kind of work makes ecological restoration of Hawaiian fishponds possible and prominent? How do these practices relate to cultural practices and activities? When restoration fades into the peripheral, what does it suggest about work and labor?

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2 Today, Keli’i sees Paepae’s mission still fits how the organization operates as well as how it is increasingly moving in the direction of growing food alongside the restoration of the fishpond
Based on my own ethnographic encounters with Paepae O He’eia, including working for them as a Summer intern, in this chapter I focus on the concept and practice of “restoration labor”. Often shouldered by non-profit organizations, I analyze how fishpond restoration encompasses various kinds of labor that I call “hard work”; including the unremitting effort to sustain cultural practices that enable ecological restoration. The basis of my argument is that restoration is a kind of work that we often do not treat as labor even though it consists of considerable expenditure of physical energy and labor-time. I argue that restoration is “hard work”, a concept which I develop to emphasize an overlooked and under-examined aspect of ecological restoration.

I use the notion of “hard work” to emphasize the convergence of both physical and emotional labor for fishpond workers, alongside the organizational work of setting up and operating institutions. To further elucidate the concept of “restoration labor”, I pay special attention to the untold story of their undercompensated, undervalued, misunderstood, and grueling physical labor from an embodied perspective. Beyond the labor involved in starting and operating a restoration organization this involves all the ways in which individual practitioners within the organization work to reimagine their relationships with the fishpond landscapes. Ultimately, the bodily and exerting nature of the work – which I initially found hard to keep up with – prompts me to return to the question, why do people stay committed to and keep performing the hard work of restoration labor?

1. *The Politics of Biocultural Restoration in Hawai’i*
Even though in literature on Hawai’i sustainability, scholars are occupied with the vast biodiversity that the Islands contain, where both conservation and restoration hold the potential to become a large enterprise (Cabin, 2013), I focus on the landscape of Hawai’i as the Island emerged as a widely recognized model for ‘biocultural’ restoration (Winters et al., 2022). A recent edited volume “Biocultural Restoration in Hawai’i” reflects conversations, from theoretical to practical and empirical, among Kānaka ‘Ōiwi (Indigenous Hawaiian) scholars around the current dynamics of the socio-ecological resource management and restoration projects and networks. The editors provided a overview of the meaning of ‘biocultural’ that characterizes the approach to restoration in Hawai’i:

The term ‘biocultural’ recognizes humanity as part and parcel of the environment. We are not from another planet. In an esoteric manner that is true to some words, ‘biocultural’ is an etymological and epistemic step towards recognizing symbiotic relationships between societies and environment in the real world…The term recognizes that even as humanity shapes the environment, the environment shapes us. It also helps us recognize that those who have developed a long-term experience of ‘relationship with place’ may help root us back to our home and guide us in living on this planet in a more just and sustainable way. (Chang et al., 2019)

The definition of ‘biocultural’ above orients us towards restoration as more than just an act of repair to the damage ecological condition and systems. Emerging out from the landscape of Hawai’i is the growing awareness of how to deliberately break the dualistic thinking that is predicated on the Western separation of culture and nature. How this cognizance of the crucial interplay between culture and nature plays out in Hawai’i is multifaceted. For instance, biocultural restoration encompasses not only the rehabilitation of once-abundant natural resources, but also the cultural re-fulfillment of generational Indigenous Knowledge and rejuvenation of care strategies (Kurashima et al., 2018; Morishige et al., 2018). Ultimately,
biocultural restoration takes into account a set of practices that offers repair to the ethos of the human-nature separation that engendered the destruction of the environment in the first place.

For fishpond restoration projects in particular, we noticed that, as laid out in Chapter 1, aqua- and agri-cultural achievements in Ancient Hawai’i are seen as emblematic of the convergence of nature and humans. For instance, both fishpond practitioners and other non-human entities have laid the foundation for the standing of fishpond and its thriving and dynamic ecosystem. Hawai’i native leadership is also largely accredited to Indigenous Cultural Renaissance movement in the 1970s, which entails a desire to return to a state of ‘āina momona, or fertile land. In the present, this practice centers largely on food. This movement encouraged revitalization of traditional Hawaiian practices of farming and fishing, which are central to the reclamation and celebration of Native Hawaiian cultural identity in addition to the balance of the ecosystem.

Alongside the restoration of cultural landscapes and spaces, the movement reflects an effort that restores Native Hawaiian language, cultural practices, ontology, relation to spaces, others, and self. Emerging also from the movement are grass-root networks of organizations that are pushing for collective interest and a paradigm of community-based resource management. To list a few, influential networks include Hui Mālama Loko I’a (fishpond restoration network), E Alu Pū (land and water stewardship ), Maui Nui Makai and Kai Kuleana (shoreline management network in Maui and Kona), and so on (Winters, et.al). In Hawai’i, restoration projects are often initiated by Kānaka Maoli (Native Hawaiians) as individuals, communities, and organizations. Still, some restoration projects in Hawai’i heavily rely on the biophysical approach and monitoring oversaw by land managers and scientists solely. In other areas, sociocultural
approach is inaccessible to communities that lack interactions with ancestral landscapes (Kurashima et al. 2017).

What this thesis strives to contribute to this growing awareness and appeal to biocultural restoration is that on the one hand, there is a need to recognize both the cultural and environmental dimensions of fishpond restoration labor, which requires hard work. On the other hand, aside from the theoretical underpinnings of biocultural restoration presented above, I turn to the practical implications of this term “biocultural” and how it plays out in the backdrop of fishpond restoration practice. I take seriously the various forms of labor that go unmentioned in this celebration of the “biocultural”. The amount of work and labor of both human and other-than-human actors, especially at the fishpond, I argue, necessitated and enabled biocultural restoration and its coming to prominence and success in Hawai’i. The literature on biocultural restoration is steeped in the understanding that the nature/culture binary can be undone, which is at odds with Indigenous ontology that is disinterested in claiming humanity as the locus of restoration.

What is also not explored in the current narrative of biocultural restoration is that despite the effort to reinstate indigenous cultural practices, what remains hidden is the labor dedicated to restoring a way of life. The “hard work” at the fishpond suggests that restoration is not solely the repair of the physical infrastructure and the ecosystems; cultural norms and ways of life are also cultivated in these socio-ecological landscapes. Admittedly, restoring an ecosystem is difficult. It also takes a considerable amount of effort, commitment, and care in the revitalization of the history and spirit of a place and healing and cultivation of relationships. I emphasize this second dimension of “hard work” in my analysis by paying attention to Hawaiian restoration as a set of
practices in which the labor that is required to reestablish a cultural way of living is central to environmental transformation.

Figure 11: Wooden sign at the fishpond. Photo by the author

Part II: The “Hard Work” of Restoration

Anthropologists Sarah Besky and Alex Blanchette find critical moments to examine social and cultural dimensions of work in the context of rural communities and agriculture. They developed the concept of “naturalization of work”, which they elaborated as:

The phrase “naturalization of work” here indexes more than an unconscious and largely taken-for-granted cultural assumption that human work is inherently necessary and valuable. It also points to a host of material processes whose ends are indeterminate, ranging from the making of working landscapes to the integration of animal lives into capitalist orders. Environmental degradation and mass unemployment have brought into relief the implicit productivism in many popular understandings of human nature, and made it easier to question whether
work is a necessary and exclusive property of being human. At the same time, more and more nonhuman entities and landscapes seem to be imbued with a capacity to labor. (Besky and Blanchette, 2018)

In this critical turn to interspecies relationships, their works examines how people understand and experience their work, and how social processes “make a life underpinned by labor seem unquestionable, inevitable, and even desirable (Besky and Blanchette, 2018). In a sense, this is a process by which work becomes naturalized, or taken for granted, as a fundamental part of one’s daily life, identity, and sense of belonging. When it comes to fishpond restoration labor, this process involves the integration of work into the rhythms and routines of everyday life, as well as the development of a sense of pride and satisfaction in one's hard work.

In the Indian Tea industry where Besky conducted years of ethnographic fieldwork, women tea-pluckers burdened the labor of tea harvest with compensations that fall below the minimum wage, but they are compromised due to the provision of housing facilities. Besky analyzed the failure of fair-trade and TWO Geographic Indicator intervention by revealing the dedicated relationship female laborers have with plantations. She also criticized the branding of Darjeeling tea as stewarding ‘traditional knowledge’ and the romanticization of life at the plantation (Besky, 2014). In postulating the fact of daily labor at the fishpond landscapes as central to my analysis, I draw parallels to Besky’s own critical analysis of labor and plantation exploitation in order to reveal the underbelly of this unappreciated yet often idealized form of work. The point of departure from Besky’s work and further exploration of the fishpond practice, however, stems from the fact that fishpond and entities that it produces straddle different categories of natural resource, commodity, and food for consumption.

Furthermore, Besky and Blanchette argue that the naturalization of work is not simply a matter of individual choice or preference, but is shaped by larger social, economic, and political
forces, pointing to the ways in which government politics, market forces, and cultural norms all shape the ways in which people understand and value different types of work. To demonstrate this idea in my research, I broaden the notion of “work” from the individual to collective and organizational efforts, specifically, I am referring to what my interlocutors call ‘āina work. I highlight that the work associated with starting a fishpond restoration non-profits, as I shall examine in Part III, is largely governed by the political and social climate in Hawai’i. For individual fishpond practitioners, that the hard work is normalized as an indispensable aspect of working on the land does not appear out of thin air, but this ethics stem from a larger social and cultural context of work. In the following sections, I continue the discussion of a particular aspect of labor at the fishpond that is naturalized, that is the “hard work” of ‘āina work. By examining this particular idea, I seek to shed light on the complex and multifaceted nature of labor and its significance in people’s lives and the multispecies world of care.

1. The “Hard Work”

The work at Paepae O He’eia has a reputation for being particularly hard. Kekoa, who is currently a full-time restoration employee, recalls the time when he was a applying to be a Kupu Hawai’i intern at the fishpond, which was the only placement option he chose, his supervisor had to double-check that he shows the commitment and dedication as fishpond restoration is typically much more physically demanding than other placement options for KUPU internship. Hoku, a native of Kahana (which literally means “the work”), spoke of how her upbringing in a family that “just loves to work hard” has shaped her work ethics. “Hard work”, then, appears to be a necessity for the fishpond restoration. Although rarely theorized as work, the “hard work” of
restoration insinuate more than just the exertion of physical labor required to lift heavy objects like rocks and woods, but also other unexamined aspects of work, compensation, and frustration. The “hard word” is not entirely invisible. While people who paid attention to this restoration project recognize the painstaking work, I mean to highlight what remains invisible, that is the practitioners’ “restoration labor” that encompasses complex and collective endeavor.

Even though He’eia fishpond has a picturesque view of Ko'olau mountain range in the back and embraced by the tranquil and crystalline ocean of Kāne'ohe Bay, it is true that the hard work isn’t glorious, or social media worthy. Practitioners, in fact, often get frustrated when this place gets treated as another “tourist” destination. Kekoa and Keahi, who are core members of the restoration team, tend to get especially frustrated at this attitude:

Some people will spend more time like recording things for Instagram and stuff than working. And then they post and it looks like this is what they do. But then when they are here, they're not doing anything. So it's all just for the camera. There's a lot of people that do that and that irritates me because then I feel like it takes away from the work that people are actually doing and that are doing it for the club.

The hard nature of the labor makes the job somewhat selective. Individuals that excelled in their work often are the ones who do not avoid the dirt and the intense physicality. For others, knowing that not everyone who comes to the space works as hard or enjoys the space as much can be defeating and discouraging. It reflects a discrepancy in the different level of commitment to ‘āina work that makes restoration labor scarce and valuable. Therefore, pushing the agenda of restoration work ethics to people who hold skepticism towards restoration turns out to be emotionally toilsome for fishpond practitioners. Throughout their times as education coordinators, both Vanessa and Hoku shared encounters with education or volunteer groups that lacked the appreciation for their work and devalued the restoration hard work. Vanessa had dealt with school teachers that accused them of child labor and explicitly expressed discontent with
their educational experiences when students participated in simple works like removing invasive plants, or moving a small pile of corals for half an hour. Others have ironically talked about paying the organization for educational groups to come in to do the work, labeling it a “great business model”. Their disappointment and sarcasm is rooted in the divergence of the restoration labor from their idealized version of the fishpond “work” in this absolutely breathtaking landscape. Any moments when people show clear disrespect and misunderstanding of the place, it makes the work of practitioners a bit harder, granted that education is one of the main purposes of this organization.

Compared to the work that practitioners carry out daily and for a long time, the work of volunteer groups that do the one or few times they are at the fishpond is marginal, at best. In contrast, the ability for groups, including the volunteers themselves, to come to the fishpond and enjoy the landscape would not be possible without the diligent hard work for 2 decades that the restoration has been in progress for. In response to certain people’s negative attitude towards the work, Hoku expressed that the fishpond “comes through many stages of restoration. It’s been such a hard process that there’s no way anybody who comes here for one day, doesn’t matter how hard you worked that day, you’re never going to work as hard as the people who have to restore the place.” To help people see the full picture of restoration, she further added that “I share the story of restoration in a way that can help people understand how hard it’s been so that when they put in a little time and a little work, they realized that it’s really, really, really tiny compared to the amount of work that people have actually done to make a difference in this place.” Vanessa and Hoku’s disappointment illuminates the temporality of the hard work of restoration, that one does not get immediate satisfaction or result from one day of work, the impact of which many groups can fail to see on the infinitely larger scale of fishpond restoration.
project. Another mental block that the groups that rejected the model of operation at the fishpond centers around “labor” and how they have to do work. The money that the organization charges for educational groups acts as compensation for the workers who bear the hard labor. This dynamic will be addressed later in the chapter when discussing the organizational issues around restoration.

Encounters with educational groups only reflect the societal discrepancy of the level of hard work. Keahi is someone that interns and workers look up to. He’s worked as a restoration technician and now coordinator at the organization for 10 years, during which he had endured bodily pain and sustained several severe work injuries. Most recently when I went back, it was disheartening to witness another injury that other workers were even too traumatized to mention. The physical health condition did not prevent Keahi from regularly coming down to the fishponds and “talk story” and supervise the progress of restoration.

Keahi is among the individuals who embody the spirit of hard work, to which he said was just a way of living for the majority of the people hundreds of years ago as maka ‘āinana, who were farmers, fisherman, craftsman, and, literally, “eyes of the lands”. Drastic transformation of the sociopolitical landscape of Hawai’i post-contact time replaced the work of maka ‘āinana. *Huli ka lima i luna, pololi ka opu; huli ka lima i lalo piha ka opu.* (When your hands are turned up, your belly will be empty; When your hands are turned down (to the soil), your belly will be full). Hard work of maka ‘āinana flourished the land and fed the people. Nowadays, with close to a million residents on O’ahu, Keahi estimated that maybe 10,000 people still do farming and fishing. The work that used to be the most important job, to mālama and make food, that majority of the population participated in, now becomes the harder work since people do it the least, which brings workers like Keahi the greatest frustration:
The hard part about the job is just to like ho’omau, to continue on, to stay at the same speed. But the hardest part is to wake up every morning to go bust your butt…Although it's hard every morning to wake up and say, I want to go jump in that mud; I want to go run a chainsaw for 7 hours; I want to go pull weeds and weed whack and do all those things that 790,000 people on this island don't do it because they don't want to weed whack every day. They don't want to do this hard work every day. They want to get a good job that pays them to sit down and look at things. The hardest part is to ho’omau and continue, knowing that not everybody can jump on the wa’a (canoe). Not everybody can jump on it. You know, sometimes you gotta paddle the canoe by yourself. So it's hard.

Keahi's story reveals the fact that ‘āina practitioners are minorities, and that the persistent hard work in caring for a place like fishpond is scarce labor. These ‘āina practitioners grapple with days when this place “beats” them. Rain or shine, many workers treat the working conditions that are governed by the weather and climate in Hawai‘i as a regularity. Much motivation is needed to get up every morning with body ache and still go into the mangrove swamp, to run a chainsaw, to lift tons of rocks, all of the bodily excretions that normalized the work at restoring a fishpond. Admittedly, workers also find rewards at seeing their hard work come into fruition over a period of time. Naturally, the hard work comes with an immense amount of accomplishment and pride for practitioners, and it reinforces the value of their restoration work. The sense of fulfillment that workers feel also affirms the organization’s mission to bring mental and spiritual sustenance.
This is also a story about compensation, or rather, undercompensation. Kekoa shared with me his emotionally charged thoughts on work in Hawaii, contending that “a big part of it is people just don't have the time or the money. And do things that they actually care about or be with the people they care about and. You know, it's pretty bad. Like, I hate it. Everything is so expensive. And, you know, it's hard to get good pay, especially this kind of work where people kind of downplay manual labor jobs and don't put much stock into them.” Hawai‘i is the most expensive state to live in, and so the fishpond workers constantly are confronted with this harsh reality of high cost of living. For Paepae O He‘eia, the organization does not entirely rely on volunteer labor even though it began with consistent volunteering that the 8 founders did. The commitment and availability of volunteer forces can fluctuate, and in general a labor force stabilizes restoration progress and leads the organization to hire at least a few staff members. This also
suggests that wages for staff operate within the limited budget that are available for non-profit ‘āina organizations in Hawai‘i. Most workers, in fact, are very well aware of the low pay at the place and the fact that there are days when they overwork. Over the years, people quit the job because they are in need of a better paying job that allows them to start and support a family and have more stability in their lives. The story of compensation foregrounds the societal forces, from tourism to land development, that made restoration labor hard and highly undercompensated.

Akahi was the former Internship Coordinator at Paepae who quit the job in 2020. Since then, she started working at KUA as a Lohe Pono fellow. She came down a few days before New Year to caretake the fishpond while other employees were on vacation. On many occasions I have heard Akahi’s name mentioned in conversations, largely due to the fact that she was such an integral part of the organization, especially for the interns. Akahi had the position of a “work mom” in which she ensured people get paid and are safe. Akahi’s job touched countless youth and young adults, some of which ended up being like family members to her, and pushed for the narrative of “loving what you do”. For Akahi, the love is not for everyone, “I’ve learned that over the years, as much as I want to push the concept of Aloha ‘āina, do aloha in a job, if there is no compensation that you know is sustainable for the future, it’s kind hard…it was a harsh reality.” There is a switch in her life when she realizes that it is hard for the job to mālama her. Having her own kids, she would want to provide them a better jump so that her daughters do not have to be pulling weeds all day, but can have the comfort of compensation like an Executive Director. She added “I was lucky that another nonprofit picked me up right after I left here. And I’m learning new skill sets. I didn't want to die in the bushes, and I don't want anybody that I love to die in the bushes either.”
When I worked as an intern over the summer, I was entirely oblivious to the undercompensation of practitioners. It was not until I went back again in October and got to spend time with workers more intimately that I realized “the pay” is a talking point that often comes up in conversations. From these chats, I learned how many of them have a second job that provides them more stable incomes. The wage can be a toil to live a comfortable life for some. The hard work is engendered by the scarcity of labor. The changing attitude towards ʻāina work has caused the vast majority to seek and embrace well-paid jobs, which leaves the land and other entities to the care of the few dedicated. At one community workday, Keahi and I led a group of middle and high school students. While showing them around the fishpond, Keahi sat down and talked to them about the importance of ʻāina work for the future of Hawaiian sustainability; he asked these students:

If none of us become farmers, which we know is important, how are we going to become sustainable? If you don’t like what you see in your neighborhood when you are driving on H2 or passing by places, wondering, how come they are doing this over here? And then you choose to work for them because they will pay you way more money. I understand that. My friend who builds coral ridge cannot afford to buy a house. But you can open up your own kalo farm. You guys are still young. Not all of you must become farmers, some of you can put to work to benefit the farmers and think of ways we can all work together with our skills, be it science, carpentry, or whatever skill we use to better our place.

Keahi, like many other workers, recognizes that higher paying jobs naturally attract the younger generation workforce, but he compromised by acknowledging the value of other forms of work that contribute to the restoration. People who were able to carry out their work in the long-run have to find alternative ways that their labor gets compensated. At Paepae, for instance, some recognized that while monetary compensations can’t always support one and their family in Hawai’i, there are other ways that their work do get compensated. The perks of hard work is to take advantage of the resources that compensate for their work. Hoku has recently given birth to
her first child while I was working at the fishpond over the summer, and I remember Hi’ilei saving some of the most precious fish at the fishpond for her. At the state of restoration where the functionality is mostly restored, employees are able to receive additional benefits and compensation not in the form of money. For instance, Hoku mentioned:

Can we help our families, you know, with spending less money on food and stuff like that, and then also just having the luxury of bringing our families here to just enjoy the space. So you don't always have to like, you know, plan a family day where it's going to be super costly. You just plan a family day out at the fish pond and bring your family here. Being able to eat fish from the fish farm, take some crab, holo holo whenever we want to. That's all been the benefits that will help but it gets really hard if you don't take advantage of being able to feed your family from this place. If you don't find a way to compensate for some of the stuff that you're spending, then it'll get to you really quickly.

But since Hoku has been working here for long enough and has had conversations with administrators, she’s able to alleviate some of her spending on food. For her, this is an important shift in mentality to be incorporated into her lifestyle. From these conversations that I have had with these workers, what becomes clear is the struggle between compensation and the urgency to push the “hard working” agenda. One way that the organization tries to integrate “hard work” into the ‘āina lifestyle is through influencing the younger generations of the value of ‘āina work. As the former intern coordinator, Akahi acknowledges the importance in “getting the youth stocked about the work”. Hence, I turn now to the internship program that I was a part of, analyzing the ways in which interns fit into the paradigm of hard work.
When I first joined the internship program at the beginning of summer 2021, my ability to endure the hard work was questioned by my fellow workers at PaePae. Seeing that I did not have much previous experience in restoration or exposure to Hawaiian culture, could someone coming from Pennsylvania be able to withstand the work? The initial doubts and comments made me wonder, what does the internship program suggest about the hard working ethics and the selective nature of the work?

Paepae offers two types of internships, one of which is through the organization directly by having a job application posted on their website, typically runs for 10 weeks over the summer
when interns work 8am-2pm for 5 days a week. The other type is through the organization KUPU; these interns typically have their contract for around and over a year; they are paid both by their host organization and KUPU. The internship program serves as another way the organization can alleviate pressures for restoration labor needs, but it also provides an opportunity for early exposure to young adults interested in the field of ecology, environment, conservation, and Hawaiian culture. In a sense it is satisfying both the current and future for a growing restoration labor force.

Leilani was one of my co-interns over the summer. Due to family connections, she is no stranger to the fishpond and the people here. My conversation with her points to the difference between volunteering labor and full-time employees at the fishpond. Interns lie somewhere in the middle point of this dynamic. She explained, drawing from her experience both from volunteering at community workdays and as a summer intern, that

when I came to community workdays [the work] wasn’t as hard. And it was always kind of short, because you’re community worked for and you’re not getting paid to work, and then, when I was an intern, it was way more involved. And we got to do a lot more because they have volunteers work on easy stuff like move these logs or move this pile of coral. But when we were interns we got to build hale and makaha, all the more fun, nitty, gritty stuff, which takes more time to learn about.

Her account highlighted the fact that interns are a more reliable source of labor than volunteers since they have more training than volunteers. Yet, they are also excluded from the entirety of the restoration labor, such as administrative tasks or meetings and repetitive work like cutting down mangrove trees everyday for weeks. But they do get enough exposure to different aspects of restoration that allows them to decide if the work is right for them, given that many of the current full-time employees started the work as the fishpond as interns. This also means that in order to make the experience fulfilling and meaningful, full-time employees are putting in efforts to plan these summer activities. I was told on multiple occasions that Keahi was burned out. Worker’s
summer schedule is already overwhelmingly busy; supervising and planning internship work is further added. On the other hand, this work is necessary. Internship instilled youthful energy into a space that can feel overwhelming as the work can get repetitive. In a way, the interns are needed to balance out the taxing hard work.

Overall, while there is a shortage of restoration labor, the work is somewhat selective. The internship program serves as a filter to assess how individuals fit into the type of work, the work ethics, and the organizational culture. Nonetheless, internships seek to connect the younger generation, in a digital society rapidly transitioning to the use of technology, to the ‘āina work that is revitalizing yet still needs more participation and commitment. So far in Part II, I have shown how the naturalization of work and, in this case, “hard work” is definitive of fishpond restoration on an individual level. Now I turn “hard work” at the organizational scale, to shed light on the social and political process of the labor involved in the making of a fishpond restoration organization.
Part III: The Making of a Restoration Organization

In the previous sections, I examined how restoration has failed to be understood as a type of labor. In this final section of the chapter, I turn to the way in which this failure to understand the hard work of restoration, entails sometimes taking for granted how restoration cannot happen without a non-profit organization, and that successfully operating a non-profit requires a certain level of hard work as well.

With their commitment and dedication to education and cultural revitalization, Paepae O He‘eia undeniably acknowledged as a beacon of light for many ‘āina restoration projects on the Islands. Even so, when Paepae was first founded as a trailblazing non-profit organization that seeks to tackle the task of fishpond restoration, presented to them were opportunities of trials as well as moments of uncertainty. Given the fact that fishpond restoration in the scale that Paepae
undertook was unprecedented, the founders were both apprehensive and excited about the variability. Since the beginning, restoration was constrained by the absence of permits and adequate technology. Angela Hiʻilei Kawelo, to whom I refer to as Hiʻilei, recounted:

When we first started, it was like we didn't have an agricultural burn permit. So like all of the rubbish that we cut from the mangrove, we had to bring it in, load it into a container or take it to the dump. It took so much time just to remove and dispose of anything that we cut and then we got an agricultural burn permit and that helped to improve things. Little things like we didn't have utility vehicles like we have today, we had wheelbarrows. So all of the rock and coral, we had to like wheelbarrow it out onto the wall. Like this whole stretch of wall right here was all done with wheelbarrows. I mean, it was hard in the beginning and, you know, there weren't the permits in place.

At the time the restoration project began the eight founders were volunteers who had other commitments, including part- or even full-time jobs. Yet, it was not until initial funding was secured that some of them became contractual workers. The lack of an “organization” also contributed to the uncertainty. Around 20 years ago, there were only a handful of organizations in Hawaiʻi, even fewer on Oʻahu, that are dedicated to restoration. Besides learning how to physically restore the fishpond, the founders also grappled with kick starting educational programs and running a non-profit. According to Keliʻi:

We have a school that wants to come. What are we going to do with the school? Do we give them tools to work with? If we give them tools, then how can we be sure that they're going to be safe?” We actually never really thought about safety too much in the beginning until people started getting hurt. And then we're like, “Oh, shit! This is kind of a big deal. We better get insurance.” Well, they're not just gonna give insurance to a person. You have to be a business or an entity to get insurance. And then how are we gonna pay for that insurance? Oh, we need to go get some grants. We need to go get money. Okay, What does that mean? And how do we get the money? And like fiscal sponsorship and Federal government and liability?

As Keliʻi recalled, the initial kick-start of a restoration non-profit is novel. The challenges associated with it are more logistical. However, nowadays, having operated for 20 years, the work is less about the kind of decision being made by founders and administrators, but how
everyone in the organizations collectively navigate the path of restoration that was at the time unpaved. Hiʻilei recognized the inevitability of mistakes, “it's just different: different time, different place. But we've come a long way, but it's taken a lot of a lot of mistakes, a lot of mistakes along the way to get us to where we are”. Given the success this organization is commended for, it is almost unfathomable the initial difficulties, and even some of the organizational issues that they still face today. With teachers, marine biologists, and people with business management backgrounds, despite facing the uncertainty, the founders each had something they bring to the table, something that the organization prides over.

Two of the founders, Mahina and Anuenue, were educators, which strikes as not surprising given that the mission of the organization stresses heavily on the educational experience and outcome that the fishpond creates. Both got their degree in education from University of Hawaiʻi Manoa, they established a strong foundation for robust educational programs through which K-12 educational groups have been able to utilize the fishpond as an outdoor classroom for Hawaiian culture, science, and language. Others like Keliʻi and Hiʻilei, both are the current directors of Paepae, contributed their own expertise in setting the foundation of forming the organization. Keliʻi used his business degree to facilitate the administrative and operational tasks at the fishpond whereas Hiʻilei helped advance scientific learning with her extremely knowledgeable background in marine biology.

1. The Cost of Restoration

As I have already suggested in the opening of this section, operating a fishpond restoration organization requires more than passion for the work and positive affect for others and for the

3 Footnote with sources and details for the recognition of the org would be helpful.
environment. I now turn to an examination of the limitations placed on the organizations and individuals that oftentimes challenge and even deter them from doing their work and how these obstacles invite further questions about their commitment and the ongoingness of their labor. Some of these issues include the cost of restoration, securing funding, financial concerns, the bureaucracy of permits, maintaining infrastructures, and managing interpersonal relationships, all of which are becoming highly intertwined with the labor process itself.

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When I visited the Island again for a week in October of 2022, the work of the fishpond restoration was largely to cut down trees in a pocket of the mangrove forest on the freshwater side of the wall. There was an impending November deadline for a grant that specified that the area be cleaned by a certain time. Maggie explained to me how planning takes place typically at the beginning of the year. They use this as a blueprint for what needs to be accomplished a given year based on availability of funding and grants. The end of year reports, thus, are essential for funders, donors, and grants, all of which financially support the fishpond organization.

As the Executive Director, Hi’ilei’s responsibility includes entering numbers and type up reports for funders, all to “make sure that we have funding in order to accomplish all of our goals in a given year and to make sure that we can pay our employees to help accomplish those goals.” Grant and fund management is a “necessary evil” in her words. That is one the fundamental work that needs to happen in order for everything else to happen. Cost often incurs when purchasing necessary equipments like chainsaws, biodegradable fuels, utility vehicles; materials to construct walls: bulks of corals and rocks for the construction of the kuapā; compensating
employees and interns; maintaining the property and infrastructure, such as the house that serves as both Keli‘i’s residency, garage, kitchen, and storage for the organization. Kamehameha Schools, the landowner of He‘eia, for instance, has been, and continues to be, a key player in the funding of restoration projects. The house that sits on the property was provided a second floor in addition to the storage on the first floor. The working budget for the project was $400,000. The project manager kept to the construction in low-profile residential areas, but was able to provide more convenience and stability for staff.

Paepae O He‘eia has been able to receive grants from different agencies like the State Office of Hawaiian Affairs (OHA), the National Marine Fisheries Service, both of which have supported the fishpond since 2005. Other potential funding sources include private, state, and federal money from agencies such as National Oceanic and Atmospheric Administration, which has a competitive pool of grants to support aquaculture projects, especially community and indigenous-led. Others include The Hawai‘i Community Foundation and its Community Restoration Partnership grants to fund restoration of coastal areas. It was said that “the CRP is a unique collaboration of national and international funders, foundations, and private donors, who provide resources for on-the-ground lower watershed and coastal restoration projects throughout Hawai‘i that involve community stewardship activities and focus on durable and sustainable positive impacts on coastal and near shore marine areas. The CRP funded projects align with the state’s goal for 30% healthy functioning near-shore areas by 2030.”

As critical as it is, grant money can also be burdensome. Given its unstable and temporary nature, it isn’t always the most reliable source of revenue stream. This makes

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4 https://www.hawaiimagazine.com/local-nonprofits-receive-1-4-million-in-grants-for-hawaiis-coastal-health/
fundraising another on-going effort, which is a combination of community events, individual and local business donations through the organization website. Other sources of funding come from collaboration with businesses and sponsorship, in addition to selling produce like moi fish, poi, and limu, which was started in 2006.

* * *

Even if the organization had stable and ample sources of funding, obtaining permits to kick start the actual restoration work poses another barrier. Different areas of the restoration projects require permits from federal, state, and county level agencies. For loko i’a that are located on the shoreline, the process becomes more complex and heavily regulated as it is as they sit on the interface of land and ocean. The process can also incur cost from $50,000-$80,000 and can take years to obtain up to 17 required permits for approval (Keala, 2007). Federal and state wise, some governmental entities that permits are obtained from includes Department of Army, Clean Water Act, Historic Site Review, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Coastal Zone Management (CZM), Department of Land and Natural Resource (DLNR), Conservation District Use Permits, State Historic Preservation Office, Department of Health, etc. If portions of the fishpond wall are submerged at high tide, practitioners begin the process by obtaining a permit from the Environmental Protection Agency (EPA) with the United States Army Corps of Engineers. The Corps also helps with consultation and familiarizing applicants with the permit checklist. Applicants must also contact The Hawai’i DLNR and Land Divisions to issue Conservation District Use Application (CDUA). Both of them require an Archaeological
On top of the domino effects that certain permits trigger, Keli‘i recalls the time-, energy-, money-, and labor-consuming nature of this process:

You need to know how to write a permit, so that you're not wasting your time. So you're not. You need to basically tell them what they need to hear, or else that your permits are not going to get approved, and then you have to wait like you do all this information. You get all these services, and you gotta contact all these people to create an environmental impact statement, to do an archaeological survey for you, and all of that gets rolled into the permit application, and then you submit it after hundreds and thousands of dollars, you submit it, and then you gotta wait.

Since 2015, this bureaucratic hoop has been streamlined and facilitated as a part of the Ho‘ala Loko I‘a program and the launching of a new permit process by the state DLNR, making Paepae O He‘eia one of the last few fishponds that had to endure the entire process.

2. Managing of human resources

Some of my interlocutors have compared running a non-profit to being in an ‘ohana (family) unit; they expressed that the more time they spend with each other, the deeper connections they establish with co-workers. Kekoa started working here as a KUPU intern, and was later hired back as a full-time restoration practitioner,

I love this place and a lot of people I work with, they're like the people I see the most and I spend the most time with. So it is a family thing. Yeah, it's like I love it, everybody. It's only gotten better. It's only gotten deeper. As I've come to know more about this place and know more about the people that work for us, it’s just deepening the love I have for the people in space.

The human resource management part of the job is both a blessing and a challenge. On the one hand, it closely knits practitioners together in a job that is intimate and caring. Yet the intimacy also comes with frustrations when arguments and disagreements do arise as they are more
emotionally charged. Hi’ilei and many other interlocutors describe this as the ‘ohana feeling attached to restoration non-profit:

You have to be able to draw a line between that and kind of the ohana feeling and the way you relate to the employees as your buddies, like they’re your best friends, they’re who you hang out with when you clock out. That’s the gray area where things get a little muddy in managing a nonprofit like this. And one that very much prides itself on us functioning as an ohana unit. It makes it real difficult to navigate.

Workers admit that the organization is not perfect, but this very imperfection makes it even more similar to a family where there is love, care, differences, and disputes all at the same time. At the end of the day, they do understand that their co-workers are all striving for the same objective to take care of something larger than themselves, which brings about more appreciation and understanding.

The organization was founded through the closeness of a friend group, but as the organization grew, more internal management and administration were needed. Over the years, the organization has lost six of its founders, and employees come and go due to a variety of unique reasons. Mainly, Keli’i summarized that people left the organization either because of pay and better job opportunities elsewhere or they were fired by the organization. The ones fired are because of their poor attendance, work ethics, or unreliability. At times, the lines between these two reasons were more blurred, with people feeling like their growth is stagnant in the organization or that they have fundamental differences of opinions and disagreements that are non-negotiable.

Despite the constant flux of employees, Keli’i and Hi’ilei, along with other current workers, seem to face this issue with a sigh of optimism. Keli’i shrugged: “it’s all good”, he said, supporting those who left because of a better and more convenient job. The founders that have left the organizations are still very involved in aspects of the organization. Kanekoa, for instance,
started another non-profit right across from the street that works on restoring lo’i and organic farming of kalo. Mahina immersed into the world of social entrepreneurship and public education. Others have served on the board of directors and still come down to the fishpond every so often. Keahi, overseeing the restoration for 10 years, compared to the place as a nest where passionate ‘āina people learn and harness the skills needed to take care of other places, “And then when you're ready to fly and you're ready to get out there…there are many spots that need love. That is the next thing when you come out very well versed in ‘āina where not just fishponds but in ‘āina work in general.”

3. Dilemmas of the non-profit

When I presented my research project to my peers in Indigenous Food Sovereignty class, after showing a video that was made in collaboration with Paepae and Wholefoods, I was bombarded with criticism. For them, the non-profit model of operation puts the sustainability of non-profit fishpond organizations into question. This event also marked their kickoff of the Adopt-a-Kuapā fundraising campaign for local businesses to contribute to the kuapā restoration. One can see Wholefoods as a representation of a capitalist enterprise that strives to commodify restoration, which in turn legitimizes labor and extraction. Whereas most of the Hawaiian fishponds operate as nonprofits, the Kauai Sea Farm introduced a new business model that sells oysters and clams as a commercial business. Recognizing that owning and operating a Hawaiian fishpond is a big responsibility that costs money, the farm is hoping to support itself financially without having to

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6 Five Percent Day is a collaboration of Wholefoods with local organizations such as Paepae O He’ea. In one of their promotions in 2012, Wholefoods posted their first Community Support Day where 5 percent of the sales were donated to Paepae O He’ea, whose representatives were present at the event to share information about the fishpond and meet the Kailua community.
depend on grants and fundings, which are dominant but not always reliable. Some are starting to reflect the longevity and validity of the nonprofit mode of operations, many of which are also heavily reliant on volunteer forces. The Kauai Sea Farm served as an example of the push against non-profit and for the commercial values in fishponds.

Establishing a non-profit organization that oversees the restoration is one way to restore fishponds; it is also important to acknowledge other community partnerships that do not directly involve registering as a non-profit. As an example, I had the chance to visit Loko I’a Pā‘iau, a royal Hawaiian fishpond located in the Kalauao ahupu’a in the ‘Ewa moku of O‘ahu. The stewardship and restoration of Pā‘iau fishpond was a result of the partnership between the U.S. Navy and the Ali‘I Pauahi Hawaiian Civic Club, ‘Aiea Community Association, and residents of the area. It is hard to make claims as to what modes of restoration are the most beneficial. Diverse history, geography, and physical condition of the fishpond, mixed with the modern demographic make-up and stages of urban development in the area, often results in a different approach to fishpond restorations that fits the needs of the local community.

To successfully operate the restoration project at the scale it has today, Paepae O He‘eia are resorting to different means that promise funding and visibility of their work. Nearly 23 percent of the annual operating budget comes from program fees, donations, and the sale of merchandise and agricultural products like limu (seaweed). In a recent news article, the executive director of Paepae O Heʻeia discussed the predicament of operating a non-profit in a system that is capitalistic and for-profit. She explains that “This will be productive, but when and how much? A fishpond is not a farm. You cannot amend the pond. We are dependent on everyone; we are vulnerable to the military, to upstream, to runoff. There are so many unknowns and it sort of sucks” (Pan, 2015). NGOs like Paepae are proceeding this critical task of
stewardship and food revitalization with much caution as they seek survival of a traditional system in a modern economy so deeply rooted in capitalist ideals. Despite opposing voices and the predicament they are presented with, the dedication of their work suggests their commitment to environmental justice and to food sovereignty in the long-run that requires a certain extent of compromise.

Ultimately, tracing back to the mission of the organization, generation of revenue and business operation are not at the core of He‘eia fishpond restoration. The fact that the organization stood for 20 years and is continuing their education and community-building testify their commitment to put “care” into the fishpond, a key affiliation people established with landscape. The daily management and restoration of the fishpond under a non-profit is not without push-backs and obstacles. It is both hard individual and organizational work that can easily be misunderstood. Yet, it comes together doubtlessly through the tremendous and unwearied hard work of practitioners who transformed the organization into a ‘ohana. This chapter has highlighted the restoration labor of human actors in the fishpond shoulders. But humans are not the ones having agentive capacity. What happens when multispecies actors participate in restoration and care labor and in what forms? This is what I now turn to in order to answer the remaining questions: how do people make sense of their work? Why do they persevere and find their work meaningful?
Chapter 3: The Care Work of Restoration

Continuing my inquiry from the previous chapter surrounding “restoration labor”, in this chapter I explore the following two questions: what is the relationship between restoration labor and care? And then I move on to the second one, how do workers understand their labor at the fishpond in relation to care? To do so, in the first part of the chapter, I offer ways that ‘care’ can be conceptualized in the fishpond landscape by presenting and analyzing existing literature that grapples with the ethics of care. In the second and third part, I explore how care work at the fishpond diverges from these conventional discourse around ethics of care and care work.

Accordingly, I challenge conventional notions of care in two ways. First, in Part II, I propose that we think beyond the human centric and agentive notion of care work. My account of the fishpond as a “interspecies landscape” maps out the ways in which the care work of restoration engages both human and other-than-human in acts of reciprocity, collaboration, and collective survival. In this sense, I hope to contribute to the recent and emerging recognition of care as a multispecies problem space. In Part III, this chapter makes clear that there are other complexities and contradictions to the act and practices of care, meaning that care work is not all just warmth, fuzziness, and harmonious ways of being. In fact, the treatment at Paepae O He’eia of non-native species illustrates how care work also often comprises certain modes of violence. Even though care labor at the fishpond is framed around affects and a deep connection with the environment, workers also face the complexity and contradictions entailed by the fact that certain forms of life must be killed precisely in order to care for the pond. Thus, while care helps workers navigate through treacherous ethical terrains of their own work and restoration labor, they are nonetheless presented with the dilemmas common to all multispecies restoration: Who
to care for? What to care for? Who has the power to determine who lives and who dies at the fishpond?

As this chapter shows, my ethnographic fieldwork and research with Indigenous workers at Paepae profoundly influenced and complicated my conceptualization of care and care work. The experience and conversations I had then allowed me to refine the Native Hawaiian concepts of mālama ‘āina (care for the land) and aloha ‘āina (love for the land), while also pushing me to interrogate my own assumptions about care.

PART I: Care Work of the Fishpondscape

In this section, I continue to engage with the environmental anthropology discourse that frames care as a multispecies problem-space. Reflecting on my own ethnographic encounters with fishpond practitioners, I present the different shapes that care work can take at the fishpond landscape, all while paying particular attention to how other-than-human entities are made to constitute as subjects of care and moral concern through fishpond labor practices. As this chapter shows, relationality and the affect multiplicity are central to elucidate fishpond care work.

1. Conceptualizing ‘Care’ in Restoration Work

In "Caring on the Clock", Duffy et al. explore how the cared-for are often designated as incapable, as if “those receiving care are members of groups that by normal social standards cannot provide for all of their own care because of age, illness, or disability” (Duffy et al, 2015, 5). Some examples of the limitation of this mode of thinking points at those who are wealthy but choose to hire others to handle mundane tasks such as preparing meals and cleaning their rooms.
Their economic ability to pay for others to do tasks of social reproduction for them does not make them less capable in the eyes of others. The literature on care work also speaks to an ongoing discussion about the nature of care work, asking, is paid care work ‘true’ care work? Should it merely be taken as a performance of labor? Is care work defined by being unpaid? What is the role of affect, moral responsibility, and nature of the tasks involved in defining what counts as care?

For fishpond practitioners, the work of care is not driven merely by affective emotions. As the previous chapter shows, compensation plays a large role in understanding restoration labor. Yet, rather than the neoliberal approach to self-care; care work at the fishpond is motivated by a more complicated set of rationales beyond mere feelings and emotions. Here, I take up Michelle Murphy’s argument that care work should not conflate the troubling and complex meanings of care – engendered by persistent histories of colonialism and U.S. imperialism – with positive feelings like sympathy and happiness. Performing care in feminist health activism, for instance, can be traced back to the troubled histories that perpetuated colonialism and class inequality. The turn to affective feelings like attachments and sympathy in the politics of care work can also have the undesirable effect of working within existing hegemonic structures (Murphy, 2015). The task is then to denaturalize care as virtuous, which shifts our attention to “the privileged position of the caring subject, wary of who has the power to care, and who or what tends to get designated the proper or improper objects of care” (Martin, Myers, Viseu 2015, 636). The fishpond restoration calls into question the conventional narrative of the heart-warming feeling associated with care. This type of narrative can obscure the discomfort, trouble, and violence that also characterize care at the fishpond.
Another important element of conventional theories of care work is that it is almost always discussed as gendered work. The rise of industrialization segregated the private and public space and production, and this gradually pushed care work into the sphere of the private and the unpaid (Folbre 2001). Thus, this led to a devaluation of the gendered care work such as raising children, caring for the dependants, as well as any volunteering work in hospitals or non-governmental organizations. This, despite that as feminists such as Silvia Federici and Nancy Fraser have emphasized, care work is part of the process of social reproduction.

The ‘crisis of care’ that Fraser alludes to in her essay “Contradictions of Capital and Care”, can be traced to the contradictions of capitalist society as understood by feminist Marxism. Fraser analyzed the contradiction by positing that capitalism relies on social reproduction without which capital accumulation is impossible; in the meantime, capitalism’s tendency for the boundless accumulation of care surplus leads to the destabilization of social reproduction. She further concludes that capitalism functions on the deliberate separation of social reproduction and economic reproduction. The former, rewarded by ‘love’ and ‘virtue’, is relegated to female and the domestic realm while the latter, compensated monetarily, is representative of male and the public domain. Yet, unwaged care labor, such as caring for the young, the old, birthing, maintaining households and communities, is essential to social activities and indispensable for economic activities (Fraser, 2016).

The study of repair and maintenance in urban studies and science and technology studies offer a useful lens to reconceptualize care in restoration using the critical tools that feminists such as Murphy and Fraser offer. Here I am thinking with Shannon Mattern, who analyzes the care work of maintenance and repair of infrastructures to show how these practices are always shaped by political, sociocultural, and ecological forces.
In addition, Mattern argues that we need to critique the politics of care by rethinking feminist care, so as to acknowledge their contributions to understanding the traditions of reproductive, domestic, and other preservation labor while also avoiding romanticizing care work (Mattern, 2018). For instance, ostensibly, different scales of maintenance work – including urban infrastructure transportation system, architecture, housework, as well as repair of objects, cleaning and maintenance of data, all of which powers the basic functioning of cities and our highly digitalized life – appears uncreative in face of the innovative technologies. This is problematic for Mattern as maintenance is both a creative effort and an essential form of care for the longevity and sustainability of our environment.

One can find parallels of function of care in maintenance and the infrastructural world applies to the care work at the fishpond. The fundamental truths that she concluded from maintenance care is that “(1) Maintainers require care; (2) caregiving requires maintenance; and (3) the distinctions between these practices are shaped by race, gender, class, and other political, economic, and cultural forces” (Mattern, 2018). Mattern’s writing is to urge us to celebrate the act of repairing, maintenance, tending, and stewardship as under-examined aspects of care work. Both chapter 2 and 3 shows that restoration should indeed be included in this increasing recognition of what care work takes form. These conceptualizations of care work, however powerful, remain anthropocentric. Many of these theories either dismiss entirely or glance over the possibility of establishing care relations beyond humans. As I shall argue in this chapter, this tendency to focus on the human makes them lose analytical purchase when it comes to care work that shifts our attention away from the human agent.
2. *Ecofeminist and Indigenous Care Ethics*

A verdant curtain of dark green, the Ko’olau mountain range appears majestic and undisturbed with mystical clouds hovering above the ridges. Keli‘i greeted me on such a day, when my breath was utterly taken away by the scenery, and my excitement to get started working at the place overpowered my fears and worries about the difficulty of the work ahead. Even when I was utterly captivated by the beauty of this landscape, I can still recall the moment when Keli‘i gestured to the mountain range, saying that *whatever happens up there, is reflected by what happens down here at the fishpond*. Essentially, according to Native Hawaiian knowledge, the health of mountains and fishponds is a connected system, referred to as ahupua’a, or land division. The act of care, therefore, in the Native Hawaiian consciousness, is never separated from one entity to another. Later in this chapter, I build off of this initial encounter I have with the mountain, water, and the fishpond, to illuminate this web of multispecies care. For now, I turn to an ecofeminist and indigenous approach to care that preface the discussion and turn towards multispecies care.

In *Matters of Care*, María Puig de la Bellacasa questions how we conceptualize care of other-than-human entities. At the heart of her expansion of a feminist approach to care is an ethico-political commitment that is often overlooked, mainly that we need to promote a politics of care that is inclusive to other-than-human entities by recognizing their agentive capacity. Her work heavily revolves around “neglected things”, foregrounding them as “matters of care.” De la Bellacasa’s commitment to engage with the non-humans recognizes that the invisible and often “neglected” labor of fishpond restoration in turn generates care relations. Her work also draws on Hilary Rose’s exhortation to shift our attention away from the romantic endeavor and the moral
obligation dimension of care as motherly, but towards matters of earthly survival (de la Bellacasa, 2011). More importantly, de la Bellacasa’s notion of “Thinking of Care”, largely influenced by the writing of Hawaray, stresses the recognition of multispecies caring as a practice grounded in relationality.

Conceptualizing care in the context of fishpond restoration practices requires us to construe an intersectional understanding of care in the realm of ecofeminism and Indigenous ontology. Then we find that there is so much common ground in mapping out multispecies care from an ecofeminist and Indigenous perspective. Indigenous scholars have made significant contributions to care practices that can be overshadowed by the philosophical discourse on the ethics of care. I seek to bring in the voice of Indigenous scholars who have written profoundly about care ethics in Indigenous epistemology and ontology. Whyte and Cuomo outlined the Indigenous ethics and practice of care that includes interconnection, stewardship, responsibility, intergenerational relationship, etc. In the face of extraction of resources and devastation to the environment that greatly impacted Indigenous communities, scholars and activists are not only realizing the philosophical importance of care but are also acting upon these issues from a legislative perspective, all of which are putting care at the center of the practice of sustainability and justice (Whyte and Cuomo, 2016).

It is also an attempt to turn to a more holistic discussion about multispecies care as intersectionality and kinship with the environment characterizes the Native Hawaiian worldview (Hobart, 2019). Recounting the spiritual and cultural significance of Maunake to Native Hawaiians, Hi’ilei Julia Hobart shows how Western colonial forces, in concert with astronomical science, the military, and tourism, have largely shaped the narrative that the landscape is empty and unoccupied. The Western portrayal and unjust use of Mauna Kea renders the space lifeless
and in turn produces a violent erasure of the mo’olelo (story) of Mauna Kea as a place of assemblage and spirituality. On the contrary, Native Hawaiians have deep and sacred connections with Maunakea through acts of healing and worship. Her article explicitly illustrates the foundation of a multispecies living and way of life in Native Hawaiian cosmology. Found in the summit ecosystem are numerous insects and native plants, whose existence is fragile and constantly at risk with the construction of telescopes. In addition, the summit is a site of origin stories and a sacred space for ancestral and cultural history (Hobart, 2019).

Furthermore, Jonathan Goldberg-Hiller and Noenoe K. Silva articulated the interconnectedness of human and other-than-human and the embeddedness of this idea epistemologically in the landforms. To list a few examples, in Hawaiian cosmology, there is no vocabulary for “animal” nor a distinct categorical boundary of human/animal that is distinctive in the Western understanding of humanhood. A natural and cultural ontology of spirituality gives rise to concepts like kino lau, which literally translates to ‘many bodies’, and ‘aumākua, or deified ancestors and household spirit, which can take forms in sharks, plants, and owls (Goldberg-Hiller and Silva, 2011). The introduction to fishpond landscape in chapter 2 also brought forth the spirituality and mana instilled into the fishpond. All of this is to demonstrate that the interconnectedness of beings are weaved into the cultural, social, and political fabric. And that to dismantle and to challenge the hegemony of settler colonialism and its impact on Hawai’i, we need to celebrate and highlight the multispecies relationality that underpins Native Hawaiian ontology.

Meanwhile, I work with and hope to use the space to refine the concept of mālama ‘āina and aloha ‘āina, which have been widely adopted and used in Hawai’i to refer to the work of land and fishpond restoration as well as other Indigenous-led movements. As part of the effort to
include Native Hawaiian literature on the meaning of these two concepts, I acknowledge that one of the lessons that I learned from my interviews is that Hawaiian words contain meanings that are individual to its users. In developing my own notions of care in the multispecies fishpond landscape, I draw from the different interpretations that my interlocutors generously shared with me.

PART II: Elements of Care at the Fishpond

1. Waterscape of Fishpond

Aia i hea ka wai a Kāne?

_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

In Native Hawaiian cosmology, water is revered as the source of physical and spiritual nourishment that sustains life. The hydrologic cycle of water is the foundation of the multi-species interconnection that allowed Native Hawaiians to flourish on the land (ʻāina). Consequently, the loss of freshwater that once flowed through the lo'i and fishponds, where countless species of living beings such as fish, eels, plants, phytoplankton, and even birds
thrive[d], is a source of profound grief for 'āina people. The life-giving power of freshwater enables diverse forms of life to coexist within an ecological assemblage, where entities are involved in a web of interdependent care. The availability of freshwater is crucial for the survival of Native Hawaiians, aquatic species, and plants, but it has also been co-opted for activities that facilitate ecological destruction, such as the rise of the sugar plantations, which resulted in the diversion of irrigation freshwater and the disruption of the estuaries that support brackish water fish and the cultivation of kalo, which require abundant freshwater supplies (Winters et al, 2022).

Today, the fluidscape of Hawai‘i has drastically changed. Still, for fishpond restoration projects, the restoration of freshwater sources is more or less dependent on the management of the land division as a whole. During my visit to Papahana Kuaola, an organization situated in the mountainous region of Waipao, I had to traverse a labyrinthine path that led me to their base tucked away in a residential area. Unfortunately, as the site was hidden from public view, it became a hotbed for illegal dumping activities, resulting in the presence of unsightly remnants such as concrete and rebar strewn across the terrain. In addition, an engine was extracted from the stream and a car axle remains embedded in the area, all remnants of environmental injustices of the past. Additionally, invasive plant species have overtaken areas along the streams, which is a growing concern.

This lack of attention and care made the landscape susceptible to wrong-doings of environmental injustice. However, the waterscape, fishpond, lo‘i, and fishpond practitioners have cared for each other since ancient times. Take He‘eia as an example, the fishpond receives its freshwater wai from three converging upland streams: Ka‘ikū, Kaiwike‘e, and ‘Ioleka‘a streams. Arterial circulation of once abundant stream water bumped life in the wetland lo‘i used for the cultivation of kalo. The land is fat and nourished by the wai. The He‘eia mullet is known for its
delightful sweetness, much attributed to the lushing water that passed through the wetland. Key nutrients then get carried down through the stream into the fishpond. Allocation and management of water became a care labor of the konohiki, regulating use and distribution.

![Figure 15: Water flowing through the kalo patch and into the fishpond. Photo by the author](image)

Care is not merely an act of humans. I begin by telling the story of the fluidscape as a metaphor of the fascinating ways in which care flows through the consciousness of Native Hawaiians today and how it comes to mold the multispecies landscape. Entanglement of the fluidscape at He’eia goes to show that regardless of the agents, care can take many shapes and forms and it builds connections across species. In what follows, I provide an account of the different ways that care is established across different entities, who collectively made the fishpond landscape viable and lively. These are actors traditionally not considered caregiving
agents nor recipients. I challenge the dyadic approach to care by mapping out the ways in which reciprocity and care work are exchanged among multiple other-than-human entities with humans, thus blurring the lines between caregiving and care-receiving. Just like the lives that water cared for and enabled, other species at the fishpond are actively helping to create, maintain, and repair the landscape.

Figure: Freshwater side of He‘eia fishpond. Photo by the author

2. Rock and Embodied Care

ʻAʻole mākou aʻe minamina We do not value
I ka puʻukālā a ke aupuni The government's hills of money
Ua lawa mākou i ka pōhaku We are satisfied with the rocks
I ka ʻai kamahaʻo o ka ʻāina The wondrous food of the land
Following the US overthrow of Queen Lili‘uokalani, Ellen Ke ko‘aohiwaikalani Wright Prendergast who was one of the protestors, composed the song Mele Aloha ‘Aina, also known as Mele ‘Ai Pōhaku, the Stone-Eating Song, where this verse is excerpted from. The song is still popular to this day as a rally cry singing against settler colonialism and the illegal occupation. It also sings to the cultural significance of pohaku in Hawai‘i at large. Rocks that collect the fog drip on Mauna Kea feed the aquifer. Other structures of rock can be found at fishponds, heiau (place of sacred worship), and ahu (altar). The use of pohaku symbolizes the abundance to live on the island. (Nordyke and Noyes, 1993)

If you go on to Paepae O He‘eia’s webpage today, the dark blue background contrasts a statement “Growing Seafood for Our Community One Pohaku at a Time”. Pohaku is a rock. Prior to the start of my internship, I was told to bring a rock, of which the story we shared on the Summer Solstice ceremony and we eventually laid on the base of the hale that interns helped build. One of the first chants that I’ve learned at the fishpond is one dedicated to pohaku. What bonds kuapa practitioners and pohaku is a sense of reverence that necessitates the careful handling and usage of rock. Rocks bite. And you would know and feel when someone is inattentive to properly placing a rock and that rock communicates by gently pinching your finger with another rock. It causes someone to make a quiet “ouch” or shake their hand out to alleviate the slight discomfort. Other times, the consequences are more dire. A tale often told when Keahi was teaching about rock stacking is how one surgeon, due to negligence, broke his fingers when a rock fell on his hand.

The pohaku represents a form of intimate knowledge obtained through touch and reinforced through observations, just like interactions that define many caring practices with other entities at the fishpond. In Haraway’s account of companion species and humans, it is clear
that care involves the work of everyday intimacy and relating for mutual survival and thriving (Haraway, 2007). Similar to rocks, plants, animals, and humans at the fishpond-scapes enters the contact zone of care through an epistemological commitment, that is, to understand each other’s expression and need through de-objectifying species of care and addressing the asymmetry often presented in the natureculture care relationships. In de la Bellacasa’s words, “adequate care requires knowledge and curiosity regarding the needs of an ‘other’ – human or not – and those become possible through relating, through refusing objectification” (de la Bellacasa, 2011, 98). It is the everyday attention and commitment to build a common language that co-transforms interspecies relationships and generates continual care.

Figure 16: The He’eia stream on the Kuaola mountain. Photo by the author

3. Affective Labor in Fishpond Multispecies Care

I would like to highlight the affective dimension of the work that is generated by care. Manifested through the language that fishpond workers describe their relationship with the ʻāina
and with other-than-human beings, subject-making becomes an important part of care and obligation. It is through caring relationships that labor at the fishpond becomes more meaningful. Affective labor is a concept developed by Hardt and Negri (1999) to describe labor that produces immaterial products and subjective experience such as emotions, moods, and feelings. These are usually undervalued and invisible, and performed by women and other marginalized groups. But it is nonetheless necessary for maintaining social relationships and reproducing social norms.

The body is often the site of affective labor, as care work and other forms of affective labor frequently involve physical contact and interaction with others. Care is then embodied in the body-knowledge of the environment and other material existence. The quotidian labor of care thus has an affective dimension. The multiplicity of care at the fishpond – from water, to plants, animals, and humans – shifts the vastness of nature towards an intimate and personal relationship that work and rework the division of nature and culture. Fishpond care allows us to see the ways in which species come to attend to each other’s needs, and in the process cultivate body-knowledge.

Another lens to understand the affective labor of care is through food. Food consumption at the fishpond allows us to see ways in which species come into being through the relational multispecies encounters. For fishpond practitioners, consumption of fish protein outside of Hawai’i loses the connection the Kanaka Maoli have with their spiritual root. Keahi told me that the gods reside in the food, plants, animals, and places, and consumption is a necessary:

But because the relationship was reciprocal, like we're going to, we're going to, we're going to care for them. We're going to maintain their habitats or water them or mālama them and care for them. And then in return, they're there to feed us. So eating fish from somewhere else in the world, we lose that connection right off the bat.
To further illustrate this reciprocal relationship that characterizes care between fish and humans, Keli’i related a fascinating account of a time when this reciprocity governed multispecies interactions at the fishpond. Keli’i told me that he has heard multiple stories from different fishpond practitioners and caretakers that:

In ancient times, the fish pond kia’i (guardian) harvested the fish by hand, like they (the fish) literally, swam into their hands, and they're able to lift the fish out of the makaha and put it into a basket. If the fish are not willing to give of themselves to sustain you, it's impossible. You would have to like, throw a net on them where you'd have to, throw a spear and try to spear them, and the fish would be in a constant state of fear. But if we have stories, and we have accounts, historical accounts of people literally standing in the Makaha and putting their hands into the water, and the fish swimming into their hands, and the people gently lifting the fish out and the fish not squirming and flopping around, the fish, basically allowing themselves to be harvested.

For him, digging into these stories showed him what human-fish relationships should be. The stories speak to a time when reciprocity of care was a silent agreement between the two species, each fulfilling their role and responsibility in maintaining the well-being of the ecosystem. Now, to continue this caring practice becomes the major task for ‘āina practitioners.

Two distinctive concepts in Hawai‘i, and fishpond practice more specifically, commonly spoken about are ‘ike (knowledge) and kilo (observation). The knowledge is embodied. Care work at the fishpond landscape cannot always be encapsulated by words and image in the perspective of these workers. To appreciate the work of care that went into the fishpond demands putting into perspective the work of generations of caregivers that came before, and most importantly, the sensation of bodily exertion and spiritual dedication to the place. Once a zealous young Hawaiian, Keahi learned through lectures and books the Hawaiian language and culture, but nothing in the books written by people who only observed ‘āina work, can explain to him truthfully the work of fishpond. He described to me,
No picture can even explain this. I look out, I know from where I started to where the wall is now, maybe that's a million rocks that I've been a part of resetting, and they touch every single one of them. I did tell somebody like I touched a million rocks at a fishpond. I think people, especially if they haven't seen it before. I don't think they can put it into the thought of a million rocks and coral all mixed into the Space.

Keahi’s account shows that the making of and participation in fishpond landscape is not reducible to merely feelings nor scientific domain of monitoring. The prolonged and unabating engagement with the landscape hinged on embodied experiences: daily maintenance, observations, education, and performance of strenuous tasks. Keli’i also extends that the goal for fishpond practitioners nowadays is to get to a point of regularity and comfort so that the reciprocity and intimacy with other species can be sustained. This is done through careful and mindful observations, which is referred to as kilo in Hawaiian.

Kilo penetrates almost every aspect of ‘āina lifestyle. Kilo often comes up in conversations when practitioners reflect on valuable skills they learned at the fishpond. Kilo is a sustained observational approach to the environment; it can mean to watch, observe, and forecast based on phenomenal cues that nature provides. At the fishpond, employees keep a kilo journal that documents their day to day observations. When we drive out on the wall, you often see people staring down into the pond, noticing patterns in which the fish move and congregate, and watching the change of tide, or paying attention to the proliferation of algae, etc. And at the end of a cycle, often at staff meetings, workers all share what they have learned from kilo. The daily exercise of kilo often informs practitioners of changes that are occurring in the fishpond, but also engage themselves with the temporality.

De la Bellacasa’s engagement with permaculture and soil illuminates what she terms subjectivity and care time. Soil time transforms a way of thinking about time that is grounded in the pace and rhythms of soil ecology as opposed to the mechanistic and linear time in modern
industrial society that values productivity, efficiency, over ecological health and sustainability. In a lot of ways, this temporal orientation towards the slow and cyclical process of the earth resonates with care time at the fishpond restoration, characterized by interdependent relationship building, observation and feedback, and regeneration.

What makes the hard work worthwhile? Continuing my conversation with Hoku about her care for the land by putting in the labor, she adds that:

It's hard labor, but if you're not around long enough to see the outcome, then it’s kind of junk. So it's nice to actually be able to stick to this kind of work. Doing something as simple as removing the invasive trees we've cleared opens the habitat up for so many natives to return. But if you've never stuck around long enough to see the natives return, then I can see how you wouldn't be able to appreciate that kind of labor. But for most of us that have been here for a long time, we've been able to see like there's hundreds of species from plants to living things in the fish plant that have come back since removing just one invasive plant.

Her narrative goes to show that the fishpond has stood for 800 years, but the product of the work is not always instantly gratifying. The care work is slow and long, and its temporality is either appreciated and instills a sense of awe or misunderstood and steers people away. ‘Āina practitioners demonstrate that care for the fishpond requires one to be in a state of bodily exertion and intimate contacts with the other-than-human entities. All these different forms of entanglement not only require intimate knowledge, but also time. At the fishpond, every morning we chant Na ‘Aumakua, to give gratitude and recognition to those ancestors who came before us and whose knowledge we benefit from. Everyone has their kumu (teacher) who has guided them through the restoration project. In a sense, the care work at the fishpond is a culmination of generations of hard work, labor, and dedication.

And the process is slow. It took Paepae O He‘eia 20 years to get to their current stage of restoration. With deployment of heavy machinery, the process can certainly be expedited. Yet,
for workers at He’eia fishpond, this slow way to restore the pond little by little, attuning to the ‘āina and allowing nature to do its work, is the pono (right and justice) way to proceed. In terms of the future vision of their work, an avid marine biologist who founded the fishpond, Hi’ilei draws the analogy of human memory to fish memory. As she thinks about the progression of her work at the fishpond and the ultimate result of her work, is to create a habitat for fish in which they are reminded of a time of abundance: “But I think a big part of what we're doing is reminding fish and birds and plants and shrimp and crabs and seaweed that this is also their place to eat.” Her kumu (teacher) taught her that the work of Kanak is deeply embedded in the ancestral memory, “a part of our DNA” in her words. Excavating that hidden memory as Native Hawaiians produces the continuity of doing the hard work, building rock walls, planting kalo, and eating traditional foods, all of which falls into the act of mālama and aloha ‘āina. Similar to fish, she contends:

They also, because of their ancestral memory and kupuna, remember, “oh yeah, my grandfather used to live in the fishpond”. It's part of that ancestral memory of when the makaha is flowing and the waters are pouring into the fish pond. I'm supposed to go there and swim there and remember that that's a place that I can go for oxygen. It's not just us restoring that kind of ancestral memory or remembering its fish, remembering too what it's like to live in a loko I’a.

Rhythm of restoration invites us to think about time as a relational concept, rather than a commodity to be traded or controlled. Just like soil time, fishpond restoration provokes us to slow down and pay attention to the natural cycle of life and death, growth and decay, all of which underpin our existence on this planet. This mindful and attentive relationship grounded in observation and intimacy defines care work at the fishpond. In the long run, the work cultivates a way of being and relating in this world rooted in interdependence of all living beings.
“Have you ever seen a picture from 20 years ago? The place was a mangrove swamp,” my initial days working at the fishpond were filled with these inquiries. A drive through the Kamehameha highway bridge that runs along the coast offers a breathtaking view of the He'eia fishpond, which has undergone a remarkable physical transformation from being shrouded by an impenetrable
thicket of mangrove trees to having only a few hundred standing. Local residents who pass through the area on a regular basis bear witness to this transformation. The bridge was once referred to as the "stink bridge," owing to the thick mangrove forest that formed a tunnel over the road and the strong odor of sulfur that wafted through the air due to decomposing mangrove leaves. A historical photograph above a freezer in the organization's kitchen attests to this change, showing the area as a mangrove swamp in the past.

One of the most distinguishing feat that reflects the temporality of care work at the Heʻeia fishpond is the management of mangrove trees. Now I turn to another under-examined aspect of care, that is the violence and complexity that necessarily accompany the work. Here, we need to expand our imagination and find more intricate connections between violence and reciprocity, tied together by the act of care.

* * *

On a picturesque October morning, my colleagues Keahi, Maggie, Kekoa and I made our way to the mangrove forest to meet a looming deadline in our fishpond restoration project. As we approached the first mākāhā of the wall, Keahi, who was driving, suddenly brought the gator to a halt and we all disembarked. On the shallow shore within the pond lay a lifeless white eel, her ivory belly basking in the warm sunlight and occasionally caressed by the gentle waves of the pond. This particular eel was cherished by the workers, who regarded her as one of the physical manifestations of Meheanu, gliding through the freshwater area of the pond with her family. Without delay, Maggie and I rushed back to the garage on the gator to retrieve a pair of shovels. Under the weight of grief and solemnity, we buried the eel beneath a dense thicket of akulikuili
plant, offering a prayer to honor her life. Keahi reminded us that the tohei (eel) will continue to nourish the land, and her life will endure in perpetuity.

The metaphor that life and death at the fishpond symbolizes the “circle of life” is not out of the ordinary. There is a cosmological approach to order that informed Native Hawaiian’s life of balance and harmony, reflected in the word pono, which is often interpreted in English as “justice” for lack of a better word. At some point, the “circle of life” metaphor becomes internalized and practitioners act on it unconsciously. For Hi`ilei, it is the same reason why the heads and guts of the fish are used for traps or to feed crabs, and there is also a certain level of success when someone does these acts unintentionally.

Multispecies coexistence is not simply a matter of enabling survival and flourishing of certain species, but it requires attention to understand what it means to live and die. The circle of life in the process of care adds complexity to the practice of non-native species removal at the fishpond, which contributes to the scholarly contention on the consequences of care. Thus, I enter the uncomfortable terrain when it comes to the eradication of species, confronting the paradox of care and the question: does eradication of certain species for the flourishing of others constitute a form of care? Scholarly work on environmental humanities and animal studies has presented violence that accompany care in the case of endangered animals conservation (Shelton, 2004; Bocci, 2017; van Dooren, 2011). I reference these works to attend to the moral dimension of killing and interspecies violence.

Van Dooren considers non-native species population management as a definitive feature of conservation ontologies. One of the goals of conservation in killing species, he argues, is the construction of nativity and preservation of native biodiversity. Setting his studies in conservation of birds in Hawai`i, van Dooren notes that under the contemporary conservation

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ontologies, the care for some species is inextricably linked to the fatal management of others, which he terms “violence of killing”. By juxtaposing the care for endangered bird species in Hawai‘i like ‘alalā with the killing of a variety of other animals, van Dooren explores “the underlying regime of violent-care that structures life and death possibilities in contemporary conservation” (van Dooren, 2015, 10). He further developed the two key contrasts ‘rarity’ and ‘nativity’ that underpin the goal of conservation to create a spectrum of desirability. This framework is admittedly insightful and provokes my thinking about how species are positioned in relative relationships with others based on certain criteria that decide life and death.

My agenda, however, does not align with the customary depictions of non-native species at the fishpond that tend to implicate conservation ethics in a negative light. Instead, I undertake a nuanced exploration of the intricacies and glean insights from the accounts of my interlocutors. Unlike conservation ontologies aforementioned in van Dooren’s conceptualization, I argue that the objectives of restoration diverge from that of conservation. Conservation care is structured around conserving native biodiversity whereas restoration has a multitude of habitat rehabilitation and cultural revitalization. Furthermore, I underscore the moral quandaries that the extermination of invasive species engenders in the minds of workers, as well as the means by which they navigate the conflicting notions of violence and care in their own practices. Additionally, I provide an illuminating perspective on the routine and quotidian maintenance of invasive species to demonstrate how they are implicated as agents in the process of care.
1. **Socio-political History of Mangrove**

The very first question about introducing mangrove to the fishpond ecosystem is one of mobility. How did it come to the landscape of Hawai‘i and fishpond specifically? What is the issue with invasive species and how did they flourish? What follows is a brief account of the history of mangroves, and how they got to be deemed necessary for removals. In the 1800s, the shift from subsistence to plantation economy in Hawai‘i caused severe land erosion and siltation, especially in the intertidal zones and shoreline areas. Thus, in 1902, Rhizophora mangle (red mangroves), indigenous to Florida were first introduced into He‘eia by the Hawaiian Sugar Planters Association among other places in Hawai‘i as a response to mitigate these impact, since in their native ecosystem habitats, mangroves can be highly valuable in providing shoreline protections, nursery grounds, and sediment stabilization (Wester 1981). Studies have also shown their function in improving water quality and serving as a carbon and nutrients tank. (Chimner, et al., 2006) In Hawaii, however, what prompted the removal of mangrove is their negative impact on the fishpond ecology. R. mangle, in comparison to the three other mangroves species introduced, has also shown the remarkable ability to spread rapidly and extensively, and eventually colonizing ecosystems (Allen, 1998).

At Heʻeia fishpond, mangroves filled in most of the available areas on the wall in just 30 years since they were initially planted. The arc-shaped stone wall design of the fishpond offers the perfect habitat for mangroves to colonize. They start to establish themselves inside the pond and on the wall; in certain cases they have caused the wall to deteriorate (Chimner, et al., 2006). Other commonly identified impacts of mangroves have to deal with: their root systems obstructing the mākāhā and hence decreasing water influx and circulation of the freshwater
stream that feeds the loko i’a; and their drawdown of nitrogen and phosphate which decrease dissolved oxygen and prohibit production of the pond. Concomitantly, the increase in salinity, turbidity, and organic matter in the fishpond shift the estuary condition away from biodiversity to invasive macroalgae, which also proliferated the pond.

On one of the days during work, Claire, a waterbird scientist from the He’eia NERR institute came and pitched a brief presentation about her research, correlating the restoration of shoreline areas cleaned of mangroves and the return of native birds. While mangroves are not primarily responsible for the large decline in endemic waterbirds, they are often considered a major factor further hindering the population recovery alongside habitat loss, disease, and introduction of mammal predators. In addition to mangrove trees, other non-native species find their way in. What is tricky is that some of them are strikingly similar to and intimately entangled with their native counterparts. In the eyes of the workers, these are the imposters, disguising themselves to compete with the native for limited resources and habitat space. Despite surging efforts to remove mangroves and other invasives in fishpond management across the island, there is very limited published data on the effects of mangrove removal in loko i’a. In another case, the scientific research actually undermines mangrove removal by arguing for their benefits at providing habitats for certain native fishes (Winter et al., 2020). Hi’ilei seeks to justify the work of removing invasives in terms of the “progression of things”, in that the space that workers clear free of non-native species is often followed by a succession and return of native species. Sacrificing invasive species in turn creates space and provides opportunities for native flora and fauna to thrive.

Besides the full-time workers, volunteers, and interns, at the He’eia fishpond – often lauded as a leading example to incorporate scientific knowledge into Indigenous management of
fishpond – marine scientists also find their work as researchers highly relevant here. On Thursdays, you see these scientists leaving their research station on the secluded moku o loʻe (coconut island), dressed in clothes that endure dirt and sweat, and rotating at different ʻāina organizations in the Heʻeia ahupuaʻa to dedicate their time to work on the land. Some of them frequent the fishpond more often than others. You see them carrying their scientific devices to detect water quality in the pond, or observing the pattern of native water birds with a vernacular, or measuring the growth and conditions of native oysters. The visitation from scientists at the fishpond is no spectacle. Eventually, after visiting their research facilities and working with them on their workdays, I started to realize the importance of their engagement with fishpond restoration work.

My project also seeks to integrate these scientific perspectives regarding the creation of the fishpond landscape. In doing so, I reached out to Shimi and Kawika. Shimi is the research coordinator at the Heʻeia NERR. Serving her capacity as the coordinator, she manages the research programs as well as the long-term monitoring of the productivity of the fishpond. I became particularly interested in how Shimi sees the invasive species management fit into the broader agenda of the fishpond to feed the community. Even from her position as a scientific researcher, she points out a critical dimension of this work: “invasive species management is so tough. Because they're invasive for a reason they grow so fast. As soon as you remove them. They start coming back immediately, like the next day or an hour later.” After the removal, Shimi added, the goal then is to find new lands to resettle them with native species. In order to accomplish that, daily work goes into managing the growth of invasives. Shimi acknowledges that “this is what our partners do every day, like folks at Paepae, Kakoʻo, and Papahana Kuaola…They manage the land every day so that the weeds don’t come back…so it’s a
multi-pronged approach in enhancing habitat for native species, doing some sort of policy work for invasive species, and then also daily maintenance.” In the circulation of care narrative, a persuasive one portrays care as an act of individualism, benevolence, and moral righteousness (Hobart and Kneese, 2020). Shimi’s observation working as a researcher points to the very work of invasive management, that tending invasive species requires labor and care. It is not a task easily undertaken. In fact, like other aspects of operating a fishpond, the growth of invasive species is managed through mundane and repetitive tasks, and it is hard work.

2. *Performative restoration*

In the heart of the mangrove marsh, a grand performance of restoration unfolds. The hazy sky above me is tainted with the smoke of a roaring fire, and the scent of burning wood envelopes me in an immersive theatrical experience. The flames dance and crackle, accompanied by a constant hum of chainsaw operations in the background. Despite my earbuds and headphones, the overwhelming sound of five chainsaws running in unison is impossible to ignore. The stage is also characterized by a raw and unfiltered intimacy, with pesky flies and insects persistently buzzing around me. As sawdust flies through the air, it becomes a palpable element in this dramatic performance. As someone who is not skilled in chainsaw operation, I play the role of a humble scavenger, gathering scattered branches to fuel the fiery pile.
I painted perhaps a more dramatic scene of the work around mangrove at the fishpond. Currently, the typical mangrove clearing practice at the fishpond includes chainsawing the tree, cutting them down, and leaving intact the prop roots and root-fiber mat. To prepare for dropping a tree, a small weighted bag is attached on a throw line, which gets tossed high into the tree in hope that the line will cling on to a sturdy branch of the tree. Then a rope gets tied to the line, wrapping the tree, and helps guide the direction in which the tree falls. This process can take any time from 5 to 15 or even more minutes. Once the initial preparation is done, there will be a couple helpers at the end of the rope, performing a tag-of-war-like labor to guide and facilitate the falling. As explained in the previous section, this process requires a high level of communication and coordination among the spotter, the person operating the chainsaw, and the
rest of the crew pulling the rope. When the mangrove tree is large, physical strength becomes invaluable to helping pull down the tree. Once a mangrove tree is dropped down, the tree trunk gets chainsawed into smaller pieces of log. Some that are suitable for building materials are saved. In another case, logs were chipped to be pavements at the fishpond garden. Otherwise, the logs get burned down into ashes with tree branches in a pile of fire.

Just like any other care work performed at the fishpond restoration project, removal of non-native species involves a certain level of risk and danger that is seen across care works in general. Duffy et al. points out that “as they care for the bodies and minds of others, care workers regularly put their own physical and psychological health at risk” (Duffy et al. 2015, 79). While their work primarily deals with human care agents, I find this to be a vastly overlooked case with multispecies care, and with the violence inflicted on invasive species. Some of the studies previously concerned hazards in healthcare facilities, workplace violence, and mental health issues (Duffy et al. 2015). In the case of ecological restoration, the tending for the vulnerability of other species should not obscure that of the workers. As I mentioned in the previous chapter, Keahi has endured multiple bodily injuries that put his life at immense risks. Others have suffered more chronic health conditions, like hearing problems (from blast of chainsaw and other machinery), neck, back, and spinal issues from lifting heavy objects. Besides the substantial risks, they can be invisible since these jobs are so often perceived as relational. Thus, workers become extra care-ful to others and their surroundings that we encountered in the previous section. And I would extend that non-native species management and the risks engenders this dimension of care. Moreover, through the strenuous management of non-native species, workers arrive at a care for each other. For instance, dropping trees, I noticed, requires collaboration and communication. It requires the cutter, a spotter, and a couple of hands who can pull the rope and
direct the tree to fall. When I volunteered in October, one day Keahi came around and asked each one of us to mention one important thing about tree dropping: let it go the direction it wants, let go of the rope, don’t yank the rope, etc. But mistakes do happen, especially to cutters who are new to dropping trees. Maggie and Kahele, for instance, dropped a tree in the opposite direction that they wished for it to fall. Everyone was safe, but this mistake sparked a worthwhile conversation, heavy and deep, with Keahi. Some mistakes cannot be undone, and there is no going back.

When we drive out or walk on the pond wall, as workers look around and observe their surroundings, sometimes they halt and bend down to pull out a particularly pervasive plant: the “pink weed”. Unsure what their scientific name is, they are disguised awfully similar to their native counterpart ʻākulikuli, known to scientists as portulaca oleracea, in that they have the pink stem and green succulent leaves that are characteristic of ʻākulikuli. The slight difference is that pink weed does have a paler look in its color and flatter leaves. Their management at the fishpond is one of arduous tasks. Not only are they particularly troublesome to be distinguished, pink weeds mingle with the native ʻākulikuli so extensively that it is difficult, in the process of removing pink weeds, to keep the native completely intact. In other ways, they have an extensive and deep root system that, unlike other weeds, is almost impossible to eradicate them thoroughly.
Coping with this tenacious nature of pink weed, workers also put into a certain degree of observational and experimental care that is often given to native species in the restoration project. Since their root system is so connected and extensive, and given the mass amount, physically plucking them out from the soil is arduous and nearly impossible. Most of the time, they are covered by a black heavy plastic tarp to block out any sunlights. But some pieces of the weed may still stick out from the broken holes in the tarp. The more extremely windy weather conditions can blow the tarp away as well. However, because pink weed is mingled with ‘ākulikuli, this method inevitably comes with the cost of sacrificing native species simultaneously. Recently, Kekoa has started experimenting with burning pink weeds alongside mangroves and other weeds, piloting, for instance, controlled burning at certain areas.
This is not to say that the ‘āina workers entirely neglect the consequences of their actions for the sake of restoration. In fact, some of my interlocutors contemplate these contradictions in profound ways. I was able to learn about mangrove management the most from spending a whole week with workers, and observing their work at cutting down roughly 30 trees. Keahi, as the coordinator of the restoration project, is particularly the expert in this endeavor: skilled in climbing up on the tree, tying ropes, throwing throw balls, operating chainsaws, and facilitating communications among the team members. I was eager to sit down with him to inquire into the encounter he had with the invasive mangrove for a decade. I presumed a very different attitude that he would have with invasive mangroves. Even so, his response impresses with a great deal of nuance.
Every other planet here, every other thing, even an invasive plant, it's invasive because we don't maintain it and it goes over our natives. But if they were maintained and used, I'm sure they would have a great use for everyday use.

Mangroves and other non-native plants produce oxygen. Their destruction and classification as weeds are somewhat justified because of the lack of understanding of their usage in the native landscape. Trained in the scientific fields of conservation and because of family influence, it is somewhat hard to imagine how Hi’ilei extends the ethics of care to non-native species at the fishpond, a mode of engaging with the natural world that she learned over the years and that the younger version of herself would never appreciate. She shared with me this shift in her thinking and approach to invasives:

We try our best to repurpose things like the invasive algae, kind of to honor its life really. I think that's important. For me, yeah, I wanna [cut] down the mangrove because I want to restore the pond. But how can we breathe a new life into that? That we just took life from. So can we repurpose the wood and build hale, mahaka, and use it for cooking in our imu. Use it for cooking our food on a barbecue, compost it, use the charcoal for gardening, all that kind of stuff. Seaweed, fertilizer amendment. I think about that too. It's just how we choose to interact with everything, not just between humans, but how do we interact with all those beings?

She encapsulates the moral dilemma by inviting me to think about the blurred line between living and killing at the fishpond. Here I return the very notion of “circle of life” that, in this case, engendered the coexistence of violence and care. One way that restoration workers grapple with the act of removing non-native species hinges on re-infusing life into death. Even though certain species are removed in order to create spaces for native species to thrive and hence restoring it to the ecosystem that existed prior to the introduction of non-natives, they nonetheless get wrapped into the web of life and care. Therefore, repurposing killed non-native species becomes an important act of care for ‘āina practitioners. At He’eia fishpond, and some
others, the mangrove trees are used for building materials like mākāhā and hale, as well as chipped to pave pathways that made access to garden and greenhouse at the fishpond easier. Practitioners see this as their passive role in participating in the act of mālama.

To frame non-native species management as an act of “forgiveness” is another way to navigate the messiness of care. On the last day of 2022, during the day, I joined a small workday at Loko I‘a Pā‘iau located near Pearl Harbor. I am deeply grateful for the chance to talk to Aunty Kehau, who is a member of the Hawaiian Civic club that supervises the restoration of the royal fishpond. When I asked her what has been difficult in the process of restoration, her answer was “knowledge and humility”. Aunty Kehau applies her observational care to the royal fishpond, which is a lot smaller in scale than the He’eia fishpond but much more behind on the restoration progress. For her, humility, observation, and forgiveness are all essential in spaces like fishponds that have gone through so much destruction and negligence. Through this process of restoring and removing invasives, she has learned “to sit and look at what the land is saying to us”. Her approach, like many other ‘āina practitioners, is not one centered around violence, but one around understanding and remedying what has been done. She said: “when we remove, we remove with gratitude for your presence here and ask permission to be able to restore. Sometimes, if possible, to transform the invasive into a new use so they still are valued and have a purpose, but just not in the one that would have been initially”. Knowing that the “invasive” tag is relational, in that non-native species are native to somewhere and sacred to the people of that place, fishpond practitioners negotiate their removal by expressing gratitude.

Echoing the views expressed by ‘āina practitioners, the perception of the inevitable violence that comes with non-native species management can be traced to the Hawaiian principle of reciprocity as an ideal of harmonious cooperation, manifest in humanity’s relationship with
the natural world. Care is necessarily reciprocal and cyclical. As de la Bellacasa writes, in providing and receiving care, “for not only do relations involve care, care is itself relational” (2012, 198), and in a world constituted with all-beings, care relationships are inevitably heterogeneous.

* * *

The current chapter has thus far illustrated the multifarious facets of care work that are imbued within the fishpond restoration. This endeavor is situated within an interspecies problem space, one that effectively dismantles the conventionally human-centric discourse of care. The complex interdependence that is constructed through interspecies care fundamentally challenges the hazy and warmth connotations that are typically associated with care. By writing about the processes of mangrove and non-native species removal as a means of highlighting the violence and complexity of care, this chapter sheds light on the intricacies of care work. Concluding on a contemplative note, I shift focus towards the significance of forgiveness within the framework of care in relation to non-native species. What does this relationship of care with non-native species inform us? In what follows, I delve into a discussion of activism, sovereignty, and care. In face of the declining number of ‘āina workers, how do the righteousness in species removal translate into larger conversations about moral responsibility and reciprocation of care? These inquiries constitute the very essence that propels the argument of the forthcoming chapter.
Figure 20: Mangrove forest of He’eia near the bridge of Kamehameha Hwy. Photo by the author
Chapter 4: Redefining Sovereignty through Fishpond Activism

*Ua Mau ke Ea o ka ʻĀina i ka Pono*

The life of the land is perpetuated in righteousness

Thus far, I have examined multiple forms through which care work manifests in fishpond restoration practices. Here, in Chapter 4, I offer care as a mode of activism and an important yet overlooked element of environmental justice. Care appears under a slightly different guise, more as a mode of collective worldmaking – including ritual, large community events, education programs – that produces a type of sovereignty grounded in collaboration and liberation. Such liberation is made possible through collective practices not only between humans but also with the environment and *becoming with* all beings and relations. The Hawaiian state motto, first coined by King Kamehameha III, speaks powerfully to the interdependence of the land and the well-being of its people. It is a reminder that all flourishing is mutual and reciprocal under righteous and just stewardship. Additionally, bearing in mind that ecological restoration and stewardship symbolize resistance against colonial oppression, I consider some of the concrete political implications of care work in the context of biocultural fishpond restoration, specifically, how they challenge our perceived notions of autonomy and sovereignty. In this chapter, I first argue that restoration activism represents a silent form of radical care that confronts colonial attempts at erasing indigenous cultural integrity. Then through the lens of ritualization and community-building indispensable to care practice at Paepae O Heʻeia, I present a version of sovereignty that simultaneously requires self and collective care alike as well as engenders spiritual transformation and empowers Native Hawaiian communities.
PART I: Care as Activism

1. Activism as Radical Care

Upon returning to the island in October, I had the opportunity to join Maggie for a holoholo, leisurely stroll, along the wall and to fish for the afternoon. During our walk, we chanced upon the cousin of a current employee of the fishpond who, according to Maggie, only participates in community workdays but is quick to seize any opportunity to fish. As we drove past them on the wall, I observed them pulling out a bucket full of kaku, an invasive barracuda species. While Maggie is typically of a mild disposition, his behavior left her feeling frustrated and somewhat incensed. Our conversation over dinner that evening revealed Maggie’s broader concerns about the disconnection of tourists in Waikiki from the land. Having grown up in Hawaii, she finds it unsettling that the tourists who come to the islands are so oblivious to the richness and complexity of its cultural and ecological heritage. This exchange with Maggie serves to highlight that Hawaii is far more than a mere neo-colonial construction of luxurious resorts and sandy beaches. It offers a glimpse into the profound anxieties that the island's inhabitants harbor about the ways in which neocolonialism plays out in the modern-day Hawaiian context.

In theorizing activism, care, and sovereignty, and attempting to understand social movement in general, I turn to the conceptualization of radical care. In a recent article exploring ideologies of care, Hi’ilei Julia Hobart and Tamara Kneese define radical care as “a set of vital but underappreciated strategies for enduring precarious worlds” (2020, 2). The concept of radical care stems from a genealogy of conceptualizing self-care and its relation to liberalism, considering both positive political changes associated with affect and care, as well as
acknowledging their negatives and paradoxes. Radical care should not be settled on the individual level and separated from systems of inequality and exploitation. Instead, it stands in opposition to the neoliberal model of care, which moralizes self-management of the body, by making visible the economic, social, political, and ideological forces.

In the context of the fishpond restoration, the framework of radical care allows us to see the historical and structural forces that have prominently shaped species management and care in the current discourse in Hawai‘i. Engaging with the idea of radical care and activism, I want to show the multispecies fishpond restoration project as a political force powerful for social change. Examining how fishpond restoration actively responds to colonial legacies, I consider some of the socio-historical changes that have precipitated the decline in the number of fishponds and cultural practices associated with fishponds. In 1848, the Great Māhele changed the legal land system to be based on private ownership and dividing up ahupua’a (land division) that altered the manner in which water systems were managed. The US Navy then took control over Pearl Harbor, followed by the Bayonet Constitution that King Kalakaua was forced to sign (Daws, 1968). The final blow was the illegal overthrow of the Hawaiian kingdom in 1893, driven by the greed for land and power that entirely eradicated laws of conservation and sustainability that ruled the island for centuries. Consequently, tourism flourished by profiting off of the commercialization and appropriation of Hawaiian culture. Abundant freshwater resources that once flowed into the bay have been diverted for sugar and other cash-crop plantation, and more recently for housing development. Decline of freshwater is devastating to loko i’a fish production that relies so heavily on the brackish water condition for cultivation of rare marine species native to Hawai‘i.
From a historical standpoint, the annexation of Hawai‘i is followed by a series of governmental policies that aim at the suppression of Native Hawaiian. In the late 19th and early 20th centuries, the U.S. government banned the Hawaiian language from being spoken in schools and public spaces, which had a significant impact on Native Hawaiian’s ability to practice traditional religion, as many religious practices and ceremonies were conducted in Hawaiian language (Trask, 1999). Furthermore, Christianization and assimilation also lead to a criminalization of traditional religious practices. The U.S. government and Christian missionaries actively worked to convert Native Hawaiians to Christianity and suppress their traditional religious practices. This included the establishment of Christian churches and the prohibition of traditional practices, such as hula dancing and the use of traditional healing practices (Kauanui, 2008). In addition, the U.S. government criminalized many traditional Native Hawaiian religious practices, including hula dancing, which was seen as a form of pagan worship (Chan, 2011). Lastly, Native Hawaiians have undergone land seizure and displacement following the annexation in 1898. The U.S. government implemented policies that seized Native Hawaiian lands and forced Native Hawaiians to move to urban areas (Haley, 2014). This disrupted traditional practices and ceremonies that were often tied to specific places and landscapes. Nowadays, legacies of settler colonialism and U.S. imperialism still plagues the Island. While hula dances are everywhere to be gazed upon, they are cultural practices commercialized, and it feeds into people’s consumption of the “Hawaiian culture”.

Under these circumstances shaped by colonial forces, activism emerges as a form of radical care. As we find opportunities to enact and mobilize care, radical care “can present an otherwise, even if it cannot completely disengage from structural inequalities and normative assumptions regarding social reproduction, gender, race, class, sexuality, and citizenship”
(Hobart and Kneese, 2020, 3). Restoration work produces an activism that dares to mediate boundaries and persist with providing care in an environment where collective existence and thriving are made to be challenging. Through this analytical lens of radical care, fishpond restoration work becomes more pronounced in its political significance.

2. “Silent” Activism

The convoluted movements of a shoal of fish that only experienced observers can decipher, represent these ephemeral and elusive moments of joy and fulfillment that render the labor of restoration so profoundly worthwhile. It appears almost as if the fish and the thriving ecosystem they inhabit and care for bear witness to the fruits of the practitioners’ hard work. Continuing to explore and understand the motives behind practitioners’ persistent care labor at the fishpond, this final chapter conceptualizes care as a form of activism, one that is often perceived as “silent”.

Before my internship started at Paepae O He’eia, I was sent an article written by Hi’ilei. In it, she described her involvement with the organization and fishpond restoration as “silent activism”, and it has haunted me ever since. Hi'ilei writes,“those of us who do fishpond work are not very vocal, but we try to lead by example. Sort of a soft-spoken kind of activism…It’s our little bit, our contribution to a very large mo’okū‘auhau of this place” (Kawelo, 2014). Knowing that fishpond restoration is not often seen as activism, she insists that practitioners bring in strong passions to restore something that speaks to the ingenuity of their ancestors. During our conversation, I specifically asked Hi’ilei to expound on this imagery of silence. Hi’ilei recalled the 100 year anniversary of the overthrow and annexation of the Hawaiian Kingdom, a time
when anger and unrest caused divisiveness in Hawaiian communities. For Hiʻilei, it is about exercising her activism in her own way, in this case, through fishpond restoration. In her words, fishpond activism, among other ʻāina restoration projects, strives for visibility rather than vocalness. Even though this type of work is unlike activists who go on the street of Waikiki, protest to shut down water polluting facilities and construction of the Mauna Kea telescope, fishpond restoration is still deemed celebratory in the eyes of practitioners as a form of activism that is responding to the same colonial extraction and an absence of care.

A KUPU intern, Maggie is a digital creator who herself has been directly involved in various forms of organizing and movements; she found herself at fishpond restoration. Commentating on the “low key” nature of the fishpond restoration on social media platform, Maggie treats restoration activism as a crystallization of love labor and good energy:

We’re just here trying to live our best life. You might not even know what we’re doing unless you’ve been here. If you’re just driving past, you might see that there’s less mangrove or there’s a new hale. It’s not like we’re showing off...Hiʻilei and her crew and the people before her who even started to restore this place, they’re just a group of Hawaiians that wanted to do good. And this is where they put that good energy into. And I think that’s activism in itself, like that love is activism, and it’s not what people imagine. It’s not like riots in the street and Rosa Parks style. It’s subtle and it’s beautiful, but it is activism.

Although fishpond practitioners themselves almost never label their work as activism, when I questioned their thoughts about the use of this term to describe their work, they unanimously agreed, “Yes, fishpond restoration is activism but not what we stereotypically call and view activism.” Fishpond activism unfolds in multiple ways. First and foremost, practitioners proudly showcase the vitality and potentials of fishpond care work nowadays. showing people that fishpond care work is actively being done even under the current social and political climate. For Vanessa, fishpond activism means holding out against systematic oppression that made Hawaiʻi food unsovereign and dependent on importation:
The fact that you can focus on what your ancestors did beforehand without having to rely on the state of Hawai‘i. I say that in quotation marks because the government that runs us wants us to be very dependent on imported goods and external things, whereas we have the capacity in Hawai‘i to produce all of our own things. But there are barriers to that where the power is not in our hands or in Hawaiian people. Like it is their place. They should be running the place and they’re not. So I feel like the fact that we even can do this, knowing that the government wants us to stay dependent on them, is in itself a form of activism.

Vanessa’s comment illuminates the current political climate of Hawai‘i as sovereignty movements started gaining momentum. Native Hawaiian rights activist Mililani Trask points out “as the Hawaiian sovereignty movement grows stronger, state and federal governments have increased their activities to circumvent Hawaiian nationhood. Police intimidation, arrests, and criminal prosecution of Hawaiians are increasing as Hawaiians resort to acts of civil disobedience and resistance. Occupations by Hawaiians of traditional sacred places and burial grounds are expanding” (2008, 75). Trask suggests a growing tension between the sovereignty movement and the government’s deliberate oppression of independence. Thus, what characterizes fishpond activism is the strive towards self-reliance and resilience. Kekoa adds that fishpond restoration is “showing that places like this can still exist in the current state of Hawai‘i. The environment we’re in now shows that traditional Hawaiian practices can still be done in this day and age and that there are more of us than people realize.” Both accounts speak to the central role of care-taking, grounded in traditional cultural values of Native Hawaiians, in achieving self-sustainability.

Fishpond practitioners also point to fishpond activism as building future generations’ capacity to practice mālama ‘āina. Keahi, among other workers, see their work profoundly influencing Hawaiian youths:

They don't know how many people will turn to ‘āina, silently…At the end of the day, we know it's pono, we know it's okay. We know we're not doing nothing
wrong… I think we say it loud and proud and people come here. But I think the way we go about it and the way we change people's minds and the way we get to people is pretty silent, like how they leave here and they have a different understanding and they go through life differently just by coming here one time. Might not change them super, super drastically. But it's a slight change when they come here so slowly we plant seeds. You plant seeds in them, and hopefully the seeds grow and flourish and. Make new leaders for the next generation.

There is a growing recognition that youth education is a powerful force of changes by instilling values of ecological care. Practitioners believe that this creates a generation of leaders committed to mālama ʻāina in the long run. Caretaking is a revolutionary praxis that Western ontologies failed to prioritize in the face of habitat destruction and ecological changes. Indigenous philosophies and practices have always emphasized a mode of co-living with each other that requires an immense amount of care, which allows us to acknowledge the revolutionary potential to break the cycle of colonial violence. The Red Nation writes that “what is often downplayed is the revolutionary potency of what Indigenous resistance stands for: caretaking and creating just relations between human and other-than-human worlds on a planet thoroughly devastated by capitalism” (2021, 7-8). Through care relations, colonial power can be disrupted as we glimpse into other ontologies that allow us to think and relate with other beings: plants, rocks, water, soil, and ancestors. This process of worlding and maintaining life with others makes fishpond restoration a prominent and promising force of activism.

**PART II: Non-Sovereignty**

Fishpond restoration stands for a mode of sovereignty that manifests itself in perhaps a slower, processual, and silent mode that centers around reclamation of care work and labor itself, through which restoration emerges as the project of sovereignty grounded in labor and care.
start from Yarimar Bonilla and Audra Simpson’s conceptualization of sovereignty to think about the implications of sovereignty beyond what the original idea of food sovereignty seems to stand for. Specifically, I look at how “non-sovereignty” and indigenous sovereignty outlined by these two anthropologists can be adequately applied to the framework of thinking about sovereignty at the fishpond. In this section, I argue that three particular ways that the fishpond sovereignty manifests itself is through, firstly, the ritualization of restoration; second, transformation of self; and last, efforts of community building. For the last part, I specifically draw on Indigenous scholars’ work that focus on collective care practice that centers the notions of community. What I found myself at odds with was finding a way to argue for how the self and collective interact in these processes. I decided that, instead of adopting a rigid logic of defining the self and the collective, my analysis is going to flow through a spectrum. While I distinct moments between self and collective, I do it with an understanding of Indigenous ontology that guides the work and refuses a dualist understanding. The non-sovereignty sovereignty reflects how self is situated within the collective and vice versa and seeks to break down the binary boundaries.

In his work on the French Caribbean societies, Yarimar Bonilla developed a concept of non-sovereignty to understand the political and cultural dynamics in the contemporary era. He challenges that idea that sovereignty - the exclusive control over a territory and its people - is the defining feature of the modern nation-states. Bonilla’s framework of the condition of non-sovereignty as a legacy of colonialism suggests that political and economic power is dispersed across multiple actors within and outside of the nation-state. This non-sovereignty is characterized by a lack of clear boundaries between the state and society, as well as between different levels of government and other actors such as multinational corporations, NGOs, and international organizations. This condition creates a space for alternative forms of political and
social organization that challenge dominant power structures (Bonilla, 2015). As Chapter 2 has shown, the restoration of fishpond involved multiple actors from state agencies, to large corporations like Wholefoods, and other non-profit organizations. The care work is never done solely by Paepae O He’eia. In fact, POH’s efforts for collaboration and community provides a space for creativity and resistance, as well as for the emergence of new forms of identity and belonging that challenge traditional notions of nationalism and liberation. It encourages us to rethink a political and social relationship beyond the borders of the nation-state.

1. Ritualization of Restoration

When the morning sun is just barely visible, the atmosphere is infused with oceanic breeze, emitting a comforting warmth. When all the chit-chatting at the garage suddenly disperses, there is a silent agreement that indicates the beginning of a day of work, the ritual of piko. Some take off their shoes and stand either in a circle or a straight line on a patch of grass. We take off any pāpale (top, hat) in order to receive knowledge, guidance, and prayers from the above. We pule, or pray, to set purpose and intention for the work, and ground ourselves in the space. The oli (prayer) and mele (songs) are expressive of the temporality and spatiality one experiences at the fishpond, as they are dedicated to their ancestors, to rocks, and other beings in the space. The practice of ritual is not atypical at Paepae O He’eia, and some other fishponds around the island as well.

Protocols like piko initiate a day of work, ground individuals to their work, give meaning to place, and foster a sense of humility to those that came before. I would like to embrace Meekison and Higgs work that focuses on the performativity and ritualizing of restoration.
Anthropological theories of performance help us rework the relationship of human and nature and generate meanings out of ritual experiences that can be applied to creatively transform biocultural restoration projects. In essence, the argument of Meekison and Higgs is based on the division of culture and nature in Western society that gives ritual restoration legitimacy. This focus on ritualization, I argue, is an analytical perspective to understand non-sovereignty at the fishpond. Rituals at the fishpond invites us to question our assumptions about power, authority, and territory in a novel and nuanced way, and to recognize the diverse and complex ways in which individuals and collectives are navigating the present political landscape. They also celebrate Native Hawaiian’s own way of asserting their forms of sovereignty and shaping their own futures.

I sat both at the Summer and Winter Solstice ceremony. The morning of Winter Solstice, we lined up on the first hale of the wall, facing east, where the sun rises from behind a tier of condominium. The jarring noise of heavy machines and lawn mowers in the neighborhood made it challenging not to notice the clash modernity has with the deep and solemn sound reverberated from the conch. Afterwards, we sat down in a circle, drank ceremonial ‘awa mixed with coconut water, and shared our resolutions to a new year. Keahi reminisced how people sitting at the circle have changed every year. Quiet for a while, he added “protocols give specialness to the place”. The ceremony was a keen reminder of an individual's sense of and obligation to places and their capacity to transform and be transformed by the landscape. One of the scientists that I interviewed responded that his work did not provide a meaningful change in his relationship with the land, perhaps due to the lack of ritualized practices that restoration workers experience on a daily basis. Rituals like Piko and Solstice ceremonies have no specific audience in mind. The participating individuals are better from this exercise of self-reflection. I argue that rituals in
restoration achieves transformation through the quotidian act of reflection and meditation, which should be distinguished from a sudden or transient epiphany.

I should caution, however, that rituals in biocultural restoration should not be treated as a religious object that confirms the “culture integrity” of restoration. Neither, I do not find it agreeable to interpret the religious symbols and meanings behind rituals in restoration. Rather, ritualization in restoration should be understood as lauded aspects of social life that invite communal creativity and individual reflexivity. To support this claim, I borrow from Winona LaDuke’s writing of the Green Corn Dance of the Seminoles, in which she argues that “preserving the sanctity of the ceremony is the central responsibility for each subsequent generation and sustains all life” (2016, 44). Kekoa, for instance, started to hold himself to protocols the more pule and oli he encountered overtime. It culminated in his growing and deeper respect for cultural ceremonies and the land.

Rituals offer others like Vanessa, a female worker at the fishpond, a space to reflect on her positionality and navigate different belief systems. With Vanessa’s beautiful voice from the chorus, she often leads prayers and songs, but with her enthusiasm, she is also the one who greets and interacts with children and tourists from all different cultures who come to the fishpond. Growing up in a Catholic family, she developed a special relation with spirituality at the fishpond:

We grew up in the Christian church. So I was always praying, like how we do pule in our opening circle every day. I think for me, the spirituality part is like where you set your intentions on a thing and then you try to manifest that thing. That can go for cultures all over. That’s what’s so beautiful about this place because when we piko at the fishpond and then you call out to whoever it is, like…or whoever, it's setting your intentions to the place that is a spiritual side of it. That’s the part that feeds you. It just makes you feel more grounded and then you can just adapt to whatever belief system you think.
Daily rituals are adaptable to accommodate the diverse communities that make up the fishpond landscape. Rituals are sensitive to the multiplicity of beliefs and religions. When I started working first at the fishpond, the daily pule was a source of discomfort. I feel out of place. I participated in the ritual feeling like a complete outsider. Frankly, however, it did not hinder my own work. It enhanced my work ethics as I understood the intentions behind them. While incompatibility, discomfort, and feeling of alienation are unavoidable, ritual practitioners at the fishpond endeavor to engage participants who do not share the same upbringing or beliefs. One of the prayers that we do almost daily is na ‘aumakua. ‘Aumakua is a family spirit and guardian. To Vanessa, everyone has their family and generations that came before oneself, and it is spiritually fulfilling for her to feel connected to those people who came before that would wish for her to succeed. Navigating her own way of thinking in this world with other systems of thought that exist is challenging, but “it [is] also a good challenge”.

Rituals instilled more profound meaning in restoration labor: it is a performative and expressive act, whereby individuals are working on the land and expressing their relationship to the land and to broader social, cultural, and philosophical traditions (Meekison and Higgs, 1998). States of communitas in rituals generate energy of shared intimacy and communal joy that is needed to bring out restoration and a reconfiguration in multispecies relationships. As a by-product of liminality, communitas is especially powerful to generate connections to others, restorations, and landscape (Turner, 1969). In the care labor of restoration, practitioners were offered the chance to rearrange their place in nature and reconfigure their personal relationships with the land. At the same time, they derive their own meaning of restoration, self-cultural identity, navigate, and rework their personal beliefs and values in relation to the environment. Overall, ritualization of restoration provides a critical perspective on the complexity of political
and cultural life in modern day Hawai‘i, and invites us to rethink about power, identity, and belonging in a globalized world.

![Figure 21: Summer Solstice Ceremony. Photo by the author](image)

2. **Self-Transformation**

The transformative power of rituals, either temporary or enduring, is undeniable. Yet in this following section, I explore the ways in which self-transformation for fishpond practitioners is achieved through care work and reframe Indigenous Sovereignty in this novel context. One of the most important questions I asked as part of my interviews is: how do you feel like your relationship with the ‘āina has changed after you started working here? While these individual experiences are complex and personal, many responses I garnered ultimately circled back to the
notion of transformation of self as a result of the caring relationship with the land. Recalling the mission of the organization to feed people through *physical, cultural, and spiritual sustenance*, this section pinpoints the cultural and spiritual aspect of care work that proves to be rewarding and sustainable. As the landscape is constantly in the re-making, so are the people and other-than-human entities who grow and change concomitantly with the fishpond.

For Hi’ilei and many others, the restoration work provides an identity. It is through decades of learning, trailing, educating, and caring that one gains a different sense of self.

I've changed a ton. I still feel like I love all of the things that I love. That hasn't changed. When I first started here, I never thought that I would be an educator. And soon after starting here, I became an educator. Not by palapala, not by credentials, but because everybody here is an educator. When it comes to fish, that's kind of my thing. But also it's different. It's different from what my family teaches. The things that I've learned from this place, specific to fish, are very specific to this place. Fish don't behave the same in the fis pond as they do outside of the fish pond. Even like little things, like when my dad comes here, it's like he's learning. And I'm able to teach him. It's very difficult to teach my dad, by the way. I feel like I'm able to teach even my 80 year old, to be able to teach your kupuna, or makua, is kind of crazy to me. I used to be really hyper real hyper. When we first started this org[anization], I had so much energy, I was like super muscular, super strong. But I feel like because of being in the office, I've lost a little bit of that muscle memory, like muscle strength. Some people have told me that I've settled, with myself and I think that just comes with age. Yeah, it's changed me a bunch.

Hi’ilei’s narrative illustrates this process of personal growth and transformation in several ways, including her role and position at the organization, her ability to learn and teach fish behaviors, and a sense of contentment with her current self. For others, self-transformation for practitioners involves a degree of reconnection with cultural traditions and spirituality as well as reclaiming agency to redefine their relationship with themselves, communities, and the environment that dismantle colonial structures. I frame transformation as “becoming with”, a concept that Donna Haraway developed to describe the process of co-constitution and transformation that occurs in
interspecies relationships. This is an invitation to sharpen our awareness of the ways in which the human experience is also constituted by a more than human sociality.

Keli’i is the current caretaker of the fishpond, meaning that he lives in the house sitting on the fishpond property with his family. During his first couple of years as a caretaker, he almost never got a peaceful night of sleep, constantly anxious of trespassing, poaching, and just random people walking out on the wall at night. When the stress and anxiety of care-taking the pond proved to be overwhelming, overtime he learned to turn to the spiritual guidance that the fishpond offers him. His trust in the guidance and wisdom of spiritual entities like Meheanu and other Kia’i that came before him, sustained him through the heavy responsibilities of being a caretaker.

I always talked about Meheanu and our other guardians before. In my first couple of years, I was journaling a lot, and I was just trying to keep track of the different Ho’ailona, different signs, and the different things that were occurring around myself, my family, and the fishpond that I never noticed before.

Keli’i gained a much deeper connection with the fishpond not simply through dedicating all his time to the point that he falls asleep and wakes up every day to the fishpond, but through the ability to see himself as a part of the continuum of kia’i. Keli’i, and other spiritual presence at the fishpond that he referred to, are never fixed entities, but rather are constantly changing and transforming in relation to one another. “Becoming with” entails a process of mutual learning which can be seen from the ways in which Keli’i learned to journal, observe, and interpret signs, and eventually he developed much more complex and nuanced relationships with other forms of life.

Others tie their transformative experience to the notion of time and generation at the fishpond. Keahi had a great zest for Hawaiian culture when he first came to this fishpond, as a multiracial young Hawaiian eager to prove his Hawaiian identity. In college, he enrolled in all
the Hawaiian culture and language courses he could and fell in love immediately with the work at the fishpond from taking a course with the current Executive Director. He said:

  But yeah, for me, I definitely am not the person I was and the place did that to me. The people helped. But we talk about our mo’o, her name is meheanu. I think what's so cool about the pond is that nothing supersedes the spiritual aspect of this place. What anchors all of us down is that: we're not that important in the lens of 800 years. First of all, you get to be a part of a 800 year old story, which is already pretty amazing. And then you hear stories like we talk about maka nui, auma auma, and we talk about some of these old caretakers whose names have lived on to this day, which is another amazing story to even be, even if we're just putting ourselves in the story with those people we base our pule and our prayers on.

Keahi’s account points to the transformation he experienced as a result of his intimate care relations with the ‘āina. On the one hand, the fishpond provides him spiritual sustenance that ultimately shaped and reaffirmed his Hawaiian identity. Blessed to be a part of the fishpond spirituality, the work is all the more meaningful when he recognizes that the animals, plants, water, and rocks he touched are all contributing to his meaningful ways of means. Donna Haraway writes that “if we appreciate the foolishness of human exceptionalism then we know that becoming is always becoming with, in a contact zone where the outcome, where who is in the world, is at stake” (2008, 244). This involves a recognition of the ways in which humans are already embedded in a web of relationships with other beings, sharing feedback loops and vulnerability. Haraway argues that humans are always already becoming with others. Whether we are aware of it or not, we are deeply intertwined in each others’ lives and existence. Becoming with ground self-transformation in connection and challenging the erroneous belief that humans are exempted from the ecological community.

3. *Collective Care Strategy as Activism*
Non-sovereignty sovereignty stands for the capacity to build collective care strategy. In Simpson’s writing about Mohawk sovereignty, she discusses the ongoing debate about membership law in the Mohawk community, which is not only presented as a crisis, but also a living example of colonialisms’ existence. In her words, “the Mohawks of Kahnawà:ke strive to articulate these modalities as they live and move within a territorial space that is overlaid with settler regimes that regulate or circumscribe their way of life” (2014, 7). While the Western concept of sovereignty is based on a particular understanding of territory, law, and authority, this conception is incompatible with Indigenous self-determination and governance. Communities are resisting colonialism in asserting their own visions of sovereignty, including this form of silent political activism and community organizing on various scales.

For Paepae O He’eia, Native Hawaiian sovereignty stems from the capacity to mobilize community and practice collective care. The geographic human community unfolds in multiple ways. One of the most prominent… in the same ahupua’a, community building and collaboration blossomed among Papahana Kualoa, an organization devoted to stream and water restoration, Kāko'o ’Ōiwi, an organic lo’i kalo farm, and the He'eia National Estuarine Research Reserve (NERR). Together, these organizations and institutes formed an ecosystem and community of their own to mālama natural resources that contributed largely to the traditional food resurgence of O‘ahu. The collaboration is a living model of a thriving and resilient social-ecological community.

On any given summer day, the fishpond is bustled with K-12 educational groups taking a field trip down to the fishpond, interns dedicating their time to environmental restoration work, and community volunteers who give their day to help with maintenance tasks at the fishpond. One of the school teachers that brought a group of 3rd and 4th graders to the fishpond once
shared with me that her connection started 10 years ago when the landscape was drastically
different. It is not uncommon for other volunteers to also have come back to the fishpond and
continue their engagement with the place. Hi’ilei Kawelo discussed the physical displacement
and culture disconnection people have with the ocean and fishery; she expresses that “some
people don’t even know what it is that we still have. They don’t know that they have an 88-acre
fishpond that they can come and visit anytime they want” (Kawelo, 2015). And the task of
reconnecting is not without its challenges. For instance, Kawelo speaks about teachers not
coming to the pond “because they are inundated with standards and testing” and other
bureaucratic processes that are present in our modern education system. Regardless of these
difficulties, it is still important to offer the community the experience to learn about ‘āina and
commit to the work that reconnects them with resources. To the mind, body, and spirit,
participation in nature, according to Tewa scholar Gregory Cajete, fosters a sense of kinship and
affiliation that nourish the community and individuals, since “after all, these relationships are the
ultimate source of continuity for any culture” (Cajete, 2018, 24).
Saturday, December 12th of 2015, was a historical moment for the fishpond and Paepae O He’eia. Starting from the morning, a line of two thousands volunteers stretched across the entire rock wall of the fishpond. They pass buckets of rocks and corals down the line of human hands just like oral traditions detailed what their ancestors have done. They gathered to fix an opening in the wall caused by a heavy rain flood 50 years ago. Part of the campaign was to fundraise $100,000 for the repairs. Though they exceeded the goal, Keli’i conceived of an idea that put together a large community effort to fix the wall. Closing of the wall was the final step for the pond to be fully operational. At the time, there was large media coverage of this event, partly to help publicize it and garner volunteer support, partly to report the magnitude of this community
workday. One of the articles writes: “the passing of rocks by hand, mauka to makai (mountain to ocean), was how ancient Hawaiians once built fishponds and hasn't been used on such a large scale in 200 years”. What was not known, perhaps, was the wearing planning preceding the event, as well as the emotional impact it had on the practitioners afterwards.

It took Paepae O He’eia five and a half years to obtain permits to fix the 200 foot long puka in the wall. Leading up to the event, according to Keahi, was one of the hardest things that the restoration crew has done. There is an enormous amount of rebuilding work even before pani ka puka. The portion of the wall that has to be rebuilt was 15 feet tall, so much of which has to be done underwater with snorkeling equipment. “The amazing thing leading up to that [is] just pushing out limits to something we never had to do here and we never will have to do that”, Keahi affirms this unique experience in itself. Hi’ilei told me that she lives in fear of big events, and eventually Keli’i managed to convince her, saying “Come on, we got to do something!”, despite all of the fundraising, logistics, and coordination. Even Keli’i was daunted by the task of feeding 2,000 volunteers. In three months time, the event was put together. Gesturing to an empty ground outside of the garage, Hi’ilei vividly recalls the madness she experienced that day:

We had a big pile of coral over here and they lined the wall from the pile of coral all the way out to Kahookele and one solid line and just passed buckets. And the weather was similar to what it was yesterday before it rained, super hot and humid, like yuk. That was crazy! We had 2000 people on site. We fed everybody fish and poi, fish and poi stew. Yeah it was crazy. We had to shuttle people. They got dropped off at King Intermediate School Park there, caught the shuttle bus here, dropped off. And then in groups of 50, we would have them laid out onto the wall with a different alaka’i and then they would get in line and then until the line was solid, then we started passing buckets.

There was so much behind the scene: from Eagle Scouts running fruits and water to everyone in line, to stationing current and past employees to oversee work safety. Hi’ilei felt like she was

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7 This excerpt is from a news article on Star Advertiser in 12/13/2015 titled “JOINING HANDS VOLUNTEERS EMPLOY ANCIENT METHOD TO RESTORE HEEIA FISHPOND”
“dumbfounded” post the event while Keli’i was riding an endorphin high for a couple of weeks.

The physical and emotional effort that went into fundraising, coordinating the event, and preparing for community meals culminated in an amazing sense of accomplishment and spiritual connection afterwards. He doesn’t know a time in the recent known history of Hawaii, that thousands of people got together for the monumental feat.8 “It was like we are living history. We are living a day in history”, Keli’i explained his excitement at the time, at the number of people the organization is able to mobilize and also at the ability to finally grow fish and fully restoring the function of the pond and feeding the community, which they have been talking for fifteen years at that point.

Pani ka puka was an event that instilled hope into fishpond practitioners. It rekindled their hope for community level resilience and mutual support. She giggled, joking that she still had a phobia of that day. Jesting aside, Hi’ilei was particularly moved when she could imagine this was what her kupuna would have seen and lived when the fishpond was built. She is hopeful knowing that “it is possible and doable and that people want to participate in things like this…they want to be able to contribute. It was just really promising”. For Keahi, this is a testament to the power of community building that the organization grew out from. Pani ka puka showed him that the organization and fishpond restoration at large is backed by the support of the community. It is even more important for the cultural reclamation work, he explains “in the old days, we lived as a community because you relied on everybody's skill to survive. Today, if our car needs fixing, we go to a car dealership, buy a new car, we go to a mechanic. But you don't know that person. Or if we are hungry. We go to the store.” The connection and mutual care for each other in the community is lost. Therefore, for Keahi to see a moment in time when a

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8 Honolulu Magazine covered this story, and opens the article with “t was an event not seen in Hawai’i for about 200 years.” [https://www.honolulumagazine.com/thousands-of-volunteers-work-together-to-fix-pani-ka-puka/](https://www.honolulumagazine.com/thousands-of-volunteers-work-together-to-fix-pani-ka-puka/)
community gathers for one purpose, mimicking what the kupuna have done, is a reminder of the hard work that his ancestors instilled in the place.

* * *

To conclude, this chapter highlights the political condition and revolutionary potential of care work at fishpond restoration. I particularly emphasized the ways in which power and agency are not only top-down, but can also arise from the collective actions and practices of collective care and communities. Silent activism and rituals serve as strategies for contesting the power of dominant institutions and creating alternative forms of organizing that rely on collective strength and solidarity. The non-sovereignty also demonstrates that a community is intergenerational and tied together through hard work, memories, and stories. Linda Hogan writes about this cultural memory that I found resonated with the intergenerational and interspecies community building salient at the fishpond: “Our ancestors respected not only animals, but all the other forms of life with which we shared this world, from the soils that nourished seeds, the trees that sustained us, to the grains and grasses that fed us and our animal relatives in our co-inhabited and tightly interwoven ecosystems. This cultural and spiritual ecology was central to our lives” (Hogan, 2018, 191). The work of fishpond restoration, therefore, allows us to define activism as the constitutive process that occurs as all-beings move together through time and space and the capacity for continual, cyclical, and reciprocal interspecies community care.
Hi’ilei, with her vast knowledge of marine science, was the person who introduced me to fishing. During our trips to Sandy Beach, she would expertly identify various types of limu. Unlike her younger self, who was eager to catch every fish she saw due to her upbringing in a fisherman family, Hi’ilei is content with simply observing them now, since she understands that “[the fish] are there because of something pono (right, just) that’s happening”. Observing the fish at the fishpond has taught me that they possess a natural inclination to care for their environment. While scientific explanations may help us understand animal behavior, it fails to encapsulate the essence of these basic acts of care that sustain our environment and relationships.

To elevate the labor and care work at the fishpond, we must shift our framing to one that prioritizes the development of interspecies solidarity and justice. This concept, as expounded by Kendra Coulter (2016), challenges the prevailing notion of human superiority and emphasizes the interconnectedness and interdependence of all species. This thesis has illuminated the intricate network of care that binds humans and other species together. Through recognizing shared interests, vulnerabilities, and oppressions, we begin to move away from a view of other beings as mere objects of exploitation and towards an understanding of their inherent worth and agency.

The labor of caring for the fishpond is rooted in a solidarity-based approach, rather than one of mere sympathy. This form of solidarity extends beyond a simple moral or ethical stance, and is a necessary and pragmatic strategy. The issues that Hawai’i currently face, whether they
be environmental or social, are inextricably linked to the complex web of relationships between multiple species. By acknowledging and prioritizing interdependence and the mutual well-being of all beings, we can strive towards a collective future that is both equitable, sustainable, and flourishing.

_The work that never ends_

Upon every visit to He’eia fishpond, it becomes evident to me that the landscape is always changing and evolving. The gradual thinning of the mangrove forest is just one example of the change that unfolds before my eyes. Concurrently, practitioners are constantly engaged in novel projects, such as the cultivation of additional land-based food and the construction of a hale at a nearby highschool in addition to building a traditional imu on the isolated stretch of the wall. My curiosity for the future trajectory of the fishpond drove me to ask Keli’i, “what do you envision the work at the fishpond to be one day after all the invasives are removed?” In response, he paused briefly before articulating his desire for the community to foster an intimate relationship with the ‘āina by continuing to cultivate land-based food, “it is a continued vision of people, of building relationships closer to ‘āina. That vision hasn't changed. It just continues to take time.”

Mirroring the never-ending work of weed wacking and removing the non-native species, there is an ongoingness of the restoration of fishponds. What care work that the fishpond leaves open is the uncertainty that resonates with social justice and solidarity work. Like soil time, fishpond time is cyclical rather than linear and teleological. There is a horizon that practitioners keep striving towards, but care work is not a permanent state of affair and is never fully finished.
The journey of engaging in the work of non-profit organizations that focus on Indigenous traditions and ecological restoration is a multifaceted and paradoxical one. As I reflect on my experiences, I am struck by the beauty of the journey and how it entails coming to terms with discomforts and contradictions. While my thesis has shed light on some of the complexities of the work, it has also left me with several questions that demand deeper exploration. For instance, what is the future path of non-profit organizations that seek to reclaim Indigenous traditions and promote ecological restoration, especially in the face of rampant corporate capitalism? Is there a way out of this system that has fueled ecological destruction and social inequality in the first place?

As I delved into the intricacies of invasive species removal, I grappled with the meaning of restoration and how it is connected to the larger socio-economic and political context. The repurposing of mangrove trees to build structures like hale and mākāhā raises a fundamental question about whether it is possible to revert to a time when mangrove was absent in Hawai‘i, and whether the killing of mangrove trees can truly contribute to the life of others. This paradoxical situation can be seen as a metaphor for how non-profit organizations currently operate in the capitalist economy. Even as non-profits like Paepae O He‘eia adopt certain aspects of capitalism, such as partnering with corporations like Whole Foods and inviting them for workdays, they contribute to the making of the landscapes, much like mangroves. This suggests that it may be impossible to completely eradicate the impact of capitalism on non-profits, and that we need to confront the paradoxes and complexities that arise from operating within this system in order to move towards a more sustainable and just future.
Hope and Joy

At the crux of my investigation lies the fundamental inquiry of “what motivates individuals to persist in this line of work?” Throughout this thesis, I have employed a variety of frameworks to contextualize and analyze my ethnographic findings. However, during an interview at the fishpond, I was confronted with a different query: “why do you continue to return to the fishpond and what drives you to share its story with people in Pennsylvania?” In response to this question, I have undertaken a self-examination of my motivations. To be frank, as I strive to be an activist anthropologist, I am compelled to engage in research that can contribute in some capacity to addressing systemic concerns. To be quite blatant, Without the potential to make a meaningful impact, I would not have pursued this project. If I had to provide an answer, it is because I am invested in this work, and I am optimistic about its potential to contribute to a food-sovereign Hawai’i in the future.

Throughout the arduous process of crafting this thesis and exchanging ideas with colleagues and advisors, I have become cognizant of how much of my current thinking and approach to the work is motivated by a sense of ‘hope’ and a yearning to be ‘hopeful’ through my labor. I perused several of the books that have significantly influenced my perspective but did not receive explicit citation in this work. These include Anna Tsing’s Mushrooms at the End of the World and Robin Wall Kimmerer’s Braiding Sweetgrass. As I flipped through these texts in the weeks following my thesis defense and leading up to submission, I found myself revisiting the importance of hope and its potential to drive meaningful change. Lying dormant on my bookshelf for some time, these volumes were imbued with insights that truly helped me navigate the trajectory of my work and determine how best to conclude this project.
I start with the Matsutake mushroom. In Tsing’s writing, the mushroom thrived in damaged landscapes precisely because of its ability to form symbiotic relationships with a wide range of organisms like trees, insects, and fungi. This could be a powerful metaphor for humans to learn to adapt and live in a world so drastically shaped by environmental changes. I approach Tsing’s work carefully knowing that what we need in the present is not blind optimism thinking that we can simply “fix” the problems that capitalism has conceived. The world we inhabit is in a perpetual state of flux and progression, compelling us to explore novel modes of existence for our very sustenance. Embracing the complexity and uncertainty of our world can lead to the discovery of new possibilities for the future, which is a beautiful and inspiring journey.

I also hope to understand restoration as a transformative journey of healing. My exposure to Kimmerer’s work in my Race, Gender, Class, and the Environment class opened my eyes to the story of Onondaga Lake’s restoration - a superfund site that was severely polluted. At first, the destructive power of corporate capitalism and the legislative body's irresponsibility left me feeling despondent about the possibility of justice. However, Kimmerer’s powerful words saved me from succumbing to pessimistic despair. In her book, she wrote, “despair is paralysis. It robs us of agency. It blinds us to our own power and the power of the earth. Environmental despair is a poison every bit as destructive as the methylated mercury in the bottom of Onondaga Lake” (Kimmerer, 2013). This line made me realize that hope and action are vital to healing the environment and ourselves. In today's world, we are bombarded with messages of despair, which can make it all too easy to fall to pessimism and the growing phenomenon of “climate anxiety.” However, it is important to recognize that restoration is a journey of healing, which can motivate us to take action and rekindle our relationship with the land. By learning the language of the land, we engage in a dialogue of reciprocity and gratitude, aligning ourselves with the wisdom of
the land and working towards a common goal of restoring the land as our home. In this way, we can find hope and purpose in the midst of even the most dire of circumstances.

I want to remind my readers and myself of the joy that accompanied this research and ‘āina work that I regret not being able to delve into more deeply in this work. The joy that I experienced during this journey made the work so much less tedious and fun-filling for me: jamming to reggae tunes, learning Hawaiian pidgin slangs, munching on delectable snacks after work, and constantly cracking jokes with my co-workers. Each individual’s unique mana, spiritual energy or power, contributes to the overall vibrancy of the environment. These fond memories highlight the fact that bemoaning environmental destruction impedes us from taking constructive steps to care for the land. It is also the immeasurable happiness that sustains us.

Figure 23: Early morning of Heʻeia Fishpond. Photo by the author


Bocci, Paolo, and this link will open in a new window Link to external site. “Tangles of Care: Killing Goats to Save Tortoises on the Galápagos Islands.” Cultural Anthropology 32, no. 3 (2017): 424–49. https://doi.org/10.14506/ca32.3.08.


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Appendix 1 - Interview Questions:

1. Tell me a little about your work at this organization? How did you find out about their work?
2. What is your role at the organization?
3. What got you motivated to work in fishpond restoration?
4. How do you define the mission of this organization? How do you see your work fitting into the organization’s mission?
5. What is your personal goal by working at this organization?
6. Can you speak a little bit about your past experiences doing ecological work? What other environmental movements and/or organizations have you been involved with or been a part of?
7. How has your connection to the fishpond, the people, and the organization changed since you joined?
8. How has the work of ecological restoration changed, or not, your relationship to the land/environment?
9. What has been the most rewarding part of working at the fishpond and the Ahu’pu’a’a (land division) of He’eia?
10. What may be a source of frustration sometimes doing this type of ecological work? What is the most difficult part of your job?
11. Why should people care about fishpond restoration?
12. How do you see your work in fishpond restoration as related to caring for land/the environment?
13. What does malama aina (care for the land) mean to you? How do you practice that in your daily life and your work at the fishpond?
14. What type of relation of care between fish and people does fishpond activism put in practice? (is fishpond just about human caring for fish/nature or is it also fish that are caring for humans in some way?)
15. What are, in your experience, the larger societal issues that fishpond practices try to address?
16. What does pono (justice) mean to you?
17. How, if at all, do you see pono reflected in Hawaiian fishpond practices?
18. Why do you think fishpond practice is a “silent activism”
Appendix 2 - Glossary of Hawaiian Terms

‘āina - that which feeds, typically translated to land
‘ama ‘ama - mullet
ahupua’a - land division usually stretching from the uplands to the sea
ali’i - chief, king, queen
aloha -love, to love, affection
aumakua - ancestral spirit
auwai - ditch, water canal
hale - house
heiau - place of worship, elaborated stone platforms
Honi - a kiss
ike - knowledge or experience
kai - ocean
kapu - sacred, prohibited
kia’i - guardian
konohiki - headman of a land division or ahupua’a
kūpuna - grandparent, ancestor, honored elder
limu - seaweed
loko i’a - fishpond
loko i’a kalo - fishpond with taro patch
loko kuapā - seawall fishpond
maka’ainana - commoner, people in general
mākāhā - sluice gate
makahiki - Ancient Hawaiian new year festival
mālama - to care for
mana - spiritual power
mele - songs
mo'o - lizard, water spirit
mo'olelo - story, myth
ohana - family
oli - chants
pāpale - top
pono - righteousness and balance
pule - pray
wai - water, fresh water