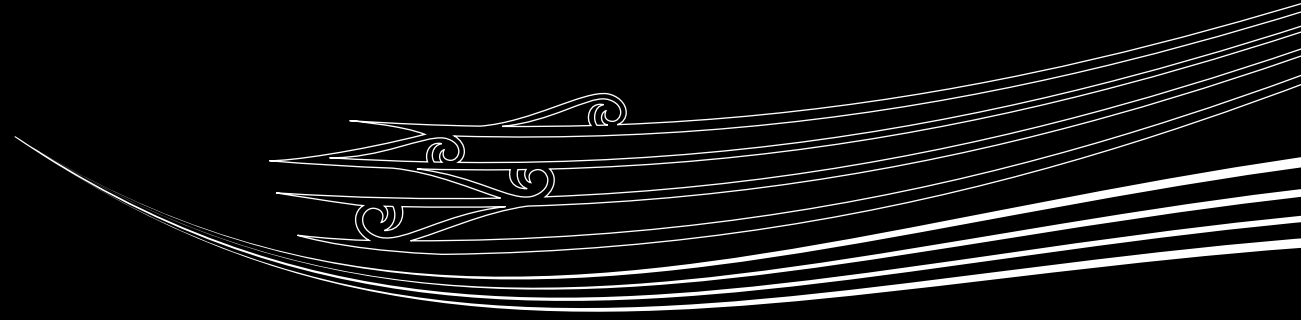




REBUILDING THE 'AUWAI: CONNECTING ECOLOGY,  
ECONOMY AND EDUCATION IN HAWAIIAN  
SCHOOLS

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## Abstract

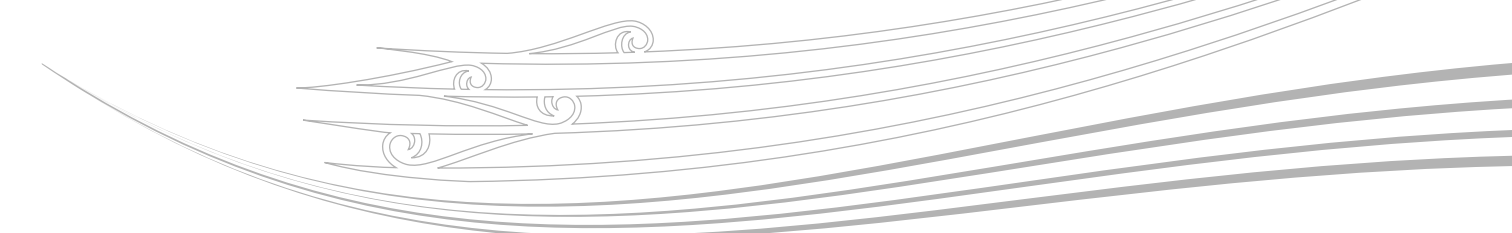
‘Auwai are irrigation ditches developed by Kānaka Maoli (Native Hawaiians) to enable sustainable, prolific, wetland taro cultivation. This article traces the decline of ‘auwai and lo‘i kalo (wetland taro fields) alongside the loss of Kanaka Maoli control of our national school system, both driven by a shift in the dominant economic system and sealed by the shock of United States (US) occupation. Drawing on oral history interviews with teachers, and on Corntassel’s notion of “sustainable self-determination” (2008), I tell the story of current efforts to rebuild ‘auwai and lo‘i through a partnership between a Hawaiian culture-based public charter school and the nearby state university. This rebuilding provides a metaphor for educators’ efforts to restore pathways of cultural knowledge transmission against continued imperialism. I argue for simultaneous, overlapping efforts to reform education and to rehabilitate the economic and ecological systems that will again allow us to feed ourselves and our ‘āina (land, particularly in food production). Indigenous education must engage in transforming the larger political economic structures that organize our relations with the natural resources.

## Introduction

‘Auwai are the irrigation ditches that Kānaka Maoli (Native Hawaiians) developed to allow for sustainable, prolific, wetland taro cultivation.<sup>1</sup> ‘Auwai supported a robust population in ‘Ōiwi Wale (only Native) times and are designed to work harmoniously within an ecosystem, leaving water in the natural watershed areas and enriching estuaries, to provide for Kānaka and the kūpuna (elder relatives) species that live in the surrounding oceans and streams.<sup>2</sup> Over the last 200 years, the active use of these ancestral technologies of irrigation and farming declined due to a number of factors: massive population collapse, dislocation of Kānaka from the land, suppression of Hawaiian self-governance, and diversion of water for industrial agriculture (namely sugar), housing and tourism development. In many places throughout the islands, ‘auwai and lo‘i kalo (wetland taro field) complexes were overgrown, destroyed or forgotten.

In this article, I trace the decline of ‘auwai and lo‘i kalo, alongside the loss of Kanaka Maoli control of our national school system, which was established in the mid-19th century. As the dominant economic system shifted, Hawaiian-controlled education and subsistence agriculture lost ground. Poor social and ecological health followed in the wake of Kanaka Maoli loss of political and economic power. Throughout the 20th century, during

1. I use a number of terms interchangeably to refer to the indigenous people of Hawai‘i, who are genealogically connected to Ka Pae ‘Āina ‘o Hawai‘i (the Hawaiian archipelago) since time immemorial: Kānaka Maoli, Kānaka, ‘Ōiwi, ‘Ōiwi Hawai‘i, Kānaka Hawai‘i, Hawaiian and Native Hawaiian. Preference is given to native terms. I use these terms to mean all people of ‘Ōiwi ancestry, not restricted by blood quantum.
2. Young (1998) coined the term “Ōiwi wale”, which is distinct from the term “pre-contact time”, often used to privilege the encounter with European foreigners as a primary reference point for Pacific histories. For description of the food production technologies that coincided with Hawaiian population growth during these times, see Kelly (1989).



prolonged military occupation by the US (Sai, 2004; Craven, 2004; Perkins, 2006), kalo (taro) production continued to decline, at the same time as a model of “development” reliant upon mass tourism and American-styled suburbs took hold.

In keeping with the importance of place-based knowledge in indigenous epistemologies, this article is anchored in the changes of a particular ahupua‘a (land division), Waikīkī. Drawing on oral history interviews with teachers, I tell the story of current efforts to rebuild ‘auwai and lo‘i in the upper part of this ahupua‘a through a partnership between a semi-autonomous, state-funded secondary school and the nearby state university. I describe the initiative to rehabilitate lo‘i at ‘Aihualama as an example of what Corntassel (2008) calls “sustainable self-determination”. Corntassel offers this notion as a distinct alternative to the rights-based frameworks that have characterized indigenous political work at the international level, arguing that framing our movements in terms of “indigenous rights” can actually be harmful to indigenous communities (p. 107). As a benchmark for indigenous mobilization, “sustainable self-determination” shifts the focus from a state-centric entitlements discourse to practices that enable indigenous economic independence (or at least less dependence), spiritual regeneration and social health through a continuous renewal of relational obligations. The project of rebuilding ‘auwai and lo‘i at ‘Aihualama can be seen as a school-based experiment in sustainable self-determination. It is part of a larger effort to simultaneously rebuild indigenous Hawaiian agricultural and educational systems that allow for the long-term health of Kānaka Maoli and others in Hawai‘i.

The ‘Aihualama project is not only about reforming education by attending to culture, but also about presenting alternatives to the prevailing economic system that degrades ecological health and negatively impacts indigenous knowledge. Thaman argued that “western-derived economic and educational developments have destroyed important aspects of Oceanic cultures, including languages, as well as social, political, and economic structures” (2003, p. 8). As peoples of Oceania strengthen and revitalize our cultures by remaking formal educational institutions, we should consider how “cultural” education projects can work hand in hand with restoration of indigenous economic systems that organize our relations with our natural resources.

Similarly, Indigenous scholars have argued that our research and scholarship should also work for the survival and health of our nations, cultures and lands (Alfred, 2005; Smith, 1999). Smith has provided an incisive critique of dominant research practices on indigenous peoples. She posits a research agenda that focuses on the ethics of researcher–community relationships and urges scholars to ensure that our work is relevant to our indigenous communities (1999). She highlighted the concerns of indigenous communities in “epistemic self-determination” in education (2005, p. 94) and argued that a focus on Indigenous epistemologies can lead to innovative questions, practices and theories (p. 93). In the vein of epistemic self-determination, I seek not only to describe an innovative

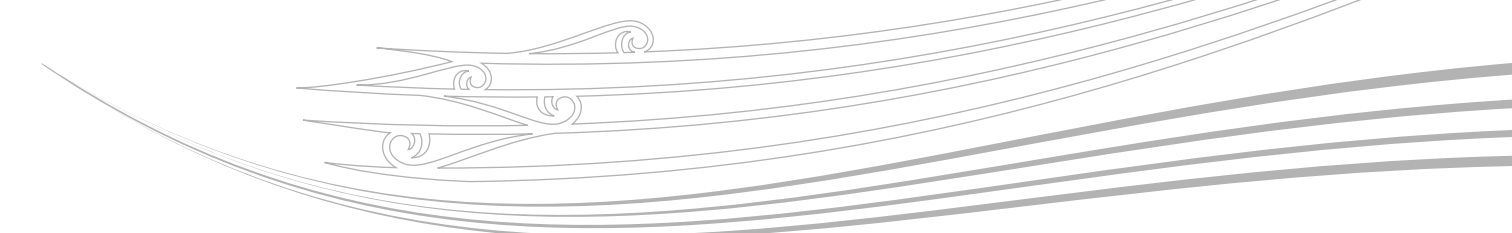


educational project that aimed to restore ‘auwai, but also to take seriously the ways in which these practices raise new theoretical possibilities. That is, I understand ‘auwai not only as a material technology, but also as a form of indigenous Hawaiian theory, with its basis in the ancestral, landed practices of Kānaka Maoli.

The work of rebuilding ‘auwai—of restoring indigenous waterways—provides a metaphor for efforts to transmit indigenous cultural knowledge in the context of continued imperialism, and in a landscape already radically altered by “development” and foreign species. At a macro level, this practice represents the rebuilding of indigenous educational institutions in an environment shaped by political and economic forces that still aim to choke us out or confine us. At a micro level, the ongoing work of maintaining and cleaning ‘auwai to allow for balanced water flow represents the internal work individuals do to stay healthy and prepare themselves for learning. This metaphor helps us think about the ways people re-establish and maintain connections to place, to ancestors and to viable livelihoods while negotiating colonial institutions, in this case, a public school system over which Native Hawaiians have little governing power.

Teaiwa (2005), and Pene, Taufe‘ulungaki and Benson (2002), provide other useful metaphors for reconceptualizing Pacific education: the canoe and the “Tree of Opportunity” respectively. Teaiwa’s canoe metaphor underscores the collaborative processes of learning that can enliven Pacific Studies classrooms. Pene et al. (2002) recognized that fundamental change is needed in the systems, structures and processes of schooling in the Pacific. They offer the tree as a symbol of institutions rooted in Pacific cultures, yet producing fruit useful for many purposes. I use the metaphor of rebuilding ‘auwai to build on Teaiwa’s emphasis on the ongoing cooperative practices of indigenous education in the Pacific, and the emphasis of Pene et al. on systemic change through the building of institutions grounded in indigenous Pacific cultures.

Renovated ‘auwai symbolize revitalized pathways, which can convey cultural knowledge between Kānaka Maoli, our kūpuna and our ‘āina (land, particularly in food production). Restoring these systems typically requires research, prayer, removal of non-Native plants and collective visioning and decision-making about how to re-dig or relocate the pathways through which water can flow. Like restoring ‘auwai, the assertion of indigenous education includes both eradication and replanting, destruction and reconstruction, struggle and change. Just as communities fight to have water returned to the watershed, we demand the redirection of resources to programmes that support indigenous communities, knowledges and practices. Just as invasive trees and grasses must be cut, discourses and institutions that minimize indigenous knowledge must be challenged. Just as the paths of old ‘auwai must sometimes be modified to account for changes in the landscape beyond our control, Kānaka Maoli innovate based on the wisdom of our ancestors and the circumstances of the present. We must find new ways to fulfill our kuleana (responsibility,



authority) to our lands. As Hawaiian songwriter and activist Kapali Keahi (2005) expressed more poetically: “it’s our destiny to set the water free.”

An early visionary of the ‘Aihualama restoration, Kawika Winter, recalls that his tūtū ho‘okama (adopted and beloved grandparent), ‘Anakala (“uncle,” term of respect for men of an older generation) Eddie Kaanana, would first walk along a stream to pray, chant and connect with his ancestors and akua (gods). This spiritual connection was essential to ‘Anakala’s work before beginning any lo‘i rehabilitation project. Emerging at the upland portion of a stream, he would walk down around the surrounding land, guided by his ‘aumakua and his own cognitive faculties for surveying the terrain and existing life.

‘Anakala’s method is instructive for my approach in this article. The first two sections represent passes along the stream, to look at the terrain of history along which both water and Hawaiian knowledge could and could not flow. I address shifts in land and water usage that moved resources away from subsistence kalo and fish production towards commercial enterprises benefiting a non-Native elite. Then I discuss parallel struggles over the design and governance of the public school system of Hawai‘i. After sharing stories about ‘Aihualama lo‘i’s current revitalization, I reflect on the potential promise and pitfalls of operating indigenous educational initiatives through existing state structures, and engaging in what Smith terms “intervening” projects (1999, p. 147). Such projects can enable cultural resurgence and pose new threats. On the basis of my involvement with Hawaiian culture-based charter schools, as co-founder, board member and former teacher and programme director, I consider the paradoxes of transmitting indigenous cultural knowledges and practices through state school systems. The article concludes with possible strategies that help keep our initiatives grounded so that we do not give up that which our communities determine is non-negotiable.

### **Ke ahupua‘a ‘o Waikīkī**

The transformation and degradation of ecosystems and indigenous economic systems have gone hand in hand with the decline of indigenous knowledges, and relationships to ‘āina, as “that which feeds” us. Standing on Kalākaua Avenue, the main thoroughfare in world-famous Waikīkī, tourists and locals alike find themselves surrounded by the most recognizable names of global consumer capitalist culture: Chanel, Hilton, Starbucks, Nike, Sheraton, Tiffany and McDonalds. The landscape of the most populated and over-built of the Hawaiian islands, O‘ahu, is saturated with fast food chains and big box stores, as well as US military installations.

However, a 20-minute drive towards the mountains from Waikīkī Beach brings one to what seems a completely different world from Kalākaua’s glitzy tourist district. There, on a small parcel of land called ‘Aihualama in upper Mānoa Valley, a group of Hālau Kū Māna (HKM) public charter school students and teachers are restoring a lo‘i and ‘auwai system,



which had fallen out of active care over a century ago.<sup>3</sup> Working under an agreement and partnership with the University of Hawai'i's Lyon Arboretum, members of the group model and practise a different kind of economy, culture and lifestyle than that apparent along the Kalākaua strip. They cultivate a relationship to the land on the basis of lineal connection, subsistence and collective work, thus disrupting the dominant mode of education practised in the public school system, and the paradigm of preservation historically practised at the Arboretum.

Now in their fourth planting cycle, the group tends to one of only two active lo'i complexes in a valley once prolifically cultivated. Waikīkī, named for its bountiful fresh water springs, once provided an ideal environment for kalo and fish cultivation. Kalo was grown extensively throughout Mānoa, the valley that extends to the ridgeline of the mountains within the larger Waikīkī ahupua'a. As late as the 1890s, Mānoa was described as rich in water and kalo:

Manoa is both broad and low, with towering hills on both sides that join the forest clad mountain range at the head, whose summits are often hid in cloud land, gathering moisture therefrom to feed the springs in the various recesses that in turn supply the streams winding through the valley, or watering the vast fields of growing taro, to which industry the valley is devoted....At the summit of the road the whole valley opens out to view, the extensive flat area set out in taro, looking like a huge checker-board, with its symmetrical emerald squares in the middle ground. (Thrum, 1891, pp. 110)

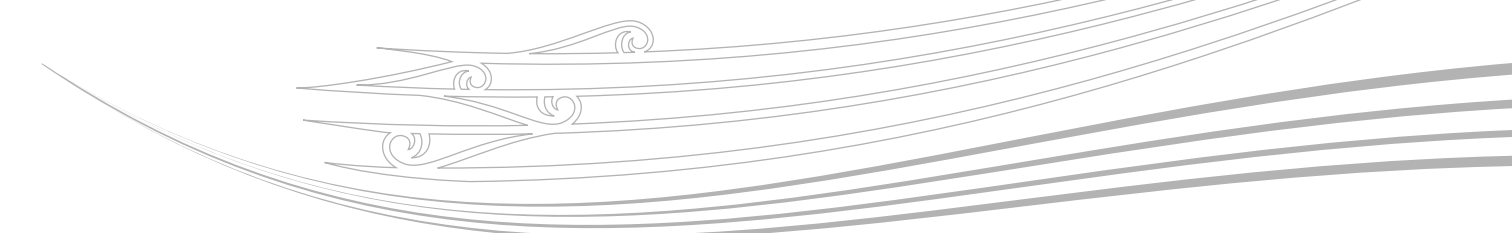
Mānoa Valley's seven streams join and run down towards what used to be the fields and wetlands in Waikīkī's coastal area.<sup>4</sup> Even after the first hotels were built along Waikīkī beach, streams continued to flow, maintaining the necessary connection between ma uka (upland region) and ma kai (coastal area). Born in Mānoa in 1874, Kupuna Annie Kamakakaukalanī Harris described how fish swam upstream to fishponds in the upper valley and waterways.

Oluna olaila Pohaku-kilo-i'a, o kona inoa o Kū-kālia. Ilaila ke kilo e nānā ai i ka i'a, ke komo mai ka i'a i 'Āpua-kēhau (kahawai mawaena o ka Moana Hokele me ka Hawaii Hokele (Royal Hn). Alaila ho'ike ke kilo, oia ke-ani 'ana i ka lepa, ho'ike ana 'eia ka i'a i Apuakehau, e komo mai nei. (Lepa, kapa pa'ūpa'ū ke'oke'o me ka laau).

Above there is a rock to observe fish whose name is Kū-kālia. That is where the observer would look for the fish when the fish would come into 'Āpua-kēhau stream (the stream between the Moana Hotel and the Royal Hawaiian Hotel). Then the

3. Hālaui Kū Māna (HKM) is a government-funded secondary school that operates semi-autonomously under a charter issued by the state board of education. Charter schools have more localized control over their budgets and curricula, but are subject to the same standards as mainstream public schools. HKM offers a Hawaiian culture-based educational programme. See <http://www.halaukumana.org/>.

4. The seven streams of Mānoa are: 'Aihualama, Waihi'inui, Waihi'iiki, Lua'alaea, Naniuapo, Wa'aloa and Waiakeakua.



observer would show, with a wave of his flag, that the fish are entering ‘Āpua-kēhau stream. (The flag composed of a long piece of white tapa cloth on a stick.) (Harris, n.d. p. 4)

This account by Kupuna Harris makes it clear that people continued to rely on subsistence fishing in this district until at least a hundred years ago. She details the systematized communication between fishers as the fish progressed upstream, providing testimony that the health of the stream and indigenous knowledge about the behaviour of streamlife survived even after the transformation of Waikīkī had begun. Ample streamflow nurtured this relationship of indigenous cultural practice with healthy ecosystem.

Alaila na ka i‘a no e pii iuka me ka ‘ike ‘ole ‘ia ‘e ke kilo. Ua ‘ike ia no ‘e na lawai‘a, aia ka i‘a ke pii ala iuka a hiki i Na-niu-a-po (same stream – he mau niu kahiko malaila). A komo i Waa-loa, a malaila hoomaka ka i‘a e manamana (branch out following water): The end.

And then the fish continue inland without being seen by the observer. However, the fishers knew that the fish are still heading inland all the way up to Nā-niu-a-pō which is the same stream. There are several ancient coconut trees there. And finally they go into Wa‘a-loa, and there the fish begin to branch out into the tributaries. (Harris, n.d., p. 5)

Kelly (1982) emphasizes that education in traditional Hawaiian society must be seen in the context of the islands’ self-sustaining economy. “The Hawaiian economy was rooted in more than a thousand years of subsistence agriculture and fishing. The value of cooperative, social labor was constantly reinforced by experience” (1982, p. 5). Food production was a significant focus of labour and learning within the extended family. Ma ka hana ka ‘ike (“in working one learns”); young people learned alongside their elders as they went about their tasks. Each family and its individual members possessed specialized knowledges. Each carried the responsibility of selecting and teaching a new generation. As repositories of both skilled and storied intelligence, one’s kumu (teacher, source) could be a parent, aunt, uncle, grandparent or a member of the wider community. Cultural protocols, codes of behaviour and ethics depended on the field of knowledge (Kamakau, 1991), but in all cases knowledge transmission, ecological health and a balanced, sustainable economy were interdependent.

According to Hawaiian customary practice, water that coursed through the ‘auwai and fed lo‘i kalo remained in the watershed and was always returned to the stream. Water was a precious resource recognized as a common good, not a private possession, and rights to water were strictly enforced according to a combination of need and the labour of constructing and maintaining shared ‘auwai systems (Nakuina, 1893; Miike, 2004). In contrast, sugar planters first began taking water outside their natural watershed areas in 1856, with the opening of the “Rice Ditch” named after the founder of Līhu‘e Plantation on





Kaua'i.<sup>5</sup> While modest compared with subsequent sugar ditches, the 10-mile long Līhu'e ditch became a landmark in the diversion of water for sugar production. The Kānaka were paid 25 cents per day for digging the unlined ditch. As Wilcox explained:

planters no longer had to look for the perfect conditions (for sugar); now they could create them. They could bring mountain water to the hot sunny fields of thirsty cane. Suddenly there were very few places in Hawaii that were not suitable for sugar. (1996, p. 54)

## Historical transformation of lands and waters

In Ōiwi Wale times, lo'i kalo are estimated to have covered at least 20,000 acres (90 square kilometres) over six islands in the Hawaiian archipelago. But by 1900, after about a century of intense contact with foreigners, only 1280 acres (5.2 square kilometers) were recorded as being in kalo production. Today, after more than 100 years of US occupation, less than 400 acres (1.6 square kilometers) are planted with kalo (Cho, 2007, pp. 3–4). This decline should be seen in the context of a changing orientation to water, agriculture and knowledge, as proponents of a racially stratified capitalist order built power and wealth from the mid-19th century. In 1893 this group illegally seized control of the government and its lands.

The decline in kalo cultivation has been steady. Exactly when kalo and fish cultivation diminished to its current level in Mānoa is unclear, but certain significant events show that imperial rule by the US inflicted serious ecological and economic change.<sup>6</sup> The US-backed oligarchy of white sugar planters and their business associates controlled land and power in Hawai'i from 1900 through the late 1940s through the government of the Territory of Hawai'i (Cooper & Daws, 1990; Jung, 2006). Under the Territorial regime, three major interventions completed in the 1920s changed the flow of water through the ahupua'a. These projects allowed for the creation of Waikīkī Beach as a tourist resort area, lower Mānoa as a land grant college, and upper Mānoa as a field laboratory for the sugar industry. In all three cases, sanitation and insect control were cited as reasons to legitimize the drying up of lo'i lands. I describe each briefly here, moving from ma kai to ma uka.

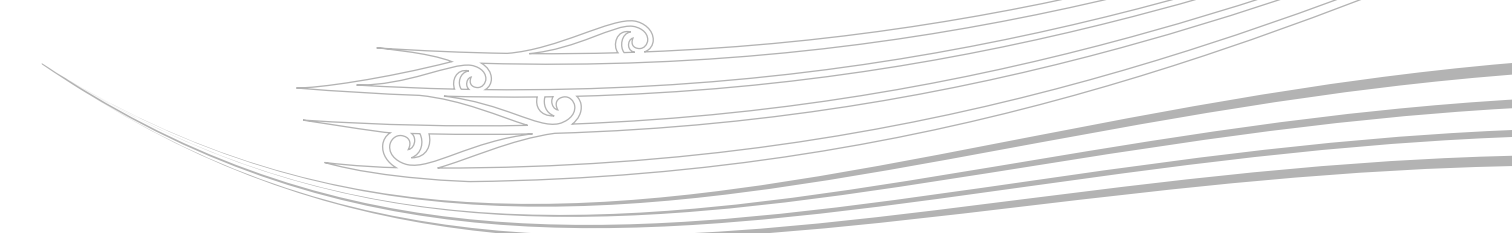
Only a few years after the beginning of American occupation, president of the Territorial government's Board of Health, Lucius Pinkham, introduced a plan to drain the wetlands of Waikīkī, citing "unsanitary" and "unsightly" conditions.<sup>7</sup> Before his appointment to the

5. The Rice family legacy of protecting white privilege at the expense of Kānaka Maoli continued when a descendant of the builder of the Rice ditch, Harold "Freddy" Rice filed suit against the Office of Hawaiian Affairs aiming to have the Office elections opened to non-Native voters. For a fuller description and analysis of the Rice v Cayetano case, see Kauanui (2002, 2005) and Rohrer (2006).

6. Both Silva (2004) and Sai (2004) provide historical and legal analyses of the illegal overthrow of the Hawaiian Kingdom, purported annexation, and ongoing US occupation.

7. Pinkham arrived in Hawai'i in 1892, a year before the illegal overthrow of the Hawaiian Kingdom. He was hired to build a coal-handling plant for Oahu Railway & Land Co., which dominated commercial and passenger transport in the first half of the 20th century and was owned by the Dillingham family. Pinkham and the Dillinghams worked hand in hand to build infrastructure for the sugar industry, using government power to support the wealth accumulation of the Territorial elite class.





Territorial government as head of the Board of Health (1904–1908) and later Governor (1913–1918), Pinkham oversaw the construction of artesian wells, to obtain ground water for different sugar plantations, and worked as labour recruiter for the Hawai‘i Sugar Planters' Association (Tsai, 2006; Kent, 1993).<sup>8</sup> He supported the Waikīkī Reclamation Project, which aimed ostensibly to address a significant mosquito problem, but also to take ‘āina from Kanaka Maoli and Asian farmers, and to dry out the land for commercial and residential development, which was represented as more “civilized” (laukea, 2009). Pinkham, Walter Dillingham and other powerful members of the Territorial government and white business class pushed legislation establishing the Waikīkī Reclamation Project, which wiped out taro and rice farming in the area and destroyed the natural estuaries on the lower wetland and coastal region (Nakamura, 1979; Hibbard & Franzen, 1986; Bain & Coll, 1994; Wood, 1999).

The transformation of Waikīkī further lined the pockets of sugar investors and their associates, providing multiple means to profit. Walter Dillingham’s Hawai‘i Dredging Company was contracted to dig the two-mile Ala Wai canal, running parallel to Kalākaua Avenue and punctuating the streams that flowed down to Waikīkī from the Makiki, Mānoa and Pālolo valleys (Wood, 1999, p. 98). His company was also allowed to resell the earthen material to farmers and small landowners in the area’s lowlands, who were required by law to fill their fields.<sup>9</sup>

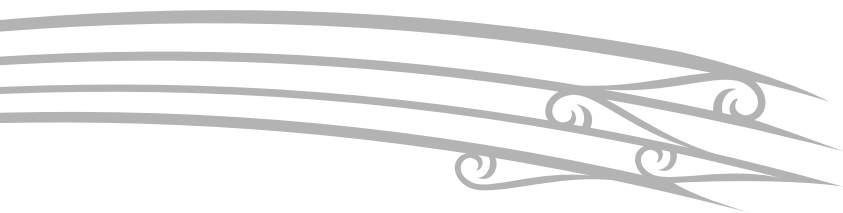
Kanaka and Chinese farmers were moved out of the middle section of the ahupua‘a, ironically, to make room for a new agricultural college, the precursor of the University of Hawai‘i. The walls of lo‘i were destroyed as land was cleared for the College of Agriculture and Mechanical Arts, supported by US federal land grant legislation (Kamins & Potter, 1998). Rather than valuing the knowledge of farmers who were already working that land, the new college was staffed by professors primarily from Cornell University in New York.

Further up the valley, the Hawai‘i Sugar Planters' Association acquired land in upper Mānoa for an experiment station, which became the point of introduction for thousands

of non-Native plant species. The experiment station served as the research arm of the

8. The Planters' Labor and Supply Company (est. 1876) reorganized itself as the Hawaiian Sugar Planters' Association (HSPA) in 1895 as an unincorporated, voluntary association. The work of the HSPA was organized and highly centralized, guiding every aspect of the industry, directed by the large sugar agencies. HSPA orchestrated foreign labour recruitment, common low wage rates across plantations, evictions of former workers from plantation housing, strike breaking, government lobbying and agricultural research. The HSPA was notoriously racist and paternalistic. For a general description of the HSPA, its control by the ‘Big Five’ sugar factors, the overall structure of the industry, and the extensive interracial labour movement that organized against the HSPA and sugar agencies, see Jung (2006).

9. The Ala Wai canal was completed in 1928. Arguments for building the canal overwhelmingly emphasized the need to dry up the marshlands to improve sanitation, yet the canal has ironically fostered extremely unsanitary conditions. It is the most polluted waterway in Honolulu, essentially serving as a drainage ditch for about 50 square kilometres of the most densely developed areas. For decades, the public has been warned not to swim or fish in the canal. Canoe paddlers who use the canal as an entry to the ocean frequently report cases of Staphylococcus and other bacterial infections. To exacerbate the problem, in 2006 the City & County of Honolulu diverted approximately 50 million gallons of raw sewage into the canal due to an overflow and rupture of a wastewater mainline.



sugar industry. Taylor (1935) describes the work of the HSPA experiment station:

There is not an aspect of sugar production...that has escaped [the experiment stations'] attention....With the assistance of science the work of agricultural and mill improvement has been carried on by and through this body. It has come to command a position as the central deciding authority for the determination of production policies and practices. This development has been coterminous with the progressive, financial domination of the plantations by the agencies. (p. 42, quoted in Jung, 2006, p. 199)

Dr Harold Lyon, plant pathologist for the HSPA and head of the Territory's Department of Botany and Forestation, led the HSPA's water conservation initiative and Arboretum, as part of the experiment station. The upper valley, extensively impacted by cattle, was replanted with thousands of different species of exotic trees, shrubs and vines.<sup>10</sup> The station also propagated, and experimented on, different varieties of sugar cane for use in the commercial fields throughout O'ahu and the other islands. There is no evidence that the HSPA's work in upper Mānoa forced existing Hawaiian and Asian farmers off their land and away from their means of survival as the Waikīkī Reclamation Project and the College of Agriculture did downstream. However, similar language was used to legitimise the draining of old lo'i lands for new purposes.

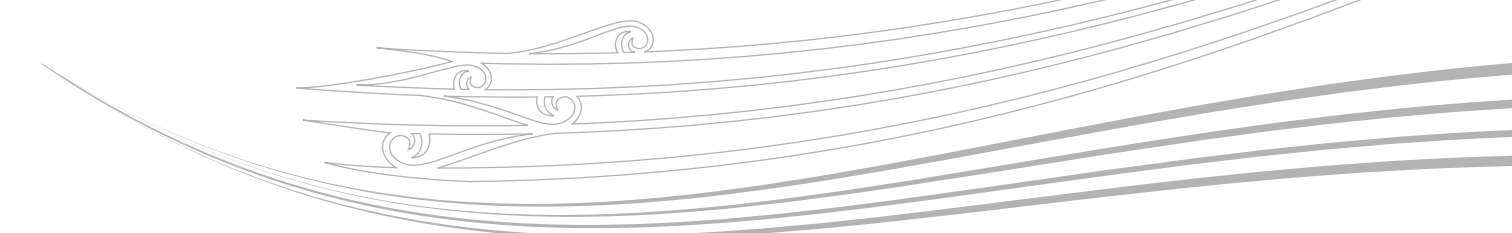
In a 1926 report from Lyon to the HSPA director, a section titled "Repairs and Improvements" describes the work done to transform 'Aihualama into an area more suitable to the purposes of the arboretum:

A series of drainage ditches has been cut through the ancient taro patches lying on the eastern side of Aihualama Stream. In digging these ditches, numerous, well-preserved stumps of large coconut palms were found buried in the muck, showing that coconuts once grew in this valley. It is proposed to drain this land to a point where it will no longer supply breeding places for mosquitoes, which have always been very plentiful in its vicinity. We shall eventually plant it up with trees and shrubs or use it for nursery purposes as our work in the Arboretum progresses. (Lyon, 1927)

Thus, throughout Waikīkī ahupua'a, the presence of mosquitoes was cited to legitimize the drying up of lo'i lands, whether for real estate development, education and research in service of industrial agriculture, or for the collection and preservation of non-Native plants.

It is important here to distinguish the traditional Hawaiian 'auwai from the later sugar irrigation ditches, because each exemplifies and supports starkly different economic,

10. See [http://www.hawaii.edu/lyonarboretum/aboutLyon\\_HistManoa.php](http://www.hawaii.edu/lyonarboretum/aboutLyon_HistManoa.php).



social and epistemological paradigms. The former prioritized ecological health, equitable distribution of wealth, and the localized knowledge of practitioners while the later valued the centralization of knowledge and wealth for the benefit of a few, at heavy cost to the environment and subjugated people of colour (Wilcox, 1996; Jung, 2006).

Centralization and commodification were hallmarks of the sugar industry and of the way sugar elites governed Hawai'i under the Territorial regime. The sugar giants controlling the industry came to be known as "the Big Five." These commercial operators funded the development of massive irrigation ditches, tunnels and well systems that allowed for centralization of the industry.<sup>11</sup> One of the Big Five agencies formed the first private water company in the immediate wake of the Reciprocity Treaty of 1876.<sup>12</sup> When the sugar factors wrested control of the governing apparatus in Hawai'i, they extended the privatization of water. Under "King sugar" and the Territorial regime, the territorial courts in Hawai'i commodified water resources (Sproat & Moriwake, 2007, p. 252).

In the 1970s extensive community organizing, particularly among kalo farmers, and advocacy secured important gains with respect to water-usage law in Hawai'i. Hawaiian social movements of the 1970s led a substantial caucus of Kanaka representatives to serve as delegates in the Hawai'i State Constitutional Convention of 1978. Participants amended the state constitution so that water is now recognized as a public trust to be conserved and used for the benefit of all. Language underscoring the subsistence and customary rights of Native Hawaiians is also included (Articles XI and XII). However, struggles over the proper implementation of that law continue.

## **Sovereignty and struggles over Hawaiian schools**

Echoing changes in water use, competing approaches to public schooling resonate with the tension between models emphasizing centralization, commodification, racial hierarchy and foreign knowledge controlled by non-Native "experts" and models valuing localized

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11. The Waiāhole ditch system, built to divert water from windward valleys to the drier, flat plains of central O'ahu, is one of the more stunning examples of the marginalization of Hawaiian customary practices and ensuing impact on the natural environment and subsistence farming and gathering. The ditch system first opened in 1916, although construction continued for at least 20 years. It includes the diversion of 37 streams and 39 tunnels drilled through mountains to collect dike water and move it across the island. Wilcox reported the average daily flow of water over a 67-year period as 32.2 million gallons per day (1996, p. 105). Bleeding the mountain dry, water pours from the tunnel walls and travels through nearly 30 miles of cemented ditches; it cannot seep back into the ground to recharge the aquifer. Correspondingly, streams shrank by up to 90 percent. "Kalo withered, native stream animals and mammals diminished, and fishponds and estuaries declined. Many people were forced to abandon their self-sustaining lifestyles and move elsewhere" (Sproat & Moriwake, 2007, p. 253).
  12. In September 1876, Samuel Alexander secured rights to collect water from the slopes of Haleakala to the east of Haiku Plantation. Alexander and Henry Baldwin, both from missionary families, organized and owned the Hamakua Ditch Company, now known as the East Maui Irrigation Company (Wilcox, 1996, p. 55). In the 1870s, Samuel Alexander and Henry Baldwin began purchasing hundreds of acres for sugar. Their company, Alexander & Baldwin, is now a multinational transport, real estate and agribusiness corporation headquartered in Hawai'i.



governance, equitable distribution of wealth and Native teachers. Like ‘auwai and lo‘i, traditional ‘Ōiwi modes of teaching and learning based on apprenticeship, mastery, kinship and community predated and survived the advent of Western-styled schooling in Hawai‘i. In addition, schools became significant educational institutions in the islands after the 1820s.

Schools and the whole Hawaiian public education system have been sites of struggle, folded into the nation- and community-building projects of both ‘Ōiwi and settlers. Earlier studies of public education in Hawai‘i have contended that schools were simply made in the image of American public schooling—importing and replanting American educational institutions on Hawaiian soil (Steuber, 1982; Benham & Heck, 1998). While American missionaries, their descendants and business associates had a strong influence at various points in the development of public education, Kānaka actively engaged with these introduced educational forms and sought to use them for our own purposes.

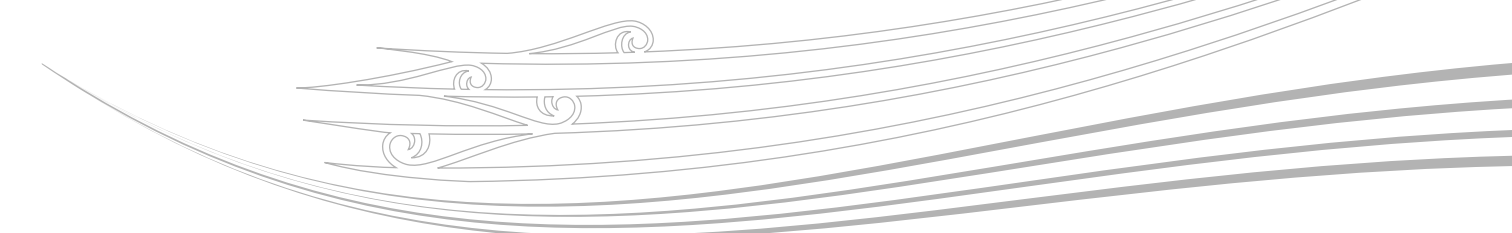
The first schools in Hawai‘i were church-based, established following the arrival of American Calvinist missionaries in 1821.<sup>13</sup> These early schools were aimed at an adult student body. Indeed, during the next decade, almost the whole adult population voluntarily attended mission station schools in order to master the new technology, palapala, or written language. By the end of the 1820s, 387,000 copies of 22 books had been printed in the islands, representing some 10,287,800 pages in the Hawaiian language (Wist, 1940, p. 22). Because of the heavy demand for literacy instruction, schools opened as fast as teachers could be supplied from among the ranks of Kānaka. Therefore, most teachers were Native, not missionary. Enrolments reached their height in the early 1830s, with more than 50,000 pupils in approximately 1,000 schools.<sup>14</sup> However, Kānaka Maoli did not remain the kind of pupils for whom the missionaries hoped. These pupils came for what they wanted—to learn to read and write—and then left. Within five years of the record high enrolments of 1832, the numbers dropped sharply to about 2,000 (Wist, 1940, p. 27).

Engaged in competing modernization projects, both missionaries and ali‘i (Native leaders) shifted their focus to government-sponsored schooling for children. The codification and institutionalization of public schooling was adjunct to the creation of the Hawaiian Kingdom’s first constitution in 1840. Compulsory schooling became an indispensable part of educating proper subjects for a modern, Kanaka-led nation state. By 1842, education in reading, writing, geography and arithmetic was required for anyone to be married or hold

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13. Seminaries were set up by Protestant missionaries to train Hawaiian men as religious assistants, teachers and future statesmen for a modernizing Hawai‘i (Wist, 1940, pp. 18–35; Benham & Heck, 1998, pp. 41–59; Osorio, 2002). Female seminaries, established as a corollary to the men’s seminaries, aimed to produce proper Christian wives for the graduates of church-run schools (Beyer, 2003).

14. Wist places the high point at 53,000 pupils across 900 schools in 1832 (1940, p. 23), while Kuykendall states that in 1831 there were 52,000 pupils in 1100 schools (1938a, p. 106). In either case, these are astounding numbers, representing nearly half the total population and averaging 250 schools per major island. In contrast, in 2009 there are 289 schools across all the islands.



high office (Benham & Heck, 1998, p. 69). For the next two decades, public schooling remained connected to Protestant church authorities. Most histories have interpreted this connection as American design and control of the system and, indeed, the role of Kānaka has been severely minimized or completely obscured. It is significant that from the outset, for example, governance of the public education system was staffed completely by Kānaka. The top three tiers—superintendent for the Kingdom, island school agents, and school boards at the local level—all comprised Kānaka ‘Ōiwi.<sup>15</sup>

The structure of school governance was in many ways more decentralized and community-based than the governance structure of Hawai‘i public schools in the 20th century, with local district boards to oversee the hiring and firing of teachers and their district budgets. Each school was “under the control of the parents interested” (Hawaiian Kingdom, 1852). These local boards also directed the building and maintenance of school houses, ensured that children of mandatory school age attended school, and organized scholars and community members to work the ‘āina given to teachers for their sustenance.<sup>16</sup>

The development of the public school system throughout the second half of the 19th century was embedded in a larger struggle for hegemony over the systems of formal education, governance and economy in Hawai‘i. While white men representing the nexus of missionary and sugar business interests were attempting to build the Kingdom’s public school system as a way of sorting and segregating racialized citizen-subjects for an oppressive plantation society, Native Hawaiian statesmen and community leaders were separating public schools from church affiliation, promoting literacy in the Hawaiian language, and increasing funding for the “common” schools, which served working class Hawaiian and Asian pupils. For instance, Mataio Kekūanaō‘a, as head of Public Education in the Kingdom, urged an increase in funding for common schools in the 1860s. Kekūanaō‘a summarized his position in his 1864 report to the Kingdom legislature:

The theory of substituting the English language for the Hawaiian, in order to educate our people, is as dangerous to Hawaiian nationality, as it is useless in promoting the general education of the people....if we wish to preserve the Kingdom of Hawaii for Hawaiians, and to educate our people, we must insist that the Hawaiian language shall be the language of all our National Schools, and the English shall be taught whenever practicable, but only, as an important branch of Hawaiian education. (Quoted in Kuykendall, 1938b, p. 112)

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15. In May 1841, David Malo was appointed the first luna (superintendent) of public education, a position he served in for at least four years. All five kahukula (school agents) appointed to oversee government schools on each of the five major islands were Kānaka: for O‘ahu, John Ii; for Kawau‘i, Papohaku; for Moloka‘i, Kanakaokai; for Maui, David Malo; for Hawai‘i, Kanakaahuahu (Kuykendall, 1938a, pp. 347–348).

16. Certain powers and decisions were centralized with the national government, including the certification of teachers (see Hawaiian Kingdom 1852, p. 1884) and curriculum content (in Benham & Heck, 1998, p. 93).



A decade later as the sugar industry and its political influence grew dramatically, American banker, Charles R. Bishop, who served as president of the Board of Education throughout the 1870s and early 1880s, exacerbated the difference in funding between English-language schools and Hawaiian-medium schools and between pay for non-Native teachers over Kānaka (Goodyear-Ka'ōpua, 2005, pp. 107–108).

Once the US military stepped in to support the sugar oligarchy in usurping control of the lawful Hawaiian government, formal political control of the national education system was wrested from the Hawaiian Kingdom, and governance of public instruction became wholly centralized, much like the centralization of water through sugar ditches. In 1896, the self-proclaimed “Republic of Hawaii” passed a law mandating that all instruction in public and private schools be given in English. The law absolutely cut schools off from public funding and recognition if they taught in Hawaiian (Lucas, 2000). Most Native teachers were left without jobs.<sup>17</sup> Just as once-thriving lo'i kalo withered when cut off from water and from the Kānaka who tended them, Hawaiian education was forcefully emaciated. For most of the 20th century, under US imperial control masked as consensual integration, not a single school in the islands made the indigenous Hawaiian language or culture central to its curriculum until the advent of Hawaiian language immersion schools in the 1980s.

Amendments to the state constitution facilitated the creation of government-funded Hawaiian educational programmes. Hawaiian educational advocates pressed for changes that favoured the Hawaiian language and education at the aforementioned 1978 Constitutional Convention. Hawaiian was affirmed as an official language of the State of Hawai'i (Article XV, Section 4) and the State committed to provide for a Hawaiian education programme consisting of language, culture and history in the public schools (Article X, Section 4). Thus, Kānaka could demand that Hawaiian culture and language-based programmes be instituted within the existing state system.

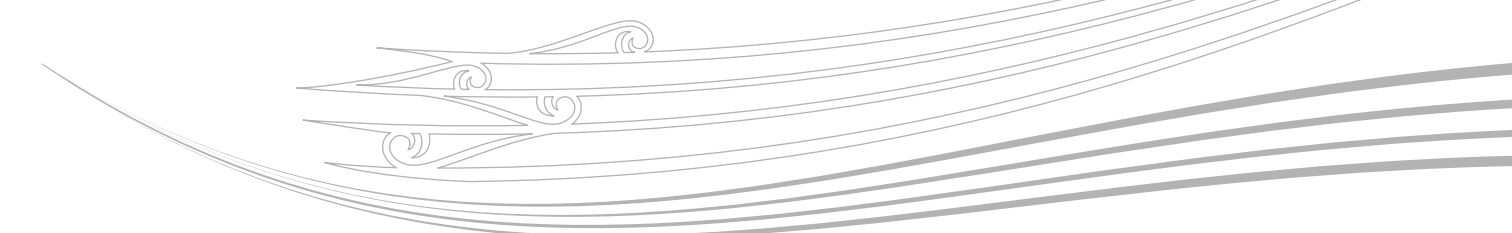
Contemporary Hawaiian culture-based charter schools, founded by and for Hawaiian communities, constitute a new generation in the genealogy of Kanaka engagements with schooling. Since 2000, Kānaka Maoli have utilized New Century public charter schools as vehicles for intervening in a history of hegemonic schooling practices perceived as disrupting pono (balanced, harmonious, proper) relationships between Hawaiian people, our ancestral knowledges, and lands.<sup>18</sup> Like 19th century Hawaiian schools, they tend to be community-based, small scale and staffed by a large percentage of Kanaka Maoli teachers.

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17. According to the 1890 census listed in the *Hawaiian Annual* (Thrum, 1891), Hawaiian and “half-caste” teachers still comprised 50% of the total number of teachers in the Kingdom, 77 Hawaiian and 39 “half-caste”. The other half were primarily American and British.

18. The term “New Century public charter schools” comes from Hawai'i's Act 62, which allowed for the creation of start-up charter schools but capped the total number allowed in the state at 25. Act 62 was signed into law on 27 May 1999. Since then, a limited number of additional charter schools, both start-up and conversion, have been allowed.





In the context of significant budget constraints, they negotiate knowledge regimes that devalue indigenous language and cultural practice.

The 14 Hawaiian-focused charter schools aim to change the culture and purposes of contemporary schooling. Empowered to run semi-autonomously under the direction of an independent local school board, these schools have a certain level of fiscal and curricular flexibility and decision-making power beyond mainstream Department of Education (DOE) schools. However, they remain accountable to centralized state authorities through a detailed contractual agreement, which aligns with various state standards and policies.

Within those parameters, curriculum can be localized according to the needs and the resources specific to the place and the communities of which the school is a part. This in turn leads to a diversity of educational programmes among the various charter schools, providing a window of opportunity for innovative projects of sustainable self-determination.

### **Sustainable self-determination at ‘Aihualama**

Water is important. Let’s get the water back. Why do we need the water back? So we can be the people that we are. So we can raise our children to understand who we are. – *Kumu Danny Bishop*

Without control of our own national system of education, the efforts to rebuild or initiate Hawaiian educational institutions share much in common with the rehabilitation of lo‘i and ‘auwai in places where resources have been diverted, non-Native plants have grown to dominate the landscape, and a few generations have passed since knowledge has been put into daily practice. The story of HKM’s renovation and care of ‘Aihualama lo‘i is significant not only because it is the first time lo‘i kalo have functioned in this area for a century. The project of rebuilding ‘auwai and lo‘i at ‘Aihualama can be seen as part of a larger effort to rebuild indigenous Hawaiian agricultural and educational systems. The process is instructive for thinking about how Kānaka Hawai‘i and other indigenous people might work for the resurgence of our cultures and institutions in a context of continuing imperialism and colonialism.<sup>19</sup>

The ‘Aihualama project is an example of what Corntassel (2008) calls “sustainable self-determination.” Corntassel contrasts this concept with previous strategies of indigenous political mobilization, which have focused on seeking rights and entitlements from dominant states. Instead, the hallmarks of sustainable self-determination include focusing on individual, family and community responsibilities, regenerating local and regional indigenous economies, and recognizing the interconnection of social, spiritual,

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19. While ‘Aihualama is the first lo‘i complex to be restored in upper Mānoa, kahu (caretakers) of ‘Aihualama credit its predecessor, Ka Papa Lo‘i o Kānewai, in lower Mānoa, as highly influential in opening the way for further lo‘i restoration. Kānewai was re-opened by Hawaiian students at the University of Hawai‘i in the 1980s, and it hosted HKM’s first classes in kalo cultivation.





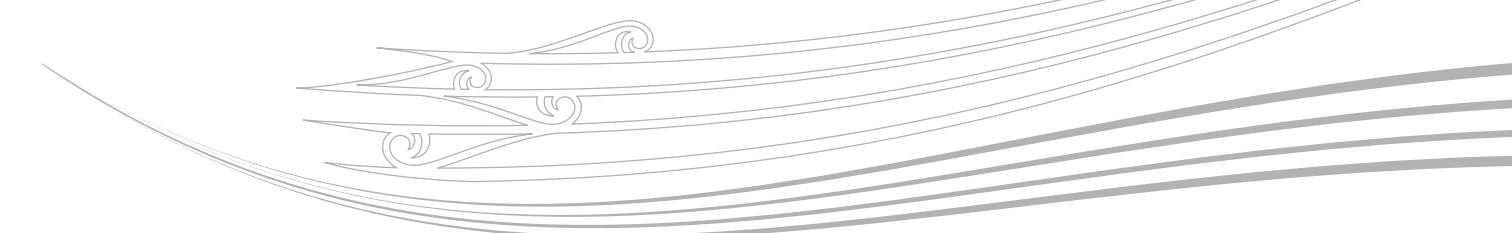
environmental and political aspects of self-determination. The ultimate goal is for indigenous people to have the freedom to practice indigenous livelihoods, maintain food security and apply natural laws on indigenous homelands in a sustainable manner. Critical to this process is the long-term sustainability of indigenous livelihoods, which includes the transmission of these cultural practices to future generations (p. 118). By focusing on sustainable self-determination in indigenous educational programmes, we remain clear that our traditions cannot be divorced from a renewal of our collective capacity to feed and sustain ourselves from our ‘āina. Correspondingly, we also recognize the primacy of education for our long-term survival.

HKM’s work with lo’i kalo and ‘auwai represents one school-based effort to nurture the relationships—concrete, genealogical and spiritual—between our youth and our ‘āina, which have been painfully absent from public schooling in Hawai’i for the last century. Like the scarcity of Kanaka-controlled schools since the end of the 19th century, our ability to feed ourselves from the ‘āina has dramatically diminished over time. The total land area in lo’i kalo has declined by approximately 98 percent (Cho, 2007). Unlike the population of Kānaka Maoli, which has rebounded since the massive collapse of the 1800s, our elder sibling, Hāloa (the kalo), continued to decline. The various kumu involved in HKM’s Lo’i project over the last 6 years have taken it as their kuleana to address this crisis. At the same time, they work to alleviate the crisis for ‘Ōiwi in mainstream public education described in the next section.

‘Aihualama was dense with non-Native brush and trees that obscured the sunlight—essential for healthy kalo—when early visionaries first trudged through its thick muddy floor. It seemed to kumu and haumāna (students) alike an impossible place to restore anything. Kumu Kamuela Yim described ‘Aihualama’s state at the very beginning of the project:

It looked all dark. Everything was super dark. The biggest problem at the time was to drop trees to get some sun in here, ‘cuz it was mosquito heaven—hell on earth. Just black...You could see the lo’i. You could see (the walls) but you were like, “There’s no way. Nothing’s gonna grow.” There was a pipe sticking out through here. There was stuff growing on all the walls.

Kawika Winter, a former researcher and liaison between the Lyon Arboretum and HKM, recounts that the area was covered in a dense canopy of different types of banyans and albizias that Dr Lyon had collected and brought in to the valley, making it too dark to grow kalo and extremely swampy. These trees are notoriously difficult to take down because of their aerial root systems. Despite the lack of light and the daunting, large trees, what encouraged all the kumu—Kawika Winter, Kamuela Yim, Kawika Mersberg and Danny Bishop—who saw the area in its early stages was the clarity with which the ancient walls were defined, despite the dense overgrowth: “you could see (the walls and terraces)



easily, without even imagining....The walls are real straight, real big, real clear” (K. Yim, personal interview, 26 January 2009). Kumu saw this evidence as a clear indication of the responsibility for revitalizing kalo cultivation in the area again.<sup>20</sup> Thus the original commitments and agreements were made, first between the Kānaka who envisioned the restoration, and then between the organizations with which they were affiliated, the University’s Lyon Arboretum and HKM. Kumu described this as a deep cultural commitment beyond contracts or memos, an obligation to the ‘āina itself, the kūpuna who had trained them, and the kalo plant as an elder sibling.

The first major hurdle, however, was the felling of the large, non-Native trees, which blocked out sunlight and created safety hazards. The Arboretum’s arborist and a team of external arborists had been contracted to fell some of the large trees, but several remained. For the first year of the project, students were mainly engaged in moving those initial logs and cutting back the undergrowth, as well as learning the names and stories of various places throughout the valley. However, kumu and haumāna were not dissuaded, neither by the hard work nor the Arboretum’s decision that no further trees could be cut back. Without the removal of more of the large banyans and albizias, it seemed that the project would stall or be permanently stunted. Then, as teachers and students retell it, the kūpuna intervened.

During the second year of the project heavy winds blew through Mānoa valley, taking down several of the tallest trees. Several attribute these “auspicious” winds to the prayers, intentions and demonstrated commitment of the kumu and ‘ōpio who were rebuilding relationships with the place. For more than a week, the class could not go up to ‘Aihualama because of extreme weather conditions. When they came back, all the trees that needed to be cut down had been blown over. Moreover, Yim recalls that they had all fallen away from the existing clearing for the lo’i, rather than towards it. The event was seen as a hō‘ailona (omen, sign), an affirmation that HKM’s Papa Lo’i was indeed meant to take on the kuleana of caring for this place, and that when circumstances were beyond human control, other forces would intervene. “Through akua’s [god’s] hands...through the natural elements and through our pule [prayers]...our kūpuna came in and helped us out, guided us in that matter” (K. Mersberg, personal interview, 23 January, 2009). Winter recounts that even the non-Native faculty working at Lyon could not help but notice the forces beyond human control: “[One professor] likes to joke that I pray down trees because once I started telling him that those trees were coming down, three of them dropped.”

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20. HKM kumu who have contributed to this project over the last 7 years include alaka’i (leaders) Kamuela Yim, Kawika Mersberg, Danny Bishop, Neil McCulloch, and ‘Imaikalani Winchester, as well as kāko’o (supporting teachers) Kaleilehua Maioho, Kapela Collins, Kawika Shizuma, Daniel Anthony, Richard Kuewa and Kristi Desuacido. Additionally, Lyon Arboretum staff Kawika Winter and Liloa Dunn have been instrumental in initiating and continuing the partnership. HKM school leaders Keola Nakanishi and Micky Huihui helped secure formal agreements between the two institutions to facilitate the project.



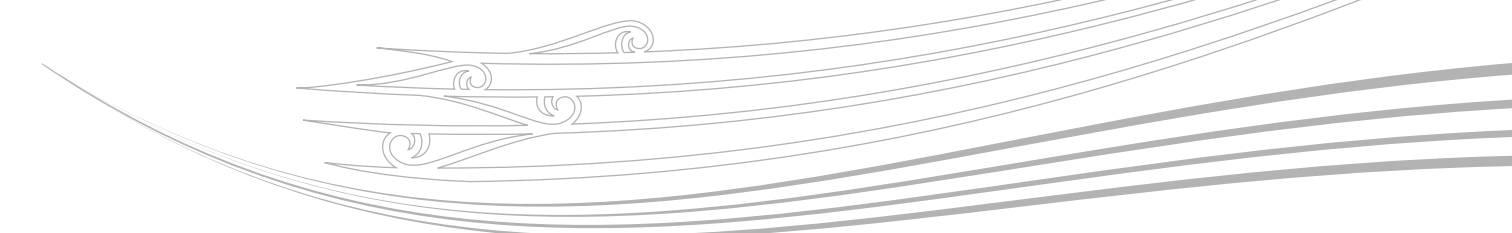
Importantly, both Mersberg and Yim reflect that this event was a landmark moment in their own development as kumu mahi'ai (teachers of farming and planting) and in the development of HKM's foundational protocols. After recounting the story, Kumu Kamuela breathed deeply then spoke fondly of 'Aihualama, looking at the greenery around us, "This is one of the first places that I actually really started believing (long pause) how 'āina is alive." He described the place as a person whose friends had all disappeared for so long that it had become depressed, wondering and longing for the return of caring companions. Those hō'ailona were ways for 'Aihualama to communicate its desire "to play again." Kumu Kawika remembered the winds as affirmation of the cultural protocols that they had been consistently practising with their students: "I look at those years as the beginning of instilling in our kids that, no matter what, we still keep doing our pule and our oli [chants], and we goin rely on our kūpuna to take care and handle the stuff that we physically no can handle." Hō'ailona, such as the winds, were seen by many of the kumu interviewed as a means for ancestors to give direction about their kuleana.

All the kumu interviewed talked about their kuleana, as passed on through their own mentors. Both Yim and Winter were heavily influenced by respected elder Eddie Kaanana and had worked with him in restoring other lo'i. Yet by the time the 'Aihualama project was getting underway, 'Anakala was ready to give them more responsibility as practitioners, and as developers of kumu in their own right.

Anakala never did come up here. Me and Kawika (Winter) both tried to get him to come up and for whatever reasons he never did come...So I think this was a big ha'awina (lesson, assignment) for me and Kawika from 'Anakala. I take it as one of the times where he just said, "ok, 'nuff I baby you. Only so long you can ask me every single time. Sooner or later, you guys are gonna have to make a decision on your own and use what I taught you, and that's all there is to it." (K. Yim, 26 January, 2009)

'Aihualama has provided a place where all the kumu who worked on the project over the last six years could grow beyond their previous experiences. All talked about this being the first time they had been called upon to lead such a project without the oversight of more experienced farmers and practitioners and become mentors themselves. The restoration work was not seen as following mindlessly in the footsteps of those who had come before, but of learning to think for oneself based on the values and principles taught by respected mentors. This is an important part of sustainable self-determination: increasing community capacity by learning from our elders and challenging ourselves to live and practise those teachings in our own ways.<sup>21</sup>

21. Celebrating the continuity of Hawaiian knowledges and the responsibility of Kānaka today, Kanahale suggests that: "We have to pay attention to our native intelligence and experiences. We should be able to look for them, define them—because nothing is lost. In fact, we still have a lot of knowledge that was left to us by our ancestors. It's still there; we just have to go and look for it. That's what we are all about—research." (2005, p. 27)



Kumu Danny Bishop, for example, spoke of applying his own learning about the importance of minimizing impact on the natural flow of the stream.

In all of our projects and all of our teachings and my learning: impacting the river as least as possible is a huge priority. Our kūpuna who live in that river are impacted by the taking from the river. And you know, you wanna justify taking from the river because you think, ‘We gon take care Hāloa,’ and ‘Well, the water gon stay in the watershed area, it’ll go back to the river anyway, so we’re not really diminishing.’ But we are impacting hugely by water temperature, volume, oxygen—all of these things...Also, erosion. If you take too much, you hasten erosion in your ‘auwai. So, I was very aware of what damages we could do by not being appropriate about where we take from the river and the amount that we take from the river. (personal interview, 19 January, 2009)

Because ‘Aihualama has an abundance of natural springs and rain, the ‘auwai system was designed to divert very little from the stream and instead to collect spring and surface water at the lowest point of a sloping ridge, move it through the lo’i, and then direct it outward to the stream. This is in stark contrast to the irrigation systems employed by industrial agriculture.

Every step of the way, students were engaged in the planning, decision-making and hard labour of preparing the lo’i, digging the ‘auwai, moving huge pieces of the felled trees, and finally planting. “Uncle” Danny used the environment of the lo’i to encourage collective sharing and decision-making, “listening to the water while you’re having discussions... where people are sharing ideas and points of view without criticizing each other. It’s a good medium. It’s a nice place to do these things, surrounded by greenery and quiet” (personal interview, 19 January, 2009).

Since their first planting under the light of a full moon in 2006, students in Papa Lo’i have opened approximately one new field per year, and learned and practised all phases from putting huli in the ground to putting ‘ai (food, especially pounded kalo) in people’s mouths. They have made papa (boards) and pōhaku (stone pounders) for their families, so that poi (finely pounded taro) can be made at home. They have increased the collection at ‘Aihualama to over 30 varieties of kalo, as well as planted ‘uala (sweet potato), niu (coconut), lā’ī (ti-leaf), ‘olena (turmeric), ‘awa (kava), hō’i’o (a native fern) and kō (sugar cane). They continue to practise daily entrance protocols to the lo’i, chanting the names of sacred places, chiefs, winds and rains of Mānoa. They have erected three stone altars—pōhaku a Kāne—at which they regularly place ho’okupu (offerings) of their own making, and they have built kahua (stone foundation) and lele (lashed wooden altar) for makahiki (a season of celebrating agriculture and harvest) observance. They have cleared invasive trees from the valley, using the wood to make spears and digging sticks for planting. They have gathered water and stones from the river, and completed surveys of the stream’s



health. They have helped others with lo'i restoration efforts in other valleys and on other islands, learned from ongoing debates about the genetic modification of kalo, and participated in political actions around those issues (Ī. Winchester, personal interview, 31 January 2009). In these ways, multiple academic subjects are integrated with cultural practice and students learn to see the connections between education, economy and ecology. Sustainable self-determination, as a long-term goal, will depend upon what these students do with their experiences after graduation.

### **Invasive institutions: surveying the current terrain**

It is important to affirm the ways indigenous educational programmes are manifestations of self-determination, and it is necessary to persistently critique the imperial contexts in and against which we operate. The 'Aihualama project, like many other indigenous educational initiatives, articulates social relations that challenge the logics of neoliberalism, even while working within state frameworks saturated by neoliberal reform.<sup>22</sup> Like rebuilding 'auwai in the midst of a forest of invasive trees and with the continuity of streamflow blocked, state-funded charter schools foster much-needed change, but have limitations as vehicles for Hawaiian educational self-determination.

In this concluding section, I address three major external forces on Hawaiian schools, which threaten our larger national claims: deep, continuing inequality; the US federal No Child Left Behind Act (NCLB); and the attempts to use the category of "indigenous" to foreclose Hawaiian rights to land and sovereignty. I then discuss the values and strategies that kumu voice as essential to navigating the perilous terrains of asserting indigenous educational self-determination through the existing state apparatus.

#### *Continuing inequality*

Educators at Hawaiian culture-based charter schools address a context of deep, historic inequality while functioning within it. Although these schools address that inequality, most Kanaka Maoli youth remain in the mainstream public school system. On that larger scale, despite important gains made in carving some space and funding for Hawaiian language, culture and history programmes, the state continues to marginalize Hawaiian education, and 'Ōiwi youth still suffer alienation. Concomitantly, Kānaka are severely under-represented in leadership positions in the State Department of Education, yet over-represented among the student population.

Within the mainstream DOE system run by the State of Hawai'i, indigenous Hawaiians make up the largest single ethnic group and the number of Hawaiian students attending public

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22. I find Cote, Day and de Peuter's concise description of neoliberalism useful: "a multifaceted political and economic project that includes the globalization of capital as well as the intensification of societies of control" (2007, p. 318).



schools is growing faster than all other major ethnic groups in the existing state system.<sup>23</sup>

Our youth are also more often labelled “special ed” or “behaviourally handicapped”. Since 2000, the Kanaka Maoli share of special education enrolment has increased more rapidly than our share of total DOE enrolment.<sup>24</sup> Thus both the total number and the proportion of Hawaiians enrolled in special education in Hawai‘i public schools are growing (Kana‘iaupuni & Ishibashi, 2003, pp. 20–21). DOE schools with a predominantly Native Hawaiian population tend to be of poorer quality than other public schools, with fewer teachers who have experience and tenure (Kana‘iaupuni & Ishibashi, 2003, p. 14). Thus, it is not surprising that Hawaiian students in public schools, as a group, continue to have higher rates of absenteeism, lower graduation rates and lower scores on standardized assessments in English and maths (Kana‘iaupuni et al., 2005). Furthermore, ‘ōpio ‘Ōiwi Hawai‘i, (Native Hawaiian youth), have among the highest rates of self-reported drug use, youth arrests, teen pregnancy and relationship violence.<sup>25</sup>

The manifestations of inequality in student lives are linked to a larger structural inequality in the Hawaiian nation. Under prolonged military occupation by the US, Hawai‘i’s lands and public school system are controlled by national and local governing entities that are not our own. Because our lands are currently controlled by an occupier state—the United States and its subsidiary, the State of Hawai‘i—we seek funding for our educational initiatives from bodies with a direct interest in suppressing full expressions of our sovereignty. That funding comes with oversight and assessment measures that do not necessarily align with what Hawaiian communities value. At the state level, the mainstream K-12 system (including 256 out of 289 public schools) is governed by a centralized board that includes no Kānaka Maoli representation. Our teachers and students are subject to state curriculum content and assessment standards developed with little attention to what indigenous communities feel our children should be able to know and do.

Yet, because ‘Ōiwi youth remain the largest group in government-funded schools, continued intervention and transformation of the current public school system in our islands is imperative to our survival. Some also maintain a larger vision for an autonomous ‘Ōiwi educational system (Kahakalau, 2003). Simultaneously, Hawaiian loyalists continue to press Hawaiian national claims for our lands and sovereign governance, so that we may control our own public education system and land base again.

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23. The 2000 USA Census showed that Native Hawaiians comprise about 20% of the state’s total population (Kamehameha Schools Policy Analysis and Systems Evaluation, 2001). Yet Hawaiians accounted for 26% of DOE enrolment in 2006–2007 and 28% in 2007–2008 (Kamehameha Schools Strategic Planning and Implementation Group, 2008). In the last 20 years, the number and proportion of Hawaiian students in public schools has significantly increased. Between 1980 and 2000, these students increased by 44%, while the number of Japanese and Caucasian students declined by more than 30% each (Ishibashi, 2004, p. 19).

24. In 2000–2001, 18.1% of Hawaiian students in public schools were enrolled in special education, compared with only 11% of non-Hawaiian public school students. That same year, Hawaiian students comprised 35.4% of special education enrolment. In the school year 2006–2007, 38% of special education students were Hawaiians.

25. For collected statistics on youth drug use, sexual activity and criminality, see Kana‘iaupuni & Ishibashi (2003), Office of Hawaiian Affairs (2002, 2006) and State of Hawaii Department of the Attorney General (2007).



### *No child left behind?*

Transforming American public education mobilizes free market analogies of choice and decentralization, while recouping a highly centralized, colonialist, assimilationist project. Charter schools have allowed Native communities a degree of autonomy over local schools. However, those schools are also subject to the demands of US Public Law 107–110, known as “The No Child Left Behind Act of 2001” (NCLB).<sup>26</sup> This federal law requires all public schools to administer annual state-wide standardized tests to measure student progress in core subjects. Funding is linked to these assessments, and schools that do not meet targeted improvements, or “Adequate Yearly Progress”, are subject to restructuring or closure. From a Kanaka Maoli perspective, NCLB vests the ultimate accountability for expressions of our educational self-determination with a government that does not represent us, and indeed has worked to exterminate, marginalize or assimilate us. “Success” and “adequate progress”, as defined by that government, do not acknowledge the full missions of Native charter schools, and have led to a fetishization of standardized test scores. In terms of accountability to our own communities, equity on standardized tests might be one minimum standard, but certainly not the ultimate goal or the framework with which to appraise our schools.

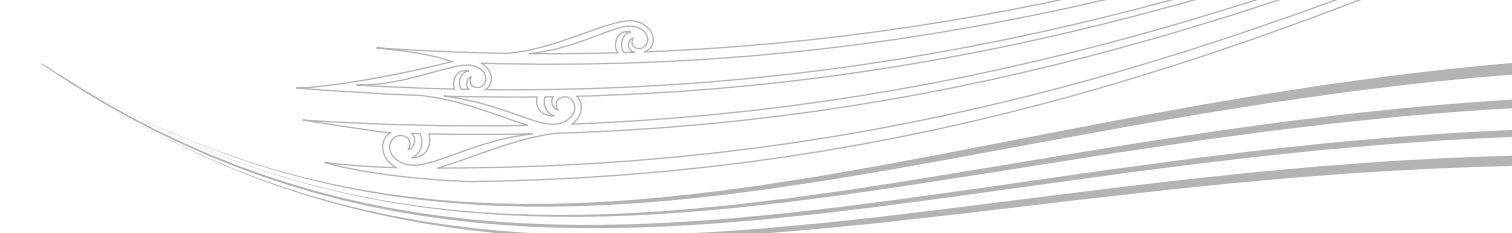
HKM is currently “restructuring” per the mandates of NCLB. This status has caused consternation among the faculty and school leadership who have debated how to address, for example, maths-test score gaps. One result is that students are now spending less time on the ‘āina and more time in maths classrooms. For example, students used to spend at least 3 to 4 hours, 2 days a week at the lo‘i or wa‘a (sailing canoe) or loko i‘a (fishpond), but now spend only 3 hours once a week. Elective courses, which brought community volunteers and experts into the school, have been eliminated to create more time for the tested subject content areas. The pressures of NCLB coupled with the institutional culture of accountability built into the charter school model can be seen as instruments of neoliberal governmentality, whereby getting Native students to score at or above the norms of other children in the US is cultivated as the achievement goal on which school survival depends. Once again, the Natives are seen as in need of remediation.

Furthermore, the requirements of the NCLB law on what constitutes a “highly qualified teacher” do not recognize the depth of cultural knowledge and ability needed to build rapport with students, which many Hawaiian kumu bring with them. For example, a HKM kumu with years of training in the cultural protocols and practices of taro farming and mālama ‘āina (caring for the land), and a college degree in special needs teaching, would be seen as unqualified under the current law to teach science through the lo‘i project. I am not saying there is no value in certifying teachers through conventional colleges of education and standardized exams; however, it is no longer up to a school or even an individual kumu to determine what kinds of professional development are most useful

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26. US Public Law 107–110, 115 Stat. 1425, enacted January 8, 2002 under the Bush administration.





within their given context. The system is set up to disqualify teachers who bring cultural expertise if they do not conform to the standards set out by the state, but there is no equal structural pressure or incentive for them to seek deeper cultural training. Additionally, schools under restructuring have been encouraged to contract large educational consulting and management agencies to help remediate them.<sup>27</sup>

### *State attempts to domesticate Indigenous claims*

Against external forces that attempt to reign in and reassimilate innovative Native initiatives—such as Hawaiian charter schools—administrators and advocates of these programmes mobilize discourses of indigenous rights to argue for their continued existence and funding. We quote the Coolongatta Statement on Indigenous Peoples’ Rights in Education and the United Nations Declaration of Indigenous Rights to argue for continued government support of our programmes. However, the use of “indigenous” presents challenges, as the category is currently being utilized to stem broad Hawaiian claims for national independence and sovereignty, circumscribing them within a model of domestic-dependent pseudo-sovereignty under federal recognition (Kauanui, 2005; Coulthard, 2007). Here, alliances with American Indian education, for example, could both create space for Native Hawaiian educational self-determination and produce a limiting political horizon.

In seeking US federal recognition for Native Hawaiians, Senators from Hawai‘i, Daniel Inouye and Daniel Akaka, have repeatedly evoked the existence of long-held relationships of domestic-dependent sovereignty for American Indian nations and thus the need for equity for Native Hawaiians. The proposed Native Hawaiian Government Reorganization Act, popularly known as the “Akaka Bill”, would begin a process of subsuming Kānaka Maoli in a political framework similar to that for recognized Indian tribes.<sup>28</sup> Moreover, Inouye and Akaka have cited the Native Hawaiian Education Act, which provides funding for a range of Hawaiian educational initiatives, as an example of federal legislation that recognizes Hawaiians as “indigenous people of the United States”. Such a position glosses the contested terrain of Kānaka Maoli collective identity and forces Kānaka Hawai‘i into a position of dependence and subservience to the United States.<sup>29</sup> Hawaiian independence advocates have opposed the Akaka Bill—for which public hearings have not been held in Hawai‘i for nearly a decade—arguing that such legislation could foreclose on Hawai‘i’s past

27. Some states have been more deeply penetrated by Educational Management Organizations (EMOs) like Edison Schools, Inc., a publicly traded corporation which works under contract to manage supplemental programmes and whole schools, as well as increasingly advising entire public school districts.

28. The Native Hawaiian Government Reorganization Act was re-introduced to the US Senate Committee on Indian Affairs as SB. 381 on 4 February 2009.

29. Recent legal and historical research on the relationship between the Hawaiian Kingdom and the US asserts that the political status of Hawai‘i must be seen in terms of prolonged, “belligerent occupation” under international law (Sai, 2004; Craven, 2004; Perkins, 2006). Thus Sai (2004, 2008) has argued that Hawaiian claims must be seen through the lens of international relations rather than US domestic law and that it is only under the international laws of occupation, governing the relations between sovereign states, that justice for Hawaiian nationals may be possible. Independence advocates, in both academic and activist contexts, are exploring these issues, and looking much further than uncomplicated equations between the struggles of Kānaka Hawai‘i and American Indians.



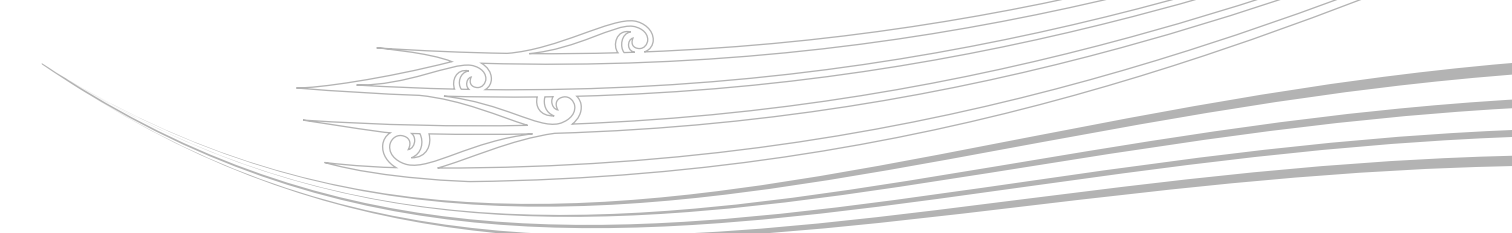
and future claims for our national lands and independent government under international law (Kauanui, 2005; Blaisdell, et al., 2009).

In the short term, it may still be necessary for Hawaiian educational programmes to continue receiving federal funds—as long as the US continues to occupy our national lands. However, calls for Hawaiian “equity” enabled by federal funding bear hazards, because “equity” is often understood within an assimilationist framework. We must caution ourselves against a dependency that keeps us fearfully protecting the scraps thrown our way, while losing sight of the whole bowl of poi. Kahakalau (2003) offers a useful discursive tack by arguing for a comprehensive and parallel system of education validating Kanaka Maoli knowledges and communities. Like Cornassel, she emphasizes self-determination rather than equality or inclusion. We must continue to build alliances between indigenous peoples working within and against the neoliberal transformation of public education, but this also requires more nuanced discussion, or we risk being confined by a limiting political horizon, in the current era of proposed (and some argue forced) US federal recognition for Native Hawaiians.

### *Strategies and non-negotiables*

In light of the external pressures discussed here, what do the voices of kumu engaged in rebuilding ‘auwai and lo‘i in the Hawaiian charter school movement say about establishing the “non-negotiables” for successful Hawaiian education and a thriving people, particularly as practised through lo‘i work? Four themes arose from the discussions around this topic:

1. ‘Āina is paramount. The land is alive, and we must strengthen our relationships to it. This includes knowing the names and characteristics of your ‘āina intimately. “No matter what, above everything else, the ‘āina is always the most important. Always. No matter what. You sacrifice everything in your life for it to the end of your days” (K. Yim, personal interview, 26 January 2009).
2. Water is essential to life. It teaches us who we are and provides a basis for our cultural practices. Yet we must also recognize that human use of water should be minimized and balanced with the needs of all the other life forms, which benefit from its natural courses in our streams.
3. Regular and consistent protocols, including oli and pule recognizing our genealogical connections to place, remind us who we are as ‘Ōiwi and honour the sanctity of life manifest in the world around us. This is a practice of mahalo (gratitude).
4. The lo‘i teaches us work ethics. The ethics kumu expressed as foundational did not emphasize individual industry but instead focused on collective work that depends upon ha‘aha‘a (humility), shared decision-making, and equal work no matter what one’s status.



Additionally, kumu talked about the ways in which continuing to make mahi'ai kalo (taro farming) a larger part of our educational programmes will help strengthen Kānaka Maoli and all who participate. In the wake of the sugar era in Hawai'i, industrial agriculture cast farming as a low-class job, something to escape and avoid because it was exploitative, disempowering and fragmented. Kumu Danny Bishop describes kalo farming as wholly different—holistic, fun and nurturing. Moreover, it is through producing one's own food and feeding others that a people can thrive. The technologies developed by our kūpuna not only allow for sustainable and prolific food production, but also build cooperative community relationships and keep us ever mindful about the interdependence of our natural world. 'Ai pono (healthful eating) from the productivity of our 'āina solidifies those relations.

Worldwide, indigenous people are leading the calls for food sovereignty, sustainable food systems and the protection of subsistence practices developed in harmony with ecological cycles. In this era of globalization-in-crisis, precipitated by the exploitative, "disaster capitalism" fostered by neoliberal states, our collective movement towards sustainable futures requires a continuing and deepening of indigenous peoples' exchange of ideas, models and movements. Our educational efforts are part of this on-going struggle between exploitative capitalist paradigms and the evolving, traditional knowledges of indigenous peoples. This is sustainable self-determination.

### **Ka ha'ina (the refrain)**

Water, and the struggles for water, run parallel with the tensions between competing understandings of knowledge in contemporary educational settings. When knowledge is seen as something to be filled or drilled into the heads of young people then regurgitated for standardized tests, and school success is defined solely by those quantitative measures, young people's desire to learn can wither and evaporate. Just as neoliberal regimes privatize water, similarly they cast knowledge as an inert commodity. Water can be bottled, shipped and sold thousands of miles away, while the streams from which it came completely dry up. Similarly, indigenous peoples have been exploited for our knowledges and cultural representations, alienating the commodity from the well-being of the people.

Over the last few decades, dedicated Hawaiian educators have achieved a significant measure of popular acceptance for some forms of Hawaiian education, including language revitalization, chant, dance, voyaging and history. Often, what becomes accepted and mainstreamed are aspects of culture that seem innocuous or that do not directly challenge the larger social, economic and political structures of dominant society. These traditions cannot be divorced from a renewal of our collective capacity to feed and sustain ourselves from our 'āina. Increasing this capacity will demand a major overhaul of the current land use practice, economic priorities and educational paradigms. Sustainably providing food and water from our own lands is fundamental to the long-term survival and independence of Kānaka Maoli.



Education researchers widely acknowledge that context impacts learning. If context matters, how can students learn and practice Hawaiian culture without access to lo'i, 'auwai and loko i'a, the fundamental technologies that fed the lāhui and allowed rich Hawaiian cultural expression for centuries? How can students learn about our genealogical connections to the manaua, the moi, the 'ama'ama and the 'o'opu (varieties of kalo, seaweed and fish) when they cannot observe, care for, or partake of these kupuna species?<sup>30</sup> We can't think about meaningful change in the current educational system without also considering the changes needed in the dominant economic system. 'Auwai remain dry when water is monopolized by other uses.

Speaking of the Native North American context, Smith observed that "the primary reason for the continuing genocide of Native peoples has less to do with ignorance and more to do with material conditions. Non-Indians continue to oppress Indians because Indians occupy land resources that the dominant society wants" (2005, p. 121). To those aiming to maintain the existing political and economic order that underpins the dominant landscape of contemporary schooling, the practice of indigenous education will likely be threatening and uncomfortable. Indeed, Hawaiian culture-based education should challenge the foundations of the dominant existing modes of social and economic relations that govern the islands. Sustainable self-determination and epistemic self-determination go hand in hand. As we clear the space for 'auwai to flow, we must also fight for the epistemic space for indigenous knowledges to flourish. The promise of indigenous education is the transformation of social relations for all peoples, enabling collective movement towards a world in which people can co-exist without violently subsuming indigenous cultures and exploiting the resources that nourish us all. It is with humility and appreciation that I share this story towards that vision.

### **Author Biography**

Noelani Goodyear-Ka'ōpua is an assistant professor of Political Science at the University of Hawai'i at Mānoa, where she teaches Indigenous and Native Hawaiian politics. The ethics and practices of aloha 'aina guide her academic and community work. Over the last 15 years, she has worked alongside other Kanaka to change the cultural and political aims of education in Hawai'i and to stand for Hawaiian self-determination and sovereignty. She is a mom, a writer and a woman of the ocean.

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30. In several cases, names for varieties of fish, taro and seaweed are shared in common, demonstrating the links between ocean and upland resources. 'Manaua' refers to the seaweed, *Gracilaria coronopifolia*, and a variety of kalo known as a wild variety with a reddish stem and long, narrow leaf. Moi, both the variety of kalo with light green leaves and the fish, *Polydactylus sexfilis*, are prized for eating. It is also a variety of sweet potato. 'Ama'ama are mullet (*Mugil cephalus*) commonly raised in Hawaiian fishponds. 'O'opu is a general term for fish that live in freshwater streams, brackish or saltwater, often referring to members of the Eleotridae, Gobiidae, and Blennidae families. 'O'opu kai can also refer to a type of kalo that can be grown closer to the ocean, because it is more tolerant of salty conditions.



## Glossary

### Hawaiian

ahupua'a  
'ai  
'āina  
'ai pono  
akua  
ali'i  
'ama'ama  
'anakala  
'aumakua  
'auwai  
'awa  
ha'aha'a  
ha'awina  
haumāna  
hō'ailona  
hō'i'o  
ho'okama  
ho'okupu  
Ka Ha'ina  
kahu  
kahua  
kahukula  
kāko'o  
kalo  
Kānaka  
Kānaka Maoli  
kō  
kuleana  
kumu  
kumu mahi'ai  
kūpuna  
lāi'i  
lele  
lo'i  
lo'i kalo  
loko i'a  
luna  
ma kai  
ma uka

### English

land division  
food, especially pounded kalo  
land, especially that in food production  
healthful eating  
gods  
Native leaders  
mullet (*Mugil cephalus*) commonly raised in Hawaiian fishponds  
“uncle”, term of respect for men of an older generation  
ancestral guardian  
irrigation ditches  
kava  
humility  
lesson, assignment  
students  
omen, sign  
native fern  
adopted and beloved grandparent  
offerings  
the refrain  
caretakers  
stone foundation  
school agents  
supporting teachers  
taro  
Native  
Native Hawaiians  
sugar cane  
responsibility, authority  
teacher, source  
teachers of farming and planting  
elder relatives  
ti-leaf  
lashed wooden altar  
wetland  
wetland taro field  
fishpond  
superintendent  
coastal area  
upland region



mahalo	gratitude
mahi'ai kalo	taro farming
makahiki	a season of celebrating agriculture and harvest
mālama 'āina	caring for the land
manauea	the seaweed, <i>Gracilaria coronopifolia</i> ; a wild variety of kalo
moi	a variety of kalo with light green leaves and the fish <i>Polydactylus sexfilis</i>
niu	coconut
'Ōiwi Wale	only Native
'olena	turmeric
oli	chants
'o'opu	general term for fish that live in freshwater streams
'o'opu kai	can refer to a type of kalo that can be grown closer to the ocean,
'ōpio	'Ōiwi Hawai'i, Native Hawaiian youth
palapala	new technology
papa	boards
pōhaku	stone pounders
poi	finely pounded taro
pono	balanced, harmonious, proper
pule	prayers
tūtū ho'okama	adopted and beloved grandparent
'uala	sweet potato
wa'a	sailing canoe

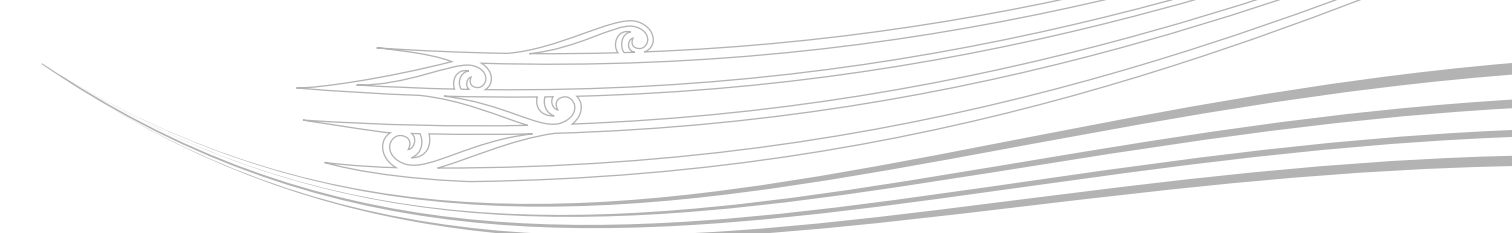


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