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“Cure the dread disease”: 19th Century Attempts to Treat Leprosy in the Hawaiian Islands

THROUGHOUT THE 19TH CENTURY, Kānaka Maoli (Native Hawaiians)¹ suffered and died as a result of numerous foreign introduced diseases to the Hawaiian Islands.² Hansen’s disease, then called leprosy, was only one of many epidemics, but by the end of the century it was perhaps the most feared. Western fears of the disease were based on medieval historical recollections of the disease as well as biblical understandings of it. Kānaka Maoli fears of leprosy developed as the century progressed and haole (non-Native Hawaiian, foreign) understandings informed official treatment of the disease. The 1865 “Act to Prevent the Spread of Leprosy” allowed for the arrest of leprosy suspects, and for those deemed ‘unclean’ or having the disease, to be iso-

¹ At my request Hawaiian words are not italicized in keeping with the understanding that they are not foreign in the place of publication.

² Robert C. Schmitt and Eleanor C. Nordyke, “Death in Hawai‘i: The Epidemics of 1848–1849” *HJH* vol. 35 (2001) 1–13.

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lated on the Makanalua peninsula of the island of Molokai.³ Enforced by the Board of Health, this removal of patients to Molokai's northern shore separated individuals from their 'ohana, their communities, and their 'āina. This attempt at isolation was thought by many to be the best way to deal with leprosy, as quarantine was the only proven method of disease prevention at that time. However, as thousands in the Hawaiian Islands suffered from leprosy and the quarantine policy in the 19th century, there were many who were not only concerned but also actively pursued better medical treatment for this affliction, some even claiming that they could "cure the dread disease."⁴

Evidence of this concern is found in a file within the Board of Health records, Hawai'i State Archives, marked "Alleged Cures" for leprosy. It includes a few letters from Hawaiian kahuna lapa'au (medical practitioners) but most are letters from non-Hawaiian or western practitioners. My survey of these letters began with hopes of assessing the efficacies of the proposed cures and measuring the Board of Health's response(s) to these offers. Unfortunately few specifics were given by the writers of these letters as to what 'medicines' they had hoped to use against the disease.

The letters came from all over the world—United States, Europe, Australia, Japan, Canada, South America—and all expressed a desire to kōkua (help). The Hawaiian and international communities' concern for those who were suffering from the disease is quite apparent. While some may question the value of examining failed attempts to cure a disease, such attempts can lead us to a much more thorough understanding of this particular episode in the history of disease in Hawai'i in general, and the history of leprosy, in particular. Whether the curative attempts received a lot of publicity in their time or were treatments that few had heard of; government sponsored research;

³ Makanalua is a traditional name for the landmass upon which the districts of Kalawao, Makanalua, and Kalaupapa are found, and is referred to today as the Kalaupapa peninsula; see Emmett Cahill, *Yesterday at Kalaupapa* (Honolulu, HI: Editions Ltd., 1990). I am also using the spelling Molokai rather than Moloka'i (unless quoting directly from other sources) throughout this work as recommended by the kūpuna (elders) of Molokai. See the opening "Note" in Harriet Ne with Gloria L. Cronin's, *Tales of Molokai: The Voice of Harriet Ne* (Lā'ie: Institute for Polynesian Studies, 1992) vi.

⁴ Dr. John Bray, letter to the Board of Health, BHL, Series 334, File 34, Alleged Cures for Leprosy.

or individual quests to find a cure, this cumulative archive of medical events and records offer a unique glimpse into the social history of disease and medicine in 19th century Hawai‘i. This glimpse or layer of understanding may further illuminate the larger social history developing in the islands at the same time, namely the clash of opposing world-views.

By 1865, epidemics of influenza, measles, smallpox, pertussis, cholera; the spread of venereal diseases and tuberculosis; and the outbreak of what the Hawaiians called ma‘i ‘ōku‘u (squatting sickness), had all contributed to the dramatic decline of the Hawaiian population. Many of these outbreaks seriously challenged the economic and social fabric of the Hawaiian kingdom as the population continued to fall with each invading disease. Captain Cook and his men brought venereal diseases and tuberculosis to Hawai‘i in 1778, and from that moment onward Native Hawaiians were assaulted again and again by a myriad of epidemics.⁵ Foreigners, that is explorers, traders, whalers, and various settlers, continued to bring these infectious diseases with them to the Hawaiian Islands.

Leprosy’s introduction to the islands came as but one of many new diseases. Called ma‘i lepera (leprosy), ma‘i pākē (Chinese sickness), ma‘i ali‘i (chiefly sickness), and eventually ma‘i ho‘oka‘awale ‘ohana (disease that separates family) by Kānaka Maoli, it is thought that leprosy came to the islands in the early 1800s, but it did not attain levels of great concern until the 1850s and 1860s.⁶

The first rumored case of leprosy was in 1835, and is attributed to a Hawaiian woman, Kamuli, from Ko‘olau, Kaua‘i.⁷ As early as 1823

⁵ Richard K. Blaisdell, “Historical and Cultural Aspects of Native Hawaiian Health,” *Pacific Diaspora: Island Peoples in the United States and Across the Pacific* (Honolulu: University of Hawai‘i Press, 2002) 279–285; O.A. Bushnell, *The Gifts of Civilization: Germs and Genocide in Hawai‘i* (Honolulu: University of Hawaii Press, 1993); Richard A. Greer, “Oahu’s Ordeal—the Smallpox Epidemic of 1853,” *Hawaii Historical Review: Selected Readings* (Honolulu: HHS, 1969); Schmitt and Nordyke, “Death in Hawai‘i,” 2001.

⁶ Approximately 7,000 to 8,000 victims of the disease in total, 90% being Native Hawaiians, would live and die in confinement at Makanalua during the 105 year history of the “epidemic” and leprosy settlement.

⁷ A. A. St. M. Mouritz, *The Path of the Destroyer: A History of Leprosy in the Hawaiian Islands and Thirty Years Research into the Means by Which It Has Been Spread* (Honolulu: Honolulu Star-Bulletin Press, 1916).

missionaries were noting medical cases that may have involved some aspects of leprosy, though its confusion with early stages of syphilis may discount these records. Nonetheless, it is not certain how or when leprosy first came to Hawai'i. Early incidences were most often associated with Chinese immigrants to Hawai'i and thus the name ma'i pākē. Some believed that leprosy was imported with Chinese plantation workers, but many individuals and groups also arrived from other regions of the world where leprosy was endemic. It could have come from any number of sources such as the Azores, Africa, Malaysia, or Scandinavia.

A Board of Health was established by Kauikeaouli, Kamehameha III, in 1850. The main charge of that board was to prevent and cure epidemic diseases, cholera being the major concern at that time. Although leprosy had been present from the early beginnings of his reign, no official mention of the disease was made prior to his death in 1854. It was not until April 1863, during the reign of Alexander Liholiho, Kamehameha IV, that leprosy was first officially noted. Dr. William Hillebrand, the medical director of Queen's Hospital, was the first to report "numerous cases had presented themselves at the Hospital" and admonished the next legislature to "devise and carry out some efficient, and at the same time, humane measure, by which the isolation of those affected with this disease can be accomplished."⁸

Lot Kapuāiwa, Kamehameha V, ascended the throne November 30, 1863. At the Board of Health meeting on December 28, 1863, concern over ma'i pākē was raised and by the February 10, 1864, meeting it was noted that the disease was spreading to the other islands. Questions as to the origin and inheritable nature of the disease were growing.⁹ It is within this context of alarm and concern for prevention of leprosy that the "Act to Prevent the Spread of Leprosy" was approved.

The 1865 "Act to Prevent the Spread of Leprosy" gave the President of the Board of Health the authority "to reserve and set apart any land

⁸ "Report of Dr. W. Hillebrand, Surgeon to the Queen's Hospital, April, 1863," in *Extracts from Reports of Presidents of the Board of Health, Government Physicians and Others* (Honolulu: Daily Bulletin Steam Printing Office, 1886) 5.

⁹ "Report of Dr. W. Hillebrand, Surgeon to the Queen's Hospital, April, 1863," 5-6.

or portion of land . . . to secure the isolation and seclusion of such leprosy persons as in the opinion of the Board of Health or its agents, may, by being at large, cause the spread of leprosy.”¹⁰ The Makanalua peninsula, on the northern side of the island of Molokai, was chosen as the place for this settlement. With treacherous ocean on three sides and steep cliffs on the fourth, the leprosy settlement was established in what many in the government referred to as a ‘natural prison’.

Many viewed the “Act” as a harsh measure, and while most understood the need to isolate the sick from the healthy in order to prevent further spread of the disease, the way in which the segregation policy was carried out was too extreme for most Native Hawaiians. The concept of separating the sick from those who could care for them was foreign to the fundamentals of 19th century Hawaiian culture and was greatly resented by many as a result. For example, we learn from the Hawaiian historian, Samuel M. Kamakau, that during the smallpox epidemic in 1853 “the wife nursed the husband or the husband the wife, and when the children fell ill the parents nursed them.”¹¹ Mary Kawena Pukui reinforced this understanding when she explained that “for any Hawaiian, the body was exposed only to close family members. And so, just as they did in sickness, family cared for family in death.”¹² Indeed, the forcible separation of individuals from family and friends seemed harsh not only to the victims and their relatives but also to many not directly affected by the policy, who did not believe the disease was contagious, and who therefore thought that such strict measures of isolation were unnecessary. Nonetheless, many supported the government’s actions, remembering that:

Aole loa no i noho hoomaha ka Moi Kamehameha V i kona imi ana i na hoao ana e kaohi ia ai ka laha nui ana o keia mai; ua noonoo o ia e hookaawale ia a ua hana i ke kanawai o ia ano, aole wale o keia, aka, ua hoouna o ia ia Dr. Hilibalani ma na aina o Asia e imi ai i na laau e hiki ai ke hoola ia, a i na ano lapaau paha e hoola ia ai.

¹⁰ “Report of Dr. W. Hillebrand, Surgeon to the Queen’s Hospital, April, 1863,” 8.

¹¹ Samuel M. Kamakau, *Ruling Chiefs of Hawaii*. Revised ed. (Honolulu: The Kamehameha Schools Press, 1992) 418.

¹² Mary Kawena Pukui, E. W. Haertig, and Catherine A. Lee. *Nana I Ke Kumu: Look to the Source*. Vol. I. (Honolulu: Hui Hanai, 1972) 134.

King Kamehameha V never rested in his seeking to prevent the spread of this disease; he thought to have a separation and made a law of that nature, not only this, but he sent Dr. Hillebrand to Asia to search for medicines and treatments that would cure.¹³

It is also not surprising that European anxieties about leprosy were especially high during the second half of the 19th century. It was a disease that was greatly feared in the western world and was assumed by many to be highly contagious. Further, foreign anxieties were fueled by apparent Native Hawaiian indifference to the disease and resistance to the segregation policy. Kānaka Maoli were prepared to shelter and care for those who contracted the disease and were willing to accompany those sent to Makanalua and to be their *mea kōkua* (helpers).¹⁴

EXPERIMENTS AND MEDICINALS

In the midst of the fear and anxiety over *ma'i lepera* and how those who contracted it were treated, medical practitioners from a variety of backgrounds and with various motivations, were looking for better medical treatments and perhaps even a cure for this disease throughout the second half of 1800s. Some of this history is fairly well known and includes the treatments of Hoang Nan pills, *gargon* oil, the Goto treatment regime, *gurgon* oil, and *chaulmoogra* oil. Many of the attempts at finding a cure were sponsored by the Board of Health of the Kingdom of Hawai'i and include the work of haole physicians George L. Fitch, Arthur Mouritz, Masanao Goto, and Eduard Arning. There were also many other, less well-known, attempts at finding a cure and offering better treatment to those with the disease that came from both the Hawaiian and international communities.¹⁵

¹³ "No Ka Mai Pake," *Ko Hawaii Pae Aina*, 9 Dec. 1882. Unless otherwise noted, the translations provided are my own.

¹⁴ Kerri A. Inglis, "Kōkua, Mana, and Mālama 'Āina: Health, Disease, and Medicine in 19th Century Hawai'i," *Hūlili: Multi-disciplinary Research on Hawaiian Well-being* vol. 2, no. 1 (2005) 205–227.

¹⁵ I use the term "Hawaiian community" in this context to include all, Kānaka Maoli as well as those of other ethnicities, who were subjects of the Hawaiian Kingdom.

Dr. Eduard Arning, the first bacteriologist in Hawai‘i,¹⁶ is particularly significant because he symbolizes the foreign physician in the islands and the foreign physicians’ role in the larger Kānaka Maoli cross-cultural encounter with foreigners during the late 1800s. In many of the popular histories written and told about the experiences of Kānaka Maoli with leprosy during the 19th century, there are two prevailing themes. One is that haole officials, namely those foreigners who were involved with and influencing the decisions of the Board of Health of the Kingdom of Hawai‘i, did not care about what was happening to those with the disease; that they were not concerned with the conditions at the leprosy settlement on Molokai; that quarantine was all they could or wanted to do to ‘treat’ the disease. The other prevailing theme is that Kānaka Maoli were passive victims of the disease and Board of Health policies, unable and perhaps even unwilling to exercise any agency on their own behalf. While there are elements of truth to these assertions, neither is a hundred percent accurate. There also lies a further ambiguity in the history of leprosy in the Hawaiian Islands. While many of those who were involved in implementing the policies of the Board of Health, most of whom were haole, expressed their concern over what those policies were doing to Kānaka Maoli and their families, they still continued to enforce those policies that so many viewed as harsh, neglectful, even inhumane. It is hoped that this analysis will help to resolve some of that ambiguity.

The more familiar and celebrated attempts to cure leprosy in the late 1800s are often known due to their connection with Father Damien’s story. In 1879, Hoang Nan pills were introduced to the leprosy settlement as a possible treatment for the disease. Made from the powdered bark of the Hoang Nan tree and mixed with alum and realga (arsnicke), the pills were to be taken three times a day.¹⁷ Damien had seen some improvement in his condition with its use, but any positive changes were short-lived. Dr. Nathaniel Emerson, then resident physician at Makanalua, discouraged its use and many Native

¹⁶ O.A. Bushnell, “Dr. Edward Arning: The First Microbiologist in Hawaii,” *HJH* vol. 1 (1967).

¹⁷ Richard Stewart, *Leper Priest of Moloka‘i, the Father Damien Story* (Honolulu: University of Hawai‘i Press, 2000) 173.

Hawaiians were dubious of the pills or withdrew from the treatment. Only those who committed to not eat poi or raw fish, and to no drink 'awa, were given the pills; but even those who "accepted the hard rule laid down for them" could not withstand their "craving of poi [and] they gave up taking Ho-ang-nan treatment one by one."¹⁸ Emerson is said to have eventually thrown the entire Hoang Nan inventory overboard while on a return trip to Honolulu.¹⁹

By 1881 *gargon* oil was used to treat leprosy. Dr. Charles Neilson, the second resident physician at the settlement from 1880–1881, judged it to be beneficial to the residents of Kalawao and in his report to the Board of Health stated: "I know of no case in which it has failed to improve the general health of the patient."²⁰ Its benefits were also short-lived.

The Goto treatment regime, which had been used in Japan for over a century, was first discussed in Hawai'i in 1882.²¹ King Kalākaua had learned of it while on his world tour and subsequently brought the treatment to the attention of the Board of Health. The regime involved two daily immersions in a hot bath containing herbs. Further, herbal medicines were to be taken after each meal, followed an hour later with the ingestion of another medicine made from the bark of a Japanese tree.²² Gilbert Waller, a wealthy American who had contracted the disease, was given the option by Walter Murray Gibson, President of the Board of Health, to seek treatment from Goto in Japan, rather than be removed to Kalawao. Waller's leprosy subsequently arrested and when he returned to the United States he wrote

¹⁸ Ambrose Kanoeli'i Hutchison, *In Memory of Reverend Father Damien J. De Veuster and Other Priests Who Have Labored in the Leper Settlement of Kalawao, Moloka'i*, unpublished manuscript (Sacred Hearts Archives, Leuven, Belgium: 1931) 21.

¹⁹ Hutchison, *In Memory of Reverend Father Damien*, 21; Stewart, *Leper Priest of Moloka'i*, 174.

²⁰ Charles Neilson, *Copies of Report of Dr. C. Neilson to the Board of Health, and of Correspondence Arising Therefrom* (Honolulu: P.C. Advertiser Steam Printing Office, 1886).

²¹ "No Ka Mai Pake," *Ko Hawaii Pae Aina*, 9 Dec. 1882. This editorial references a letter from King Kalākaua, noting "in the King's letter to us, while he was traveling around the world, he met with and saw one of the experts, and we recall his intelligent explanation, about taking care of the body to ward off disease."

²² Stewart, *Leper Priest of Moloka'i*, 276.

to Gibson and recommended that the kingdom try the treatment. In 1885, Dr. Masanao Goto accepted the Board of Health’s invitation to come to Hawai‘i and administer the regime himself at the Kaka‘ako Branch hospital where he was monitored by Dr. Mouritz.²³

In 1883, Gibson had extended another invitation. This time it was to Dr. Eduard Arning, a young scientist who was anxious to further the research on leprosy that had been begun by the bacteriologists Dr. Gerhard Armauer Hansen and Dr. Albert Neisser. Hansen had identified the bacillus that causes leprosy, *mycobacterium leprae*, under the microscope in 1873, and Neisser had developed a successful staining technique which would allow for its study. All three men were interested in understanding leprosy’s pathology. Gibson saw it as a great opportunity to bring someone of Arning’s caliber to Hawai‘i.²⁴ From Gibson’s perspective, the Board of Health, under his direction, was “doing everything possible in the matter of leprosy, and more,”²⁵ and hiring Arning was his proof of that. Further, Gibson did not view the islands as isolated from the rest of the world, rather he believed that the kingdom should have access to the world’s knowledge concerning leprosy, and “if the kingdom could sponsor research leading to the eradication of leprosy, then the Board of Health should make the arrangement, and reap the simultaneous rewards of local well-being and world glory.”²⁶

By the 1880s the sugar industry in Hawai‘i was in full swing. The haole plantation owners were increasing their wealth but were also subject to government taxation. Approximately ten percent of government revenues were going to the Board of Health, 50 to 65 percent of which was allocated to the care and treatment of leprosy in the islands. Such attention to a single disease “had no equal in the world,” Gibson was always quick to point out.²⁷

²³ Stewart, *Leper Priest of Moloka‘i*, 276.

²⁴ Arning, Eduard Christian, Physicians File, Mamiya Medical Heritage Center, Hawaii Medical Library. Son of a German merchant who settled in England, Arning spent two years as a medical student at the University of Heidelberg and completed his medical degree at the University of Strassburg in 1879.

²⁵ Gavan Daws, *Holy Man, Father Damien of Molokai* (Honolulu: University of Hawaii Press, 1984) 171.

²⁶ Daws, *Holy Man*, 140.

²⁷ Daws, *Holy Man*, 126.

Throughout his appointment in the Hawaiian islands, Arning would be challenged by the expectations and impatience of Gibson, and by the limitations of doing research in Hawai'i. While we might well view Arning's time and accomplishments in Hawai'i as inconsequential on a world-wide scale, he does hold a place of consequence in Hawaiian history for two reasons. Firstly, he was the physician that diagnosed Hansen's disease in Father Damien, and secondly, his inoculation experiment on the Native Hawaiian, Keanu, would give both Arning and Keanu a unique place in the history of medicine in Hawai'i.

Dr. Arning was a very meticulous, precise, formal, and logical researcher and his experimentation was extensive.²⁸ He performed biopsies on living patients, autopsies on the dead; inoculated his assorted animals, sacrificed them and autopsied them; examined hundreds of microscope preparations, made thousands of attempts to grow *mycobacterium leprae* on artificial media; and interviewed patients, treated and examined them.²⁹

Unsuccessful in his inoculation experiments on animals, and unable to grow the bacillus in artificial soils, Arning concluded that "the bascillus leprae is limited . . . to the human race."³⁰ His work with Kānaka Maoli was not going well either. Beyond his clashes with Gibson, and a lacking laboratory, Arning's greatest challenge, largely due to his own cultural myopia, seemed to have been working with Native Hawaiian subjects. He reported that his clinical work included "inquiry into the general historical features of the disease and into the history of the disease in the individual" and complained that:

I have here encountered great difficulties, and am afraid have wasted time and patience in trying to derive reliable information from the

²⁸ One of the prevailing theories amongst physicians in Hawai'i was that leprosy was the "fourth stage of syphilis". Arning thought this ridiculous and suggested that if those in power truly believed that, then it would be logical to stop syphilis before it became leprosy. The government should establish syphilis settlements instead of leprosy settlements.

²⁹ Bushnell, "Dr. Edward Arning," 13.

³⁰ Edward Arning, *Copies of Report of Dr. Edward Arning to the Board of Health, and of Correspondence Arising Therefrom* (Honolulu: P.C. Advertiser Steam Printing Office, 1886) 11.

Hawaiians, lack of observation of their personal health and willful deceit are so mingled with truth in their statements, that I defy anybody to collect reliable statistics, such as on which it might be possible to base proofs for hereditary or congenital transmission of Leprosy on these Islands.³¹

When the opportunity to experiment on a human being presented itself, Arning seized upon it. Dr. George Fitch, resident physician from 1882-1884, had already made the suggestion that “condemned criminals should be given the choice of inoculation with the blood and matter from leprous patients or execution as preferred by them.”³² One Hawaiian man made that choice.

From the Kohala district of Hawai‘i Island, Keanu would come to be known as the convicted murderer who was inoculated with leprosy by Dr. Arning. Accused, tried, and found guilty of the murder of a Japanese man named Charlie in February 1884, Keanu was sentenced to be hanged on October 28, 1884. Keanu had been involved with Charlie’s wife, Kamaka, a Hawaiian woman, and “the illicit and clandestine liaison between Kamaka and Keanu led to the murder.”³³ According to Dr. George Trousseau, “the Board of Health petitioned . . . King Kalakaua’s Privy Council of State to commute Keanu’s death sentence to life imprisonment, and for the advancement of science he (Keanu) was to submit to inoculation with leprosy.”³⁴

Confined in the O‘ahu jail, Keanu gave his written consent to be inoculated with leprosy to Dr. Arning on September 30, 1884. Under no circumstance was Keanu to be pardoned or given his freedom; if the experiment was successful Keanu would simply be moved from the O‘ahu jail to the Makanalua peninsula on Molokai, the ‘natural prison’. Dr. Arning removed a piece of clean skin from the arm of a young girl with leprosy and implanted it into Keanu’s left forearm. According to Arning’s report “the implantation wound became an

³¹ Arning, *Copies of Report*, 3-4.

³² “Report of the President to the Board of Health,” in *Extracts from Reports of Presidents of the Board of Health, Government Physicians and Others* (Honolulu: Daily Bulletin Steam Printing Office, 1886) 59.

³³ Mouritz, *Path of the Destroyer*, 152.

³⁴ Quoted in Mouritz, *The Path of the Destroyer*, 153.

ulceration which took nearly three months to heal.”³⁵ At the time of Arning’s last examination of Keanu on June 5, 1886, his arm was free from pain and no *mycobacterium leprae* were found in the secretion. However, by the fall of 1887, three years after inoculation, Keanu was confirmed a ‘leper’.

Keanu’s leprosy progressed rapidly and in February of 1889 he was removed to the Leprosy Settlement at Kalawao. He died on November 18, 1892, deaf and blind at the age of 56.³⁶ Despite the apparent success of Arning’s experiment, there were those who questioned whether or not Keanu’s leprosy was the result of the inoculation or rather that he had lived in the same house with leprous relatives prior to his murder conviction.³⁷ Several members of the Board of Health, including Dr. Emerson, were appalled by the “abusive human research” and pushed for Arning’s dismissal.³⁸

Regardless of the outcome, Keanu’s inoculation gave Arning and Hawai‘i a degree of notoriety. While medical experimentation on humans was nothing new, Arning’s experimental work with Keanu speaks largely of western considerations of the time. Experimentation on Kānaka Maoli did not begin nor end with Arning. Dr. Mouritz also made a series of experiments in inoculating non-leprous mea kōkua (helpers) and similar trials had previously been made by Dr. George Fitch as well.³⁹ Dr. Fitch, third resident physician of the leprosy settlement, claimed that leprosy was the fourth stage of syphilis and believed that it was only communicable by heredity.⁴⁰ Fitch conducted experiments on his Hawaiian patients, 30 males and females, by inoculating them on the upper arm in a manner similar to vaccination. His purpose was to show that all of these patients, who had syphilis, could not be successfully inoculated with leprosy because

³⁵ A. A. St. M. Mouritz, “Human Inoculation Experiments in Hawaii including Notes on Those of Arning and of Fitch,” *International Journal of Leprosy* vol. 19, no. 2 (1951) 214.

³⁶ Mouritz, *Path of the Destroyer*, 154.

³⁷ Mouritz, *Path of the Destroyer*, 154.

³⁸ Stewart, *Leper Priest of Moloka‘i*, 251.

³⁹ Mouritz, “Human Inoculation,” 203–204.

⁴⁰ “Report of the President to the Board of Health,” in *Extracts from Reports of Presidents of the Board of Health, Government Physicians and Others* (Honolulu: Daily Bulletin Steam Printing Office, 1886) 59.

he believed that leprosy was simply “modified syphilis in a fourth stage.”⁴¹

Dr. Mouritz’s objective was also to prove that leprosy could not be successfully inoculated because he believed that it followed a different path—through the digestive tract. Mouritz claimed that in the early 1880s, “the greater number of the 225 healthy kokuas, male and female, living in the Settlement were ready and willing to be experimented on by any means likely to induce leprosy, hoping to obtain board and lodging as lepers for the remainder of their lives without working.”⁴² It is doubtful that their motives for volunteering were as Mouritz states, nonetheless, the doctor chose ten men and five women as his subjects for experimental inoculation, but “every case was a failure and produced no results.”⁴³ All of his subjects were Kānaka Maoli.

More attempts to treat leprosy followed. In 1888, the artist and philanthropist Edward Clifford traveled to Hawai‘i after visiting India and brought with him several cases of *gurgon* oil for the treatment of leprosy. The oil, which comes from a fir tree growing in the Andaman Islands, was mixed with lime-water to create an ointment. Treatment with *gurgon* oil included rubbing the ointment all over the body for two hours twice daily, followed by drinking a mixture of equal amounts of lime-water and the oil.⁴⁴ For most who tried it, some improvement in their lesions and health was initially experienced, but then the familiar symptoms of leprosy returned.

Chaulmoogra oil was introduced to the islands in the early 1900s, providing hope for a time, but it also inevitably failed to cure leprosy. In the 1920s, sulpha drugs were discovered and then used experimentally against Hansen’s disease on patients in the United States. By the 1940s, they were available for patient use in Hawai‘i.⁴⁵

⁴¹ Mouritz, “Human Inoculation,” 215.

⁴² Mouritz, *Path of the Destroyer*, 140.

⁴³ Mouritz, *Path of the Destroyer*, 151.

⁴⁴ Stewart, *Leprosy Priest of Moloka‘i*, 347.

⁴⁵ The sulfone drug therapy did not ‘cure’ Hansen’s disease, but it did stop the bacterium from progressing or causing further damage to patients. Today, multi-drug therapy, dapsone being the mainstay, is used to treat the disease and quickly suppresses any infection. While the number of cases worldwide has dropped in the last decades, leprosy remains a disease that is closely connected with poverty, largely prevalent in India, Southeast Asia, and regions of South America.

(A) ETIOLOGY

Imbedded within these different attempts to treat and perhaps even cure leprosy are opposing approaches to disease and medicine. In order to reconcile the different approaches and to appreciate the insights they offer, it is important to understand the worldviews of the Native Hawaiians and non-Hawaiians involved and their differing cultural understanding of (a)etiology, the study of the cause and origin of disease.

In general, from a Native Hawaiian perspective, disease could be caused in one of four, closely related, ways. Illness could result through the breaking of kapu (sacred laws and prohibitions), the loss of mana (power), the loss of pono (balance, harmony), or 'ānai (a curse). The breaking of a kapu, as an individual, or the offending of an ancestral god, could result in the loss of mana and thereby loss of pono. Some Native Hawaiians understood the dismantling of the kapu system to have brought about disease and illness upon the whole Hawaiian population. An 'ānai may have been brought about through jealousy or contention between individuals, but the result would be the same—suffering by disease.

For at least one kahuna lapa'au (medical practitioner) the many diseases visited upon the Hawaiian Islands and the massive depopulation that resulted were attributed to the ali'i turning away from their traditional religion. This kahuna, named Hua, believed that the mō'i (Hawaiian monarchs) not only broke away from the kapu system, but in so doing, they lost their mana and were no longer pono. Hua stated the following to Peter Kaeo and Jonathan Napela while at Kalaupapa in 1873:

The heavens are open to me and the darkness has vanished. It was the King, Kamehameha III who brought our peril upon us—he committed the wrong for which his subjects have paid a severe price. The gods of his ancestors permitted small pox to enter his Kingdom. He did not recognize his wrong before he departed from this world, and neither did his successors. Neither Kamehameha IV or Kamehameha V prayed to the gods of their ancestors and because Kamehameha V did not do what was right the gods of his ancestors permitted leprosy to enter the

Kingdom. The people have suffered greatly and they follow him in death.⁴⁶

It would seem that Hua also held the monarchs accountable for the spread of leprosy in the islands.

Throughout the 19th century, western or foreign ideas on the origin of disease still varied considerably. Most prevalent were miasmatic theories, in which disease was thought to come from bad air, and fermentation theories, which were based in the idea of contagion and are viewed as the beginnings of germ theory. Other beliefs included viewing filth or dirt as the source of all diseases, a belief most notably held by the Sanitarians. Because of this, they viewed ‘native’ populations as being particularly susceptible, as well as the reservoirs of disease.

THE SPREAD OF LEPROSY

Kānaka Maoli and haole perspectives on leprosy illustrate their respective understanding of (a)etiology in general. Most Kānaka Maoli viewed leprosy as just one of many newly introduced infectious diseases and its contraction attributed to the breaking of kapu, the loss of mana, the loss of pono, or ‘ānai. They clearly understood that leprosy was the result of foreign introduction and explained its spread throughout the island chain by recounting the mo‘olelo of an ali‘i named Naea.⁴⁷ It was said that a Chinese man who had come to the islands during the years of the sandalwood trade, and later became a cook for Naea, had brought the disease to Hawai‘i. During Kauhikaouli’s reign, the cook died of the disease and Naea was stricken by the illness. Having been diagnosed by Dr. Hillebrand, Naea was exiled to Wailuku, Maui, with his attendants, where he lived and subsequently died. It was then explained that after Naea’s death his

⁴⁶ Letter 34, Peter to Emma, August 29, 1873, in Alfons L. Korn, ed., *News from Molokai: Letters between Peter Kaeo & Queen Emma, 1873–1876* (Honolulu: University Press of Hawaii, 1976) 77–79.

⁴⁷ Naea was the biological father of Queen Emma.

attendants scattered throughout the islands, spreading the disease, and creating the epidemic.⁴⁸

In an 1872 issue of *Ka Nupepa Kuokoa*, John W. Kaluaokeala expressed some of his ideas regarding the cause and spread of leprosy. His discussion epitomizes much of the confusion over disease theories in general, and leprosy in particular:

He mau makahiki i hala ae nei, ua laha nui ae keia ano mai iwaena o kakou, a ke laha nei no, aohe i akaka pono ka hopena. Ua hookaawale nae ke aupuni i wahi e malamaia ai ka poe i loohia i ua ano mai la, aia ma Kalihi ae nei a me Kalawao i Molokai.

Mawaena o na kauka o kakou, aole i lokahi ko lakou mana no ke kumu i puka mai ai keia mai ma keia pae aina. Ua mana kekahi, no ka loa ana i ka mai pula, noho maloko o ke kino, a mahope, puka mawaho o ke kino he mau puupuu. Ua mana hoi kekahi, ua lawe ia mai keia mai, mai na aina e mai, ma ka lole, ma ke kino a me na ukana. . . .

Ma keia pae aina hoi, he mea mau ka laha ana o keia mai mawaena o ka poe ilihune malama ole i ko lakou kino iho a no ia mea, ua ili no maluna o na keiki a lakou ke hemahema o ka lakou mau hana.

Ua hoole na kauka o ke aupuni, aohe laau lapaau e ola ai keia mai, ina mai pake oiaio, aka, ina paha no ka inoino o ke koko, maha paha e ola no.

I ka nana aku, o ka ke Akua hoopai no paha keia i ka poe malama ole i ko lakou mau ola kino.

Some years ago the disease was wide spread amongst us, and it is still widespread, and the explanation is not clear. The government has separated a place to care for people who are stricken with this disease, here in Kalihi and at Kalawao on Molokai.

Our doctors do not agree on the reason why the disease has popped up on these islands. Some think it is because of gonorrhoea and it stays in the body and afterwards it breaks out in little bumps on the body. Others think that this disease was brought from another country on the clothes of the body or in their luggage. . . .

In these islands it is commonly spread among the poor people, those

⁴⁸ This explanation of the spread of the disease is given in the manuscript written by Ambrose Kanoali'i Hutchison who was sent to the leprosy settlement on Molokai in 1879. Hutchison, *In Memory of Reverend Father Damien*, 6.

that do not take care of their own bodies and because of this it is spread to their children because of the wrongs that they [the parents] do.

The government physicians have been denied, there is no medicine to cure this disease if they truly have mai pake, but if it is bad blood, then it probably can be cured.

To look at it, it seems to be God’s punishment on those who do not take care of their health.⁴⁹

Then seemingly expressing confidence in Dr. Georges P. Trousseau, who at that point supervised the leprosy treatment center in Kakaako, and perhaps with confidence in western medicine, Kaluaokeala stated “. . . e hiki no iaia ke lapaau, no ka mea, aohe mai i nele i ka laau (he can administer medical care, because there is no disease that does not have a medical cure).”⁵⁰ Though not everyone appreciated Trousseau’s efforts. Six months later, a man “long suspected of having the dread disease” whom Trousseau had identified “to be exiled to Molokai” tried to shoot the doctor. The man was arrested and then tried to shoot Marshal Parke before being taken to prison, saying that he “would prefer to be hanged to the living loathsome death at Molokai.”⁵¹

A few years later, in an editorial found in *Ka Nupepa Kuokoa*, there is discussion of a “new theory” for the spread of leprosy among Kānaka Maoli that had recently been published in the newspaper *Ka Lahui Hawaii*. The first article had stated that “by establishing sugar plantations here in Hawaii and the people from foreign lands come here to work in the sugar fields” ma’i lepera was brought to the islands.⁵² The writer does not take issue with the idea that foreigners brought the disease to the islands, but rather with the notion that the “sending [of people] to work in the sun and rain, is why so many Hawaiians contract leprosy” and counters that:

⁴⁹ John W. Kaluaokeala, “Ka Mai Pake,” *Ka Nupepa Kuokoa*, 19 Oct. 1872.

⁵⁰ John W. Kaluaokeala, “Ka Mai Pake,” *Ka Nupepa Kuokoa*, 19 Oct. 1872. Dr. Georges Trousseau was the Port Physician for Honolulu soon after his arrival in Hawai’i in 1872 and became physician and friend to several of the Hawaiian monarchs. See Jean Greenwell, “Doctor Georges Phillipe Trousseau, Royal Physician,” *HJH* vol. 25 (1991) 121–145.

⁵¹ “Disturbance at Kalihi,” *Nūhou*, 4 April 1873.

⁵² “Kumu Hou o Ka Mai Lepera,” *Ka Nupepa Kuokoa*, 4 Aug. 1877.

He kumu keia i lohe ole ia ma aua, a akahi wale no i keia kalaimanao.

Aole makou i manao he mea e loa ai i ka lepera ka hele ana . . . Ina he mea mai ia, alaila, aohe uao kanaka e koe, e pau loa ana na kanaka o na aina kaupapaloi i ka mai. He mea hou keia ia makou, a aole o makou manaio.

This is a reason that has never been heard before and this is the first time for this discussion.

We do not think that this is how leprosy is contracted, . . . If this is what causes sickness then all Hawaiians would be gone, there would be no one in the taro patches because of the disease. This is new to us and we do not believe it.⁵³

Most haole practitioners, whether they were westerners or other foreigners, understood that leprosy was a foreign introduction to Hawai'i but thought that its spread was aided by indigenous culture and practices. Some stigmatized the disease with biblical connotations, entertained filth and dirt theories of the time to explain its spread, or, as previously mentioned, believed that it was the fourth stage of syphilis.

Dr. Masanao Goto, a Japanese physician trained in what was then the beginnings of western (bio)medicine, illustrated the confused state of western medical knowledge in the 19th century when he described leprosy in 1888 as "an endemic, contagious, chronic, malignant, constitutional, hereditary disease . . .".⁵⁴ Goto further demonstrated western (mis)understandings of leprosy during his time. He believed that many indigenous factors, such as consumption of 'awa, fish, and poi, contributed to a population's susceptibility but viewed 'civilization', or rather the lack of 'civilization' as he perceived it, as the main cause of the disease:

If we look upon the geographical distribution of leprosy, we easily find that it prevails inversely to the general degree of civilization. It is not found in the most civilized countries . . . Civilization tends to drive

⁵³ "Kumu Hou o Ka Mai Lepera," *Ka Nupepa Kuokoa*, 4 Aug. 1877.

⁵⁴ Masanao Goto, "Leprosy," *The Sei-i-kwai Medical Journal* vol. VII, no. 5 (May 1888) 83.

away the prevalency [sic] of leprosy. It is evident that an unhealthy and immoral condition of the people in uncivilized countries increases the susceptibility to leprosy.⁵⁵

Fears and concerns over leprosy were very real both for Native Hawaiians and westerners. For westerners, the greatest fear was that the disease would produce an “imperial danger”. Kānaka Maoli were facing depopulation of the kingdom, the political and social challenges of on-going epidemics, and Board of Health policies that meant separation from family, community, and place.

Differing ideas on how to treat disease in general and leprosy in particular further illustrate the respective worldviews of the Kānaka Maoli and haole. Overwhelmingly, the Native Hawaiian response to any disease, including leprosy, was to kōkua, or to help the person with the illness. The western approach to leprosy was to quarantine those with the disease. Unfortunately, leprosy quarantine and the way it was so often carried out, was experienced by most as isolation, banishment, and even abandonment.

Symbolic of haole attitudes of the time are the writings of Dr. Mouritz. In his examination of the history of leprosy in Hawai‘i he wrote in his book, *Path of the Destroyer*, of his belief that the disease was carried through the gastro-intestinal tract. He described how “healthy Hawaiians will eat, drink, sleep, and live with a leper voluntarily, and without fear, . . . a healthy Hawaiian man or woman will marry a leper, although there are plenty of well men and women in sight.”⁵⁶ It is clear that all Dr. Mouritz saw was the disease. He no longer identified the patient as a person, but rather identified them by their disease, leprosy. Even in these early stages of 19th century (bio)medicine, the western physician was being trained to treat the disease, not the person. For Kānaka Maoli, to kōkua, to give aide to the sufferer, was a long-standing tradition.⁵⁷

⁵⁵ Masanao Goto, “Leprosy,” 89.

⁵⁶ Mouritz, *Path of the Destroyer*, 69.

⁵⁷ Inglis, “Kōkua, Mana, and Mālama ‘Āina,” 223–225.

LETTERS TO THE BOARD OF HEALTH

These differing perspectives on the (a)etiology and treatment of a disease such as leprosy can also be seen in the various letters received by the Board of Health, both in the general files of incoming letters as well as in the singular file labeled "Alleged Cures". Many letters from Native Hawaiian practitioners are found interspersed with other incoming letters that deal with leprosy. In general, letters came to the Board of Health from patients, family members of the afflicted, others involved with the settlement and, in the case of the "Alleged Cures" letters, from those within the Hawaiian community as well as the international community.

Letters from the settlement include those from David Walsh, the first resident superintendent from 1867 to 1868. Mr. Walsh speaks of the condition of the sick, the need for medicines, and his attempts to care for the patients with his limited supplies.⁵⁸ Letters from the patients overwhelmingly asked for medicines or treatment, including many who asked to be treated by kahuna lapa'au. A few patients wrote to the Board of Health not expecting a 'cure' for leprosy, but asking it to at least help the patients with influenza, tuberculosis, and other sicknesses from which they were suffering.

Letters from Native Hawaiian practitioners included one from D. Kaiwiokalani, who in 1873 had treated patients at the receiving station in Kalihi and expressed his desire to treat patients at Kalawao. Another Kanaka Maoli, Henry Kaili, was in Kalawao in 1873 when he wrote of his desire to treat patients, if only he had some medical supplies.

S. H. Meakapu also wrote to the Board in 1886. He had treated D. Keawahi for two years. Interestingly, he believed leprosy to be the result of "bad blood" in a person's system that resulted from syphilis. Meakapu believed that he had cured Keawahi and wanted to treat others. He expressed both his motivation in curing Keawahi and his ambiguity as a kahuna lapa'au during this era of the kingdom. He states: ". . . this disease will be stayed from its death doing among this

⁵⁸ D. Walsh, letter to Board of Health, BHL, 1867, Series 334, File 34.

race . . . I am not an approved physician. I have no license, but I have done this through love. . .”⁵⁹ In 1887 Meakapu petitioned the Board of Health again and was given both permission and payment to treat patients at the leprosy hospital in Kaka‘ako.

Ka Nupepa Kuokoa also reported on the efforts of kahuna lapa‘au to treat leprosy. Likely written by some of the patients he treated, one article wishes to make known “the truth for all in this world to know” of the work of the Hawaiian medical practitioner, Kahui. The article states that:

Ua laapau oia ia makou a ua ola maikai kekahi poe, a ua aneane ola maikai kekahi poe. O ka mai hoi keia i oleloia e ka Bibila a me ke Aupuni, he mai hiki ole ke hoola ia, aka, ma ka imi poao ana a keia kahuna, ua keia ka pono a me ka oiaio o kana mau hana ma ka lapaau ana nona iho a me makou.

A no ia mea, he nui ko makou minamina laia no kona hookuu e ia ana e hoi i kona aina mai anei aku. Aka hoi, i na e ae mai ka Paapa Ola iaia e hoihoi mai ianei e lapaau hou ai, alaila na ka manawa no e hoike ma i ka waiwai io o kana mau hana.

He treated us and some were made well and some got better, almost cured. This disease that is talked about in the Bible and by the Government is one that cannot be cured, but, this Hawaiian medical practitioner has diligently sought out a cure, the result of which was seen in his medical care by himself and us.

And for this reason we are greatly saddened by his premature dismissal to return to his own place and leave here. But, if the Board of Health will agree to return him here to again practice, then it will only be a matter of time that the true value of his practices will be demonstrated.⁶⁰

⁵⁹ S. H. Meakapu, Letter to Board of Health, BHL, 1873, Series 334, File 34. In 1868 the legislature passed an “Act to establish a Hawaiian Board of Health” (Papa Ola Hawai‘i) through which approved kahuna lapa‘au could apply for a \$10 license to practice medicine. Under Kalākaua in 1886, the membership of the Hawaiian Board of Health was expanded and the licensing fee increased to \$20. See Malcolm Nāea Chun, ed. *Must We Wait in Despair* (Honolulu: First People’s Productions, 1994).

⁶⁰ “Palapala Mai Kalawao Mai,” *Ka Nupepa Kuokoa*, 12 June 1875.

The letter then lists nine patients whose “health is good” and another eight who “were nearly cured” by Kahui.⁶¹

Many in the international community had learned of the leprosy settlement due to the attention given to Father Damien, and as a result many interested in attempting to cure the disease wrote to the Board of Health of the Kingdom of Hawai‘i. One such medical practitioner, W.S. Arrowsmith, had written from England in 1876, suggesting the use of *gurgon* oil to cure leprosy. He was moved to write to the Board of Health as he felt “deeply interested in the fate of those afflicted with Leprosy in your Islands, . . .”⁶²

Dr. N. Oakley wrote in 1876 from Australia to suggest a medicinal called “Hayles Specific”. Alluding to the perceived “imperial threat” posed by leprosy and his apparent success with Hayles in Australia, Oakley stated “I need hardly point out to Your Excellency, that should it sustain the reputation it has acquired here, it would be an immeasurable boon to the afflicted . . . at Molokai.”⁶³

Dr. John Bray wrote from Washington, D.C., in 1886 that “a friend of [his] & of suffering humanity has recently discovered a wonderful remedy which he is confident will perfectly cure the dread disease: leprosy. He is entirely willing to supply it on proper conditions to give it a fair & final test without any cost whatever, relying on its successful result for his recompence [sic] . . .”⁶⁴

Letters of introduction and recommendation were sent by and on behalf of Dr. Sarah E. Green of Nebraska in 1896. No specifics were given of her proposed treatment for the disease. There seems to have been no response to her offer of assistance by the Board of Health of what was by then the Republic of Hawai‘i.

The one attempt to cure that did get a fair amount of attention as evidenced in the archival records was the Goto regime, though the treatment received mixed reviews from various parties.

What does seem apparent is the Board’s willingness to try new forms of treatment in hopes of finding a cure. In correspondence that included a discussion of the Goto treatment, one Board of Health member wrote to another official in 1879, “We are of course all

⁶¹ “Palapala Mai Kalawao Mai,” *Ka Nupepa Kuokoa*, 12 June 1875.

⁶² W. S. Arrowsmith, letter to Board of Health, BHL, 1876, Series 334, File 34.

⁶³ Dr. N. Oakley, letter to Board of Health, BHL, 1876, Series 334, File 34.

⁶⁴ Dr. John Bray, letter to Board of Health, BHL, 1886, Series 334, File 34.

reasonably, and necessarily, sceptical [sic] as to a radical cure from any of these remedies, yet not to such a degree as to refuse to give them a fair trial.”⁶⁵ Some 15 years later, Dr. Mouritz concluded in a letter written to W. O. Smith, President of the Board of Health, that while the treatment was providing relief to patients, it was not a cure and the Board soon ended its support of the treatment.⁶⁶

In another letter to the Board of Health, Dr. Mouritz again expressed his disappointment in the Goto treatment, but also his hope in the ‘science’ of the day: “There is one bright spot however on the horizon of Leprosy at present, ‘microbe medicine’, and I do not think it too visionary to suppose, that the *Bacillus Leprae* may yet find a deadly foe, and thereby free mankind from its ravages.”⁶⁷

Indeed, leprosy was of great international concern by the 1890s as well as the focus of research for many. In 1896 it was proposed that a Congress of Leprologists be held to address the suppression and prevention of leprosy and, in 1897, the first World Leprosy Congress was held in Berlin.⁶⁸ Armauer Hansen and other leading bacteriologists, including Robert Koch and Rudolf Virchow, were all in attendance as was a delegate from Hawai‘i. It would not be long before a successful treatment for the disease, sulfone drugs, would be found on the medical horizon.

CONCLUSION

Is there any correlation between worldviews and the treatment of disease? The Native Hawaiian community viewed the cause of disease in general and leprosy in particular to be due to personal actions or agency. Their attempts to treat or cure the disease thus focused on the person. In their attempts to find treatments or cures, they looked to kahuna lapa‘au as well as to other Kānaka Maoli who wished to kōkua. Even when treatments did not cure, if they were easing the pains and discomforts of the patient, they were still perceived as worthwhile because they aided the one who was suffering.

⁶⁵ Sutter M. Gulick, letter to J. O. Carter, BHL, 1879, Series 334, File 34.

⁶⁶ A. Mouritz, letter to W. O. Smith, BHL, 1894, Series 334, File 34.

⁶⁷ A. Mouritz, letter to the Board of Health, BHL, 1894, Series 334, File 34.

⁶⁸ Sheldon Watts, *Epidemics and History: Disease, Power, and Imperialism* (New Haven: Yale University Press, 1997) 40-41.

The haole community also had a strong desire to cure the disease, but by the end of the 19th century its focus was most often on the disease itself and not on those who suffered from it. In keeping with the general concepts of an emerging (bio)medicine, with a focus on microscopes and germ theory, if a treatment did not halt the bacteria it was deemed of no value, even if it gave temporary relief to the patient. With this focus on the disease, and not on those who were suffering from it, the western physicians who were influencing the Board of Health of the Kingdom of Hawai‘i continued to make policy decisions that reflected their medical worldview and not necessarily those of the kingdom’s Native Hawaiians.

Despite the differences, both approaches stemmed from a desire to help those who had contracted the disease and stop it from spreading any further. The popular discourse that “no one” cared or was concerned about what was happening to Native Hawaiians in the face of the leprosy epidemic is not accurate. Concern within the Hawaiian community and the international attention it was given led to many offers to cure or treat the disease. Those who offered to help, to medically treat the disease, had various motivations, but underlying all was the desire to kōkua or assist in their own way. Neither the Hawaiian community nor the international community was quietly accepting isolation as the only ‘treatment’ for the disease. They both approached their attempts to treat or cure the disease from their respective worldviews and the differences in those views led to cultural misunderstandings that unfortunately played out in the lives of those who contracted leprosy.

While ‘success’ in the treatment or cure of leprosy was not found in the 19th century, the records explored demonstrate the resiliency and determination of the Hawaiian community not only in the face of a devastating disease, but in challenging the policies of a Board of Health that was influenced by the western concepts of disease and medicine of the late 1800s.⁶⁹

⁶⁹ This paper is dedicated to the memory of the late Richard Marks (1929–2008): Kalaupapa resident, patient advocate, educator and historian. I would also like to express my gratitude to the anonymous readers and editor of the journal whose many suggestions helped to improve this article.