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## Worlds Beyond Medicine: Nils P. Larsen's Impact on Hawai'i

### INTRODUCTION

Nils Paul Larsen (1890–1964) was a significant transitional figure in Hawai'i as it changed from a plantation society to a modern Pacific community. Larsen lived in Hawai'i from 1922 until his death in 1964, and was recognized in varying degrees as a physician, director, researcher, writer, historian, politician, artist, playwright, inventor, association president, decorated war hero, Swedish consul, honorary *kahuna*, and congressional delegate.

This article focuses on Larsen's biographical information, contributions to the field of medicine, and his appreciation for both progressive and traditional medical practice in Hawai'i. His work included milk regulation, better nutrition, improved care for tuberculosis patients, studies on aging, population control, industrial medicine, decrease of infant mortality, healthier lifestyle for plantation workers, and improved housing for nurses. He also sought to preserve Hawaiian herbal remedies and medical knowledge.

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## EARLY YEARS

Larsen's father, Emil, was a tailor from Sweden. He changed the spelling of the family's last name from L-A-R-S-O-N to L-A-R-S-E-N when he became an apprentice in Norway because of animosity between the countries. He kept the spelling upon his return to Sweden and started his own tailor business. Emil married Maria Friman when he was twenty-four and she was twenty-six years old. Their seven offspring (eldest to youngest) included: Joseph, Samuel, Mary, David, Dan, Nils, and Elisabeth.

Facing bankruptcy, Emil borrowed money to move to New York. Emil and Samuel traveled to Peeksville, New York, and arrived in early October 1892. In June 1893, the rest of the family donated their belongings to the local church and joined them. Larsen was three years old when his sister lifted him up from the ship to see the Statue of Liberty. They moved to Bridgeport, Connecticut, when Emil was asked to help start a Swedish Mission Church. The three eldest siblings quit attending school to help support the family, while the youngest boys (Dave, Dan, and Nils) were encouraged to pursue higher education.<sup>1</sup>

The family had a "stern ethical" upbringing by his father whose church services were always conducted in Swedish. On one occasion Emil asked his youngest son, who was known by his middle name, "Paul," to give a sermon. The heart of the young Nils Larsen's sermon was built upon the belief that the "greatest glory is not in never falling, but in rising every time you fall."<sup>2</sup> In nightly readings to her family from Christian teachings, his beloved mother passed on a belief that "you are responsible for your soul and the joy of living is the fight against oppression and evil."<sup>3</sup>

Nils Larsen began working for hire in grammar school cutting grass, washing windows, and shoveling snow in winter, or cleaning yards every day after school and all day on Saturdays. During vacations in high school he worked in a steel mill as a box carpenter and made big wooden boxes wrapped in steel bands for steel shipping. "He could drive an eight-penny nail in one blow and sink it to the hilt." Larsen recalled "there was always a group of twenty to thirty men outside the gate looking for the job if you couldn't keep up."<sup>4</sup> During

football season Larsen would cajole his brothers to take over his share of the work.

Larsen considered himself an American, even though he was born in Sweden and the family spoke Swedish at home. After giving his high school graduation speech, his German teacher called his attention to his thick Scandinavian accent. Larsen became self-conscious and worked hard to get rid of the “dis/dat, dese/does/weat/weter and so on” to no avail.<sup>5</sup> A critique written by his teacher on this paper warned him, “Do not fear feeling strongly, or expressing your feelings; but let judgment and reasonable restraint tone down any excess in feeling or language.”<sup>6</sup> Despite his aggressive and obstinate character, Larsen proved to be a well-rounded person in both academic and extracurricular activities .

#### COLLEGE YEARS

Larsen studied agriculture when he entered the University of Massachusetts (known then as Mass Agee), to become a forester. As an extracurricular distinction, he was offered the presidency of the campus Young Men’s Christian Association (YMCA). He refused on the grounds that it would not allow people of other religious affiliations to hold office, and instead formed a group (the College Christian Association) that fought against fraternity fixing of campus elections.<sup>7</sup>

In college Larsen wrote a soul-searching paper entitled “A Confession.” In it, he questioned the believability of the fire and brimstone language of Biblical events that did not portray a forgiving spiritual father. Debates such as the “creation” versus “species evolution” models of the origin of the world made it difficult for him to decide to choose a life of “works over faith.” He simply believed God symbolized the highest ideal for humans and he concentrated on acting in a righteous manner with the interests of ordinary people in mind.<sup>8</sup> As a college representative at a Christian Northfield Conference, Larsen learned that there was only one doctor for every million people in China, and he felt compelled to pursue this career; he decided to become a physician.<sup>9</sup>

Larsen lacked money when he was in college. His brother, Sam,

assisted him by providing him with a home and a summer job. Larsen received a Bachelor of Science degree from Mass Agee in 1913 and a medical degree from Cornell Medical School in 1916. Even in medical school, Larsen displayed the kind of community service that would characterize his medical career by organizing two Boy Scout troops in New York.

#### MILITARY COMMISSION

In 1916, Larsen finished his graduate work in biological chemistry at Columbia and was granted a fellowship at New York Hospital.<sup>10</sup> He served as an assistant pathologist there until April 1917. During World War I, Larsen received a commission as first lieutenant in the Medical Corps 106th, United States Infantry.



FIG. 1. Nils Larsen in military uniform, ca. 1918. Lila Larsen Morgan Collection.

First Lieutenant Larsen went overseas on active service to Belgium and France in May 1918. He wrote a letter to his sister, Mary, in May 1917 on a field typewriter on his way to France, which reflected his wartime apprehension. When the troops were awaiting orders in safe places, he worried that “at any moment we will be called away again and be put into a concentration camp and there is no telling what will happen even five minutes ahead.”<sup>11</sup>

While he was overseas, Larsen’s younger sister Elisabeth developed tuberculosis. In 1918 his sister Mary wrote that she had accompanied Elisabeth to a farm in the country in New Hampshire where she “could live in the open.” When the disease advanced Elisabeth lamented to her sister, “Oh, how terrible it is to die and how long it takes.”<sup>12</sup> She was twenty-six years old when she died.

Larsen did, in fact, face combat duty. In the infantry he was promoted to major in 1919 and received the Silver Star Citation that read:

... While directing the evacuation of wounded from the front line trenches under a heavy concentration of machine gun and artillery fire, constantly exposing himself to such fire with utter disregard for his own safety. Five of his seven litter bearers being killed or wounded, he crawled well forward of the front elements of the 106th Infantry and finding a wounded soldier who had lain in an exposed position for 36 hours, he carried him upon his back to safety; afterward searching the shell holes in front of the lines until all the wounded or killed of his regiment had been found.<sup>13</sup>

After military service, Larsen re-embarked on his medical career at the University of Cornell as an instructor in medicine and bacteriology and as an assistant visiting physician in pediatric service at Gouverneur Hospital.<sup>14</sup>

#### MARRIAGE AND CAREER

In the summer of 1919 Larsen went on vacation to Hawai‘i and brought along his eleven-year-old niece. He visited his brother, Laurentius David Larsen, who had come to Hawai‘i in 1908 to work as a plant pathologist. By then David Larsen was an established manager

for Kilauea Sugar Plantation. It was through Dave that Larsen met Sara "Sally" Lucas of Honolulu, a member of Dave's circle of friends from his bachelor days.

Unlike Sally's jovial and sociable manner, Larsen's character showed evidence of a strict upbringing in his puritanical beliefs about women. He claimed that dancing was something he never indulged in, nor did he engage in much dating. After his vacation, Larsen returned to New York, with no intention of further contact and he and Sally went their separate ways.<sup>15</sup>

At Bellevue Hospital in New York, Larsen continued his medical research, writing, and working with other prominent physicians, focusing on pneumonia and asthma. He published in *The Journal of the American Medical Association* and *The Journal of Immunology*. Larsen conducted ambitious research on respiratory disorders. Additionally, he held the post of commanding officer of the First Field Hospital of the New York National Guard.<sup>16</sup>

Some two years after Larsen and Sally Lucas met, Sally traveled to New York, with the intent of starting a candy business. She had been impressed with the doctor, who had brought his young niece to Hawai'i with him, and was urged by a friend to call him. When he called on her, with the lining of his jacket hanging out, she offered to mend it. This impressed him greatly, and the two embarked on a fast-paced romance. They wed on September 1, 1921 in Kensington, New Hampshire and lived in New York City. Meanwhile in Hawai'i, Sally's mother, Lydy Lucas, sought out employment for her son-in-law so she could keep her daughter nearby. Lydy discovered that Queen's Hospital needed a pathologist. Larsen was offered the appointment in July 1922 and accepted it.

Larsen and Sally left New York and traveled to Hawai'i by train and ocean liner when she was six months pregnant. When the newlywed couple first moved to O'ahu they initially resided with Sally's parents on Lunalilo Street in Honolulu. Their daughter, Lila Elizabeth Larsen, was born on September 18, 1922 in the Lucas' home. The following year, the Larsen family moved into a cottage near Diamond Head. Jack Lucas Larsen was born on May 30, 1924. Nils Larsen worked and studied his new environment, eager to prove himself as a physician.<sup>17</sup>

### QUEEN'S HOSPITAL THURSDAY MORNING ROUNDS

When Larsen joined the Queen's Hospital, it had been in existence for about 60 years. Upon becoming its first medical director, he went to work examining the population and local medical maladies and pushing for modernization. He also initiated the often-heated Thursday morning clinic, called "round-table discussions," vigorously conducted instructional sessions, mainly for interns. In January 1923, Larsen wrote:

...Thursday morning rounds are now made by the Honorary Board of Physicians. These are weekly conferences at which interesting cases, undiagnosed conditions, therapeutic problems are presented for discussion. The response by the members of the Board to the number of 10 to 20 each week has been very gratifying. Their interest and discussion has helped materially to improve the service and stimulate to more thorough work. At these conferences the deaths of the week are also discussed. The cooperation by the members of the Honorary Board through constructive criticism and helpful suggestions make it possible to more speedily check defects and errors which results in better service to the patient.<sup>18</sup>

The meetings were held in the spacious nurses' classroom with large windows. The sills were wide enough so that latecomers could sit on them and passersby could humorously see the long row of participants' rear ends from outside the building. Interns would present their cases, and locally established physicians, like Dr. Fennel from Straub, would lecture. Prominent visitors added to the appeal of the meetings. The "1928 Report of the Medical Director" noted:

... The Thursday Morning Clinics have continued without a break and with increasing attendance. Many mainland visitors have expressed wonder when they find over 50% of the whole medical profession gathering weekly to discuss their medical problems. We have also been most fortunate in having with us some of the very best men in the country. . . . It sounds like the top of Who's Who in Medicine. These men have each taken part in the discussion and helped us with our problems. Few people realize the value thus reverted by the hospital to the community.<sup>19</sup>

Annual progress reports were generated and continued until 1936. As the discussion group increased in size, the meetings moved into even larger classrooms that held more attendees.

#### MILK CAMPAIGN

The “milk campaign” in Hawai‘i, as it came to be known, began in November of 1922. The medical community was alarmed because the infant mortality rate was unacceptably high, with 366 deaths per thousand births. Learning of milk campaigns on the U. S. East Coast exposing potential health problems with milk, Larsen suspected Hawai‘i had similar problems. A surprise inspection of Honolulu dairies uncovered unsanitary conditions, leading him to spearhead a drive against spoiled, unsanitary milk. The test samples from “baby milk” sold in Honolulu showed a dangerously high bacterial count. In one inspection Larsen found a man sieving milk through a mosquito net, claiming it would, “strain out them germs you’ve heard about.” Another found a milker, “squatting before a cow whose ulcerated udders were distended three times their normal size with streptococcus infection.” Honolulu milk, Larsen claimed was, “as safe as drinking a swig of water from a stagnant pool.”

Larsen, along with Army Medical Corps Commanding Officer Colonel Craig; President of the Board of Health, John Trotter; Territorial Food Commissioner Bairos; and Chief Sanitary Inspector Schultz, set about correcting the situation. A coalition of Queen’s and Tripler hospitals and the Board of Health became involved in a cooperative drive to analyze Honolulu milk. When all laboratories confirmed a problem, the matter was taken to the public via the editor of *Honolulu Advertiser*, Lorrin P. Thurston. After Thurston was shown the relationship of milk to infant diarrheas, septic sore throats, and other milk-born epidemics, due to the high bacterial count and dirty handling of the milk, he began a media campaign to clean up the milk. The Medical Society formed and passed a resolution for standard milk regulations and laws.

On April 28, 1923, *Honolulu Advertiser* headline news aimed to warn and incense the public stating: “Children of Honolulu are Perishing as a Result of Germ-Laden Milk.” To expedite change, individual dairy sites and their bacteria counts were mentioned in articles.

Some of the bacterial counts ranged into the millions. Dairies were up in arms over the negative publicity. When Trotter, the president of the Board of Health, asked that the publicity be ended because of the damaging effect on the industry, Colonel Craig responded by banning any further purchase of milk for the military unless the campaign was continued.

The *Honolulu Advertiser* headlines finally improved for the milk industry in August, 1925 with stories like "Health Board's Drive Results in Better Milk," and "Removal of Tubercular Cows from Dairy Herds Insures Better Milk." On January 14, 1926, it was officially announced that the milk in Hawai'i ranked as well as mainland milk; later that year Honolulu had more certified and pasteurized milk than other comparable cities in the United States. An article entitled "Plantation Babies Okay Now," which appeared in *Reader's Digest*, made national news.<sup>20</sup>

#### PREVENTORIUM

Larsen, along with other prominent Honolulu physicians, as George Straub of Straub Hospital, worked on many health programs and clinics at Palama Settlement on the outskirts of downtown Honolulu. Larsen was a member of the Board of Trustees that provided specialty care to the economically disadvantaged. Programs like milk stations, prenatal clinics, public health nursing, and camps were developed to teach health, hygiene, and stress management. A tuberculosis committee was developed and branch dispensaries were established, with the first at Palama Settlement.

The purpose of settlement houses like Palama Settlement was "to allow social workers, health care providers, and community leaders to gain an understanding of the geographical neighborhood they lived in—and to enlist the aid of the more fortunate to improve these conditions." They did so by living with the people in the communities who were not able to afford medical care.

While Palama Settlement had operated a tuberculosis day camp since 1910, and a summer camp for children at its Fresh Air Camp at Waialua, these were not sufficient for the total care that children with tuberculosis required. Local interest in Hawai'i preventoriums ("twenty-four hour, twelve month institution for the care and obser-

vation of children sub-standard in health") arose in the early 1920s.<sup>21</sup> In 1926, Dr. A. L. Davis, Bureau of Tuberculosis Director, wrote: "There is an urgent need for a preventorium where pre-tubercular children can be treated."<sup>22</sup> The tragedy of Larsen's sister's death drove his desire for premium medical care for people with this affliction.

On July 19, 1927, Larsen, a member of the Health Committee of the Chamber of Commerce, once again called for the creation of a preventorium; he also brought up the matter with the trustees of Leahi Home. The proposed site was estimated to cost \$140,000 and serve up to one hundred children. The cost was considered excessive.

The College Club finally renewed its commitment to create a treatment facility. In 1929 it encouraged local welfare and public health agencies to add their support. In 1930 the director of Palama Settlement offered to lease, free of charge, three settlement residences for preventoriums. The trustees of Leahi Home secured the attorney general's support. In July 1930, a five-year lease was signed between Leahi Home and Palama Settlement for use of the buildings. The memorial fund of Dr. Francis R. Day, who was the first to "outline a definite crusade against the spread of tuberculosis in Honolulu," donated money to recondition the buildings and equip them for caring up to 39 children. Larsen was appointed to the advisory committee to assist in directing the preventorium with medical director, Dr. A. N. Sinclair. They conferred on such topics as nutrition, weight, follow-ups, intelligence quotients, dental conditions, and family relief. Eventually, because preventative shots and outpatient treatments diminished severe cases of tuberculosis, preventoriums were no longer needed.<sup>23</sup>

#### HARKNESS HALL

When Larsen first visited Hawai'i in 1919, he was a guest at the first graduating class from the Queen's nursing school, which was made up of women who had been recruited from plantations. Women had few opportunities other than plantation life; nursing was one of them. Some of them had witnessed their mothers dying in childbirth and left plantation life in favor of hospital life, even though that meant working twelve hour days for about ten dollars a month, and living in facilities that were in shambles.<sup>24</sup>

Nurses were housed in the Supervisor's Cottage, Graduate Quarters and Probationers' Cottage. Living conditions there were crowded and not very pleasant. In the wooden dormitory termite droppings were said to have fallen on them.<sup>25</sup>

In 1924 when Larsen became the director of the hospital he prompted better living conditions for nurses. In 1931, Mr. Louis Lapham of Chicago visited the meager cottages and, through his efforts, Mr. Harkness of New York donated \$125,000 towards a nurses' home. Dr. James Judd, E. Faxon Bishop (chairman of the board of trustees of Queen's), as well as nineteen contributors raised the money needed for Harkness Hall, designed by noted architect C. W. Dickey. It was a substantial building with a sizeable lobby; in places it was a two-story and others a three-story structure. Each nursing superintendent had a suite consisting of a bedroom, living room, bathroom, and a petite kitchen. The housemother had a similar suite and supervisors had connecting baths between each pair of rooms.<sup>26</sup>

#### QUEEN'S & PLANTATION HEALTH

In his research of plantation diseases, Larsen learned about deaths from beriberi and gastroenteritis—both preventable ailments. Larsen blamed the condition on neglect and ignorance. In 1928, he was invited to speak at the annual meeting of the Hawaiian Sugar Planters' Association (HSPA) on recent developments in medicine. To the members' dismay, instead Larsen described the worrisome health conditions found on some of the plantations. He argued for the creation of a plantation health center and for good medicine delivered in an economic manner: "At your experiment station, scientists have demonstrated that it pays to improve crops. Let me show that it also pays to improve human conditions." When one irate Planters' Association member replied that they were not in the business of public health, Larsen responded, "How much cane can a sick man cut?" Larsen offered an eighteen-month trial health improvement program to prove its effectiveness in reducing the costs of producing cane. "If it does not lower the cost of producing cane, we'll abandon the project." The HSPA agreed to a trial period based on these terms.

Larsen suggested improving nutrition on plantations first. Fruit

trees and other edible plants were brought in and cultivated on the plantations so that workers could enjoy a variety of fresh food. After seventeen months, Larsen proved to the directors that “workers who ate twice their former amount of protective foods suffered less than half as many sick days as had the other laborers.”<sup>27</sup> Plantation stores began to sell protective food at cost, and nutritious lunches were served to school-aged children for five cents. Well-balanced, affordable meals were provided for workers that offered a better nutritional option than rice only. The plantation store began offering chocolate milk. Colored charts and comic books were used to teach children the importance of a balanced diet. The meal program fluctuated because the workers simply did not like all of the food provided.<sup>28</sup> Dr. P. Howard Liljestrand discussed the results of the trial period:

I am now completely convinced that the population in general gets far less medical care than it needs and can use, because of fee for service payment. It is true that plantations have a high rate of office calls and a high rate of hospitalization, but Dr. Larsen's figures indicate that it pays off in good health.<sup>29</sup>

In 1929, Larsen took on the job of creating the Ewa Health Center that would become a hub for medical improvements.<sup>30</sup> Infant mortality rates on the Ewa Plantation were tragic. Physicians initiated a diet regimen for newborns that included local, fresh ingredients. Beta lactose, unsweetened evaporated milk, and cane syrup were given to infants prior to breastfeeding. After a few weeks, cod liver oil, and orange juice were introduced into their diet. At three months infants were given *poi* and strained vegetable soup. The health center also prepared formulas for babies in sterile bottles that were delivered daily for a year and then supplemented by soup.

Larsen analyzed records at the Ewa Health Center. He believed that women were having too many children too close together and this resulted in maternal deaths. In one instance a thirty-five-year old mother gave birth to her twelfth child after having lost six others. Larsen recommended birth-spacing and birth-control on plantations for the well-being of mothers and infants. Condoms became available for three- to ten-cents despite strong religious opposition. Pregnant women were given rides to the health center for examination and

prenatal education, and encouraged to deliver at the hospital rather than in unsanitary camp shacks. Post-natal care included home visits by nurses. Larsen's interest in population and birth-control later brought about his alliance with Margaret Sanger (also a visiting patient of his) and he accompanied her to international Planned Parenthood conferences. This led him to give sex education lectures at McKinley High School.

Larsen used his prolific writing skills in various arenas, such as in *The Queen's Bulletin*. He published his research findings in medical journals and took on the editorial role for *Plantation Health Bulletin*. The bulletin contained articles for and from plantation doctors regarding interesting cases, new findings in medicine, and transmitted information. Doctors wrote on subjects such as deaths, diseases, industrial accidents, births, or anything else of concern. *Plantation Health Bulletin* became a history of plantation health over its twenty-five years.

Industrial accidents, another major concern of Larsen's, were high on O'ahu. After 1937, when specialists were assigned to minimize this figure, O'ahu's rate of accidents on the job plummeted from 2450 per hundred thousand to 930, and the death rate was significantly lowered as well. The number of appendicitis operations was also studied in Hawai'i. The plantation records showed a comparison of 1.2 per hundred thousand deaths from appendicitis as against the mainland number of 10.8. This, Larsen commented, suggested good methods and "vigorous record keeping."<sup>31</sup>

With regard to plantation health, Dr. L. L. Sexton, Sr. asserts that:

A discussion of plantation medicine would not be complete without the highest commendation to Dr. Nils P. Larsen whose name is synonymous with plantation medicine. His encouragement to the inexperienced young intern, or words of restraint to the over-aggressive has brought plantation medicine up from its crude beginnings to a degree of efficiency second to none in any other agricultural area in the world. He molded the disorganized, inefficient system of plantation medicine into the modern association of plantation physicians whom today we salute.<sup>32</sup>

Larsen spoke out about civil rights for plantation laborers, their need for advanced medical services, and access to better nutrition. By

the 1940s, major epidemics had been curtailed. With the use of sul-fapyradine, death from pneumonia had decreased close to threefold. The plantations became the most healthful places to live in Hawai'i. Tuberculosis cases were generally confined to sanitariums and that lowered the number of tuberculosis cases on the plantations. Larsen's efforts in the creation of a better health, welfare, and living environment for plantation workers had paid off.<sup>33</sup>

#### QUEEN'S EXPANSION & MEDICAL GROUP

During Larsen's tenure at Queen's, between 1922 and 1942, the hospital grew in many areas. The intern program was approved by the American Medical Association, the Liholiho Wing was constructed, a department of physiotherapy was initiated, mental health and diabetic clinics were opened, the Mabel Smyth building was dedicated, and a blood bank was established. In 1927, and again in 1946, Larsen

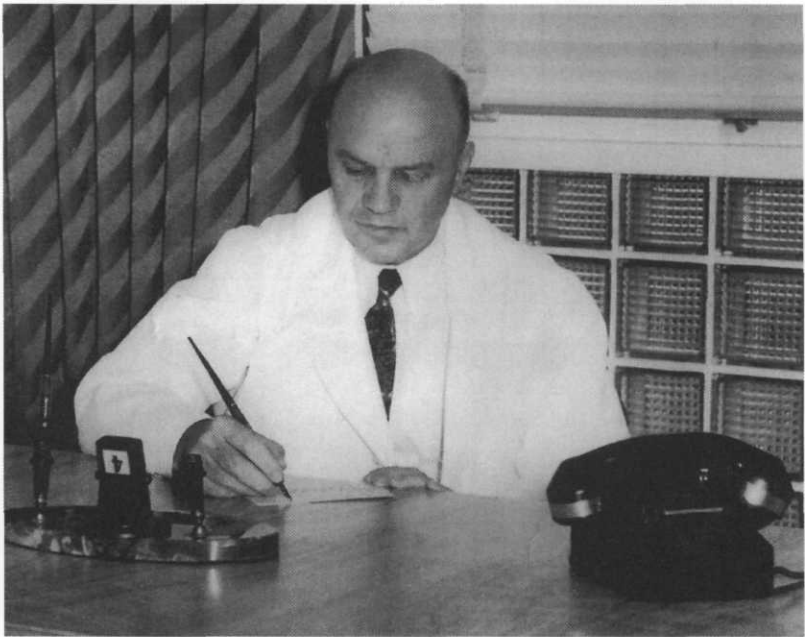


FIG. 2. Dr. Larssen at the Medical Group, ca. 1955. Lila Larsen Morgan Collection.

served as president of Honolulu County Medical Society; in 1929, he became chairman of the first Pan-Pacific Surgical Congress; in 1930, he became medical advisor to the HSPA. Additionally, Larsen acted as a consulting physician for Tripler Hospital.<sup>34</sup>

In addition to his work at Queen's and other associations, in 1934, Larsen became part of a medical coalition. The Medical Group was established on South Beretania Street in Honolulu. Doctors James Judd, Arthur Molyneux, Peter Halford, and R. L. Mansfield decided to create the joint venture in order to share expenses and profits. Larsen, who rented office space for his consulting practice, joined in. According to "The Medical Group of Honolulu" brochure, it behooved the group to be part of a team, affording them relief from such things as bookkeeping and paying for expensive equipment individually. It additionally advanced their knowledge of medicine as they could easily consult each other and provide better patient care. In 1939, they formed a formal partnership and decided to construct their own air-conditioned building on Punchbowl Street in Honolulu.<sup>35</sup>

#### TYPHUS AND VAGOTOMY

In 1939, at the age of 49, Larsen is believed to have contracted typhus as a result of a fleabite that he obtained while developing film in a darkroom under his home in Diamond Head.<sup>36</sup> On November 25, 1939, he came down with a mild case of diarrhea and minimal abdominal cramps. He developed a slight headache and loss of appetite on the second day. On the third day his temperature reached 102 degrees and symptoms increased to "general malaise, excessive peristalsis, and a wide-awake state." When admitted to the hospital, Larsen felt chilly, had increased headaches, experienced pain in the lower lumbar region with aches in his legs, and had "severe diaphoresis."

After four days Larsen's temperature dropped to normal and he felt much better. However, on the fifth day his temperature rose again. It soared to 104 degrees and averaged 103 degrees. On the sixth day of typhus, he developed a rash of small red spots on his abdomen. As they covered his whole body, "part of the rash was hemorrhagic." His symptoms grew to "a chilly sensation, a constant and severe headache, painful eye movements, sensitivity of his spine, and

aches in his legs. He experienced extreme fatigue, with insomnia even after given A.S.A. [acetylsalicylic acid] compounds, morphine, dilaudid, and pantapone." Inhalations of pure oxygen gave headache relief, but he had no appetite and loose bowels.

On the ninth day of the disease, Larsen developed an irregular arthritis that involved his ankle, knee, hip, left shoulder, both wrists, and several finger joints. They were painful, red, and the swelling lasted from two to three days. He was also jaundiced and had an "acute nephritis." Larsen lost 22 pounds during this time period. It was not until the fifteenth day that his temperature dropped to the normal range. His pulse remained consistently below average. He was hospitalized for 20 days.<sup>37</sup>

After his recovery, Larsen initiated correspondence with Dr. Hans Zinsser of Harvard Medical School, professor of bacteriology and immunology at Columbia and author of *Rats, Lice and History*. Larsen wrote: "I had occasion recently to meet your good friend with whom you have been so intimately associated with throughout your professional life—namely typhus fever." He documented an increased number and severity of cases in Hawai'i: four cases of typhus in 1933, fourteen in 1934, nineteen in 1935, fifteen in 1936, thirty-four in 1937, forty-six in 1938, and thirty-five in the first six months of 1939.

Larsen informed Zinsser the disease seemed to frequent drier, more affluent sections of the community. In parched areas, dry fine dust naturally occurred under homes. An entomologist's report noted that after rats were killed in traps, they were often left indefinitely in this powder. The fleas that escaped off dead rats then lived for some time in these dry, dusty areas. Even Larsen's double-walled home was a breeding ground for rats, "whose scampering can be heard at any time, night or day."<sup>38</sup>

As a result of typhus, Larsen suffered from severe angina. On December 5, 1941, Larsen boarded the Matson luxury liner *Lurline* with his wife on a medical trip to help cure his angina. They went to Boston where he was to have an experimental surgery called a vagotomy, cutting the vagus nerve on the back to rid the heart of pain. He was one of Dr. Paul Dudley White's first patients to undergo this procedure.<sup>39</sup> The operation did not aim to resolve the source of his pain, only the sensation of it. The *Lurline* zigzagged its way to San Francisco, before Pearl Harbor was attacked on December 7, 1941. For-

tunately, the Larsen children were away at college when the bombs hit Hawai'i. After the surgery Larsen contracted an infection and developed a large carbuncle; he recuperated for several weeks in New York, working on etchings. Upon returning to Hawai'i, his interests in medicine took a turn towards preserving traditional Hawaiian medical practice.<sup>49</sup>

#### HAWAIIAN HERBAL MEDICINE AND *KAHUNA*

Larsen believed Western doctors discounted Hawaiian medical practices because of "Anglo-Saxon prejudice and pompousness, the usual trimmings of the superiority complex." Larsen considered the system of traditional Hawaiian experts or *kahuna*, who were influential in all aspects of life, had been dismantled after Western influence took hold. Information about the *kahuna* and their belief system was either ignored or disparaged by newcomers, who focused mostly on the grisly stories about the "low-brow *kahuna*" who practiced "black magic" according to medical literature. The mystifying of Hawaiian herbal medicine may have been purposeful on the part of missionaries because slandering *kahuna* made all Hawaiian medical knowledge seem "primitive" and, therefore, insignificant to "real" medicine or Anglo-Saxon importance. Larsen found that modern Hawaiians only had fragments of knowledge about traditional Hawaiian medicine from which to piece together a "mosaic."

Larsen advocated for much of the *kahuna* system. Generally, Hawaiian children were trained as early as five years old to study in certain chosen areas that they showed a propensity for. According to Larsen, the *kahuna* was near the top of the traditional Hawaiian social hierarchy and the *kahuna lapa'au* and the *kahuna hā-hā* were the most respected of the *kahuna* class. They sat on the chief's council. They served as expert diagnosticians and therapists respectively, and possibly both. He pointed out that *kahuna* varied their pharmacopoeia according to what worked for them and were selective about disclosure of their remedies to even their own interns.

In Hawaiian medicine, the *kahuna lapa'au* was the authority qualified to perform the "highest form of healing." They were trained to relieve pain and suffering through medicinal herbs. In dispensing medicine, they carried herbs, scrapings from pumice stone, and

earthen powdered roots in *lau hala* baskets. Larsen found *kahuna* believed in observation, animal testing, autopsy, the practical usage of many herbs, and the end result. Larsen noted there was experimentation in this learning process, as in all medical knowledge. Hawaiian medicine at the point of European contact understood the workings of the human heart, that the head controlled the body, and that disease responded to herbs and/or healing through the spirit. As Hawaiian medical knowledge increased through practical experience, it overcame superstitious beliefs. In comparison to traditional Hawaiian medical practices, Larsen claimed much of what missionary doctors practiced at this time was not considered acceptable medicine today (such as blood-letting, or using calomel, and sulphur). Hawaiian medicine, he asserted, “is still logical.”<sup>41</sup>

In a divergence from the Hawaiian oral tradition, upon the demand of the king in 1868, a *kahuna lapa’au* and *kahuna hā-hā* had written their medical knowledge in a book entitled *Kua’ua’u*. Larsen found this to be a prime reference tool to validate the difference in medical practices prior to 1800. He contended green leaves and vegetables Hawaiian *kahuna* put on wounds could be compared to later uses Caucasians found for garlic, yeast cell extractions, and leaf chlorophyll—all useful in inhibiting the growth of bacteria.

In 1922 Larsen found that the Territorial Board of Health published a list of 191 known Hawaiian medicinal herbs, their method of preparation, and use. The best known of these included: the *kukui* nut (a purgative and strong physic), *’awa* (a sedative), *kalo* sap (a blood-clotting astringent), *noni* applied with hot Epsom salt packs (to abscesses and bring boils to a head), *uhalao* (to chew for sore throats), *pahoehoe*, (for eye inflammation), fine *pia* or starch mixed with certain smooth clays (for stomach disorders), *laukahi*, a broad green leaf containing chlorophyll with vitamins and minerals sterilized by the sun (to heal wounds), and saline water (a cathartic). The *popolo* plant, related to deadly nightshade, was the backbone of the *kahuna lapa’au* armamentarium.<sup>42</sup>

Larsen became so well known for his advocacy of Hawaiian herbal medicine that, by the 1950s, William Totherow, an assistant physician from the Lanai Plantation, referred to him as “medicine man of Hawai’i.”<sup>43</sup> Larsen emphasized Hawaiian remedies were effective only when they were prescribed by the *kapuna lapa’au*. However, Larsen

had such a strong belief that taro was one of the reasons why Hawaiian children had such healthy teeth (as opposed to the white rice diet of other cultures found in Hawai'i) that he developed a supplement he called "tarolactin," which he gave to his grandchildren, who were fond of it.<sup>44</sup> In 1951 Larsen showcased an exhibit at Bishop Museum featuring information on practices Larsen deemed valuable in his investigation of medicine among Hawaiians.<sup>45</sup>

Larsen's interest in preservation of ancient medical Hawaiian practices prompted him to become an active member in the restoration of an ancient Hawaiian *heiau*. In 1953, at a Hawaiian Historical Society meeting, Clarice Taylor suggested a small, newly rediscovered *heiau* in Keaiwa could easily be preserved and the committee concurred. Per Larsen's request, a retired forester in the 'Aiea area, Thomas K. McGuire, confirmed that the abandoned *heiau* was, in fact, a medical center that had maintained a large herb garden. After Hawaiian cultural experts Mary Kawena Pukui, Anna Peleiohaolani Hall, and Emily Taylor verified the *heiau*, the committee went to work on the idea.

The *heiau ho'ōla* (or "heiau of healing") was simple in construction: "A stone wall surrounded an area in which there was a grass house for the medical master who lived there and practiced his art there."<sup>46</sup> It was where:

... the kahuna of old dispensed their powers. They prepared herbs with stone pestles and mortars, seen, now, only on the shelves of Bishop Museum or in an occasional family collection.<sup>47</sup>

Ill or injured Hawaiians either traveled to the *heiau* for medical help or assistance was dispensed to those who were too sick to journey. Larsen conducted a study of the *kahuna-lapa'au* and found that after patients entered the gates of the *heiau*, they met an intern for the *kahuna-lapa'au*. The patient took bundles of food or clothing as payment. Salt water stood in a bowl at the entrance for all to sprinkle on for purification. Green *ti* plants were grounded around the walls to keep out the contamination of evil spirits. The medical master kept intern *kahuna* busy as they gathered plants and herbs and helped the master make medications. Women *kahuna* were restricted to the area outside the walls.

Healing centers were dedicated, so a rededication, quasi-reenactment ceremony was planned for the *Keaiwa heiau*. The Board of Agriculture and Forestry set aside the land as a park and assigned a crew to clean the site. About 40 plant varieties used by Hawaiian ancestors were planted. The Outdoor Circle of Ewa and 'Aiea laid a path of *ti* leaves from the roadway to the *heiau* entrance. The rededication on 'Aiea Heights was held on Thursday, November 15, 1951, at 3:00 p.m. Hawaiian community leaders honored Larsen, saying "we want our friend who has studied medical lore, to come inside the *heiau* as a *kahuna lapa'au*."<sup>48</sup>

#### AGING

Throughout his professional life, Larsen studied aging. In November, 1956, Larsen wrote an article entitled "On Deferring Old Age." He told of his "first angina symptom at 39 and severe angina until 51 when a coronary thrombosis floored me for a while." In January 1941, he wrote:

The world has come into a realization that we are in the midst of a great change. 'The wave of the future' as Anne Lindbergh calls it, is a mighty force which is engulfing us. When it has passed, it will leave a washed and different world. To fight that wave and try to keep everything as it is, is like trying to deceive ourselves as individuals into believing that we are not growing old.<sup>49</sup>

At a symposium in Philadelphia regarding aging, Larsen declared the current problem was how "to keep the step firm, and creative effort active until one is about to disappear into the golden sunset of an active, happy life." He was ahead of his time in discovering ways to remain healthy into old age; they included a low fat, low salt diet, no smoking, daily exercise, and moderate alcohol consumption which lessened the chance for a hardening of the arteries.

Larsen was the medical director at Queen's for 20 years, until 1942. He retained his partnership in the Medical Group up until 1955 when he retired and continued to treat only a select number of patients in his Kāhala office. He analyzed the difficulties of growing old, describing the cramps in his calves, the tightening of the chest,

pains in the jaw—all of which, he said, were evidence of hardening and stiffening of the blood vessels. He insisted that by 69 years of age the idea of death had “lost all its terrors.” Life was still full of fun, but for him there was no longer any fear for him connected with the “step beyond.”<sup>50</sup>

Despite his best efforts, on March 19, 1964, Larsen suffered a heart attack and died at the age of 73. Dr. Marvin A. Brennecke reported:

You can see him—and this he did—sitting in the waiting room (of the Medical Group office in Waialae-Kahala), two hours before his death, holding an oxygen mask over his face and reading a current lay magazine. He was waiting to receive the report on his EKG that a colleague had just taken. He had just finished writing a note to Dr. Paul White of Boston describing his symptoms, believing that this may be of value in the study of heart diseases in the future.<sup>51</sup>

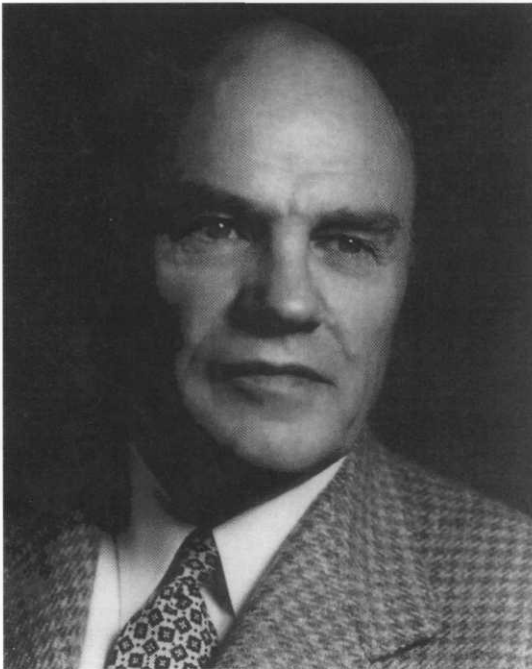


FIG. 3. Nils Paul Larsen, ca. 1955. Lila Larsen Morgan Collection.

It was typical that Larsen was at work not only on his own needs, but also in pressing new research for those who had yet to face the aging process. Larsen took the same practical medical approach as did his venerable Hawaiian counterpart, the *kahuna lapa'au*.

## NOTES

I would like to thank Lila Larsen Morgan for encouraging the preservation of Nils Paul Larsen's memory and for providing many references used in this article from her private collection. Helen Wong-Smith has also been instrumental in editing and offering valued suggestions.

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- <sup>2</sup> Nils P. Larsen, "Looking Back," *The Pharos of Alpha Omega Alpha*, 1958, p. 24.
- <sup>3</sup> Lila Morgan, letter to her children, 30 Sep. 1996.
- <sup>4</sup> Morgan, notes on NPL and money, 30 Dec. 2000.
- <sup>5</sup> Nils P. Larsen, letter to his children, 1 Aug. 1959.
- <sup>6</sup> Nils P. Larsen, English paper, 30 Sep. 1909.
- <sup>7</sup> Lila Morgan, notes on Mass Agee, 17 Aug. 1998.
- <sup>8</sup> Nils P. Larsen, "A Confession," 1914.
- <sup>9</sup> Lila Morgan, notes on Mass Agee, 17 Aug. 1998.
- <sup>10</sup> Margery Hastert, Mamiya Medical Heritage Center, Nils P. Larsen, M.D. Queen's Historical Room. <http://hml.org/mmhcxhibits/larsen/fngaid.html>. 1 April 2001.
- <sup>11</sup> Nils P. Larsen, letter to Mary Larsen, 2 May 1918.
- <sup>12</sup> Mary Larsen, letter to Nils P. Larsen, (circa 1918).
- <sup>13</sup> *Sanitary Detachment 106th Infantry History and Roster Pamphlet*, 1919.
- <sup>14</sup> Hastert, "Nils P. Larsen, M.D. Queen's Historical Room."
- <sup>15</sup> Morgan, letter to her children, 30 Sep. 2002.
- <sup>16</sup> Hastert, "Nils P. Larsen, M.D. Queen's Historical Room."
- <sup>17</sup> Lila Morgan, letter to her children, 30 Sep. 1996.
- <sup>18</sup> Nils P. Larsen, "House Physician's Report," 30 Jan. 1923.
- <sup>19</sup> Nils P. Larsen, "1928 Report of the Medical Director."
- <sup>20</sup> Nils P. Larsen, "History of the Campaign for Better Milk in Hawai'i, 1947, 9-11.
- <sup>21</sup> Paula Rath, "Palama Settlement: 100 Years of Serving a Neighborhood's Needs," *Hawai'i Medical Journal*, Nov. 1955, 774-5.
- <sup>22</sup> A.L. Davis, *Annual Report for the Board of Health*, 1926.
- <sup>23</sup> Rath, "Palama Settlement," 774.
- <sup>24</sup> Ruby LoRaine Carlson, "A Case Study of Queen's Hospital School of Nursing (1916-1968)," Diss.U of Hawai'i, 1991.
- <sup>25</sup> *Ka Hakaupila School of Nursing Yearbook*, 1934.
- <sup>26</sup> Carlson, "A Case Study of Queen's Hospital School of Nursing."
- <sup>27</sup> Nils P. Larsen, "Hawaiian Sugar Plantation Speech of 1928," 4.
- <sup>28</sup> Nils P. Larsen, "Twenty-Year Review of Health Work on Hawaiian Sugar Planta-

- tions," Address Before the 74th Annual Meeting of the Hawaiian Sugar Planters' Association, 7 Dec. 1954.
- <sup>29</sup> Howard Liljestrand, "100 Years of Plantation Medicine," 1956.
- <sup>30</sup> Larsen, "Hawaiian Sugar Plantation Speech of 1928."
- <sup>31</sup> Larsen, "Twenty-Year Review of Health Work on Hawaiian Sugar Plantations."
- <sup>32</sup> L.L.Sexton, Sr., *Plantation Health Bulletin*, April 1961, 43.
- <sup>33</sup> Larsen, "Twenty-Year Review of Health Work on Hawaiian Sugar Plantations."
- <sup>34</sup> Margery Hastert, "Nils P. Larsen, M.D. Queen's Historical Room."
- <sup>35</sup> "Medical Group Brochure." [Honolulu] n.d.
- <sup>36</sup> Lila Morgan, notes on typhus, 28 Feb. 1999.
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- <sup>38</sup> Nils P. Larsen, letter to Howard Zinsser, 4 Jan. 1940.
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- <sup>40</sup> Janine A. Powers, personal interview with Lila Morgan, 27 April 2001.
- <sup>41</sup> Nils P. Larsen, "Medical Arts in Ancient Hawaii," *53rd Annual Report of the Hawaiian Historical Society*, Honolulu, 1944, 27–44.
- <sup>42</sup> Nils P. Larsen, "The Highly Developed Art of Medicine in Old Hawaii," *CIBI Journal*, Winter 1962.
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- <sup>44</sup> Janine A. Powers, personal interview with Lila Morgan, 17 April 2001.
- <sup>45</sup> E.H. Bryan, Jr., "Kahunas' Means for Curing on Exhibition," *HA*, Nov. 1951.
- <sup>46</sup> Clarice Taylor, "Heiau Hunting," *The Saturday Star Bulletin*, 17 Oct. 1953, 8.
- <sup>47</sup> Nils P. Larsen, "Rededication of Healing Heiau Keaiwa," *Annual Report of the Hawaiian Historical Society*, Honolulu, 1953, 7.
- <sup>48</sup> "Park Rededication Tomorrow," *HSB* 10 July 1953.
- <sup>49</sup> Nils P. Larsen, "On Deferring Old Age," Social Sciences Association, 5 Nov. 1956. Unpublished speech.
- <sup>50</sup> Larsen, "On Deferring Old Age."
- <sup>51</sup> Marvin A. Brennecke, "Dr. Nils Paul Larsen," *Plantation Health Bulletin*, April 1964.

