SOCIAL JUSTICE AS A PUBLIC HEALTH IMPERATIVE FOR KĀNAKA MAOLI

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Abstract

Kānaka Maoli (Native Hawaiians) have experienced drastic changes to their way of life and to the demography of their ancestral homeland over two centuries of US occupation. We review 1) the current social status and health status of Kānaka Maoli; 2) the effects of social status on a person's health status; 3) the major social changes in Hawai'i affecting Kānaka Maoli social standing and well-being; and 4) the empirical studies suggesting a relationship amongst social, psychological, and physical factors affecting Kānaka Maoli health and well-being. We also examine the issue of social justice for Kānaka Maoli as a public health imperative. The major tenets of this paper are that 1) the drastic and rapid social changes in Hawai'i and other societal issues have adversely affected the health and well-being of Kānaka Maoli and 2) a complex interaction exists between the social status and health status of Kānaka Maoli.

E iho ana 'o luna, e pi'i ana 'o lalo, e hui ana nā moku, e kū ana ka paia

That which is above shall come down, that which is below shall be raised up, the islands shall be united, and the walls shall stand upright
— A prophecy by the priest Kapihe

Native Hawaiians or Kānaka Maoli[1], the indigenous people of Hawai'i, have experienced drastic changes to their way of life and to the demography of their ancestral homeland over the last two centuries of Euro-American influence. The United States (US) occupation of Hawai'i and the compulsory acculturation toward the American way of life, and the migration of other ethnic groups to Hawai'i, have adversely impacted the social status of Kānaka Maoli in their own homeland. The effects of these changes on the health and well-being of Kānaka Maoli have been immense. In this paper, we examine the relationship between the social status and the health indicators of Kānaka Maoli. What we intend to elucidate is how the social status of Kānaka Maoli has changed over time, and how this change has directly impacted Kānaka Maoli health and well-being. We conclude by exploring the issue of social justice for Kānaka Maoli as a public health imperative with larger, more far-reaching effects than medical and psychological interventions, which often focus on an already ill individual.

The social status and health indicators of Kānaka Maoli

We present a brief overview of some statistics on the social status and health status of contemporary Kānaka Maoli to provide a point of reference for the discussions to follow. Kānaka Maoli are more likely to work in low paying jobs, to be undereducated, to be

1. We use the term Kānaka Maoli (or Kanaka Maoli in the singular) here to mean Native Hawaiian(s) and it refers to any person(s) who resided and/or had ancestors residing in the Hawaiian archipelago prior to 1778. The term was first used in 1852 Kingdom of Hawai'i documents to distinguish between Hawaiians and non-Hawaiians at the time (Rezentes, 1996).

incarcerated, and to be living in poorer conditions than other ethnic groups in Hawai'i (Office of Hawaiian Affairs, 2006). Scholars have suggested that Kānaka Maoli have been, and continue to be, alienated and stigmatized by other social groups (Marsella, Oliveira, Plummer, & Crabbe, 1995). Okamura (2008) suggests that the socially and economically dominant ethnic groups in Hawai'i (that is, Chinese, Japanese and Caucasians) have contributed to the stigmatization and subjugation of Kānaka Maoli and other Pacific Islanders. He also suggests that social and educational institutions in Hawai'i perpetuate this stigmatization and subjugation. We refer the reader to Okamura for further details about his analysis of how social inequities are defined along ethnic lines in Hawai'i. For a more detailed review of the social indicators of Kānaka Maoli, we refer the reader to Kana'iaupuni, Malone and Ishibashi (2005).

Paralleling their social disparities, Kānaka Maoli have some of the largest health disparities compared to the other ethnic groups in Hawai'i and in the larger US. They are among the highest ranking groups in terms of obesity (44%), diabetes (13%) and cardiovascular disease (4.6%) (Balabis et al., 2007). To put this in perspective, the prevalence of obesity and diabetes is 17% and 6%, respectively, in the general Hawai'i population; 11% and 5%, respectively, in Japanese-Americans; and 18% and 5%, respectively, in Whites (Balabis et al., 2007). Also highly prevalent in Kānaka Maoli are health-compromising behaviours associated with obesity, diabetes and cardiovascular disease, such as depression (13%) (Cho et al., 2006), cigarette smoking (27%) and other substance use (26%) (Balabis et al., 2007). Thus, the life expectancy of Kānaka Maoli is as much as 12 years less than that for some other ethnic groups in Hawai'i (Park et al., 2009; Office of Hawaiian Affairs, 1998). For a more detailed review of Kānaka Maoli health disparities, we refer the reader to Johnson, Oyama, LeMarchand and Wilkens (2004).

A major tenet of this paper is that the lower social status of Kānaka Maoli in their homeland is adversely affecting their health status, above and beyond biological and behavioural influences. Why is it important to understand the effects of social status on a person's health in general? Most often health interventions focus on the individual and target his or her behaviours (for example, eating habits and coping skills), attitudes and beliefs (for example, irrational beliefs), or biology (for example, neurochemical imbalances). However, an individual is part of a family, community and socio-political system that exerts a strong influence on his or her behaviours, attitudes and beliefs, and biology (Heaney & Israel, 2008). The people around us and the environment in which we live, whether close in proximity or distal, influence us in many ways, and one such way is in our quality of life and well-being. For indigenous peoples suffering the ramifications of colonization, their environment and way of life are no longer under their direct control. In fact, they have been pushed to the fringes of society and assigned negative stereotypes and images (for example, lazy Hawaiian, drunken Indian and violent Māori) and have thus been forced into a subordinate social ranking by the colonizer in their own homelands.

The impact of social status on a person's health outcome

The idea that a person's social status or social rank is strongly associated with his or her health status has been asserted and examined for decades. Studies with humans and nonhuman species have found that those with a lower social position in their society experience excessive and persistent stress levels, exhibit stress-related pathologies (for example, depression and hypertension), and display higher morbidity and mortality than those with a higher social standing (Sapolsky, 2004). Stress is defined here as a physical, cognitive, or psychological response to environmental events (for example, stressors or agents that cause stress to an organism) that cause bodily or psychological tension. Although stress is a common human experience, certain environmental conditions (for example, impoverished living conditions) can exert greater and persistent stress on an individual, and individuals with a lower social status are more likely to be living in such environments. To illustrate the relationship between social status and health, we summarize a review article by Sapolsky (2004) and an experimental study by Mendelson, Thurston and Kubzansky (2008) on this topic.

In his review, Sapolsky (2004) explains the physiological and psychological effects, and their relationship, on an individual with a low social status. Briefly, a low social status, and related psychological factors (for example, perceived discrimination or anticipation of a stressor), can lead to chronic elevations in basal glucocorticoid levels (that is, a hormonal stress response), slowed stress response, and delayed and extended post-stress recovery (Steptoe et al., 2002). Consequently, having a subordinate social position is associated with immunosuppression (that is, a body's decreased ability to ward off infections) and an increased risk for cardiovascular disease. Although social subordination is not always associated with physiological indices of stress, it usually involves exposure to high rates of physical and psychological stressors, a tendency toward chronic activation of the stress response, and increased risk for stress-related diseases such as diabetes, heart disease and psychiatric disorders (Sapolsky, 2004).

In situations where physical (for example, illness), social (for example, poverty) and psychological (for example, hopelessness) stressors are continuously anticipated in the absence of an actual threat, the mobilization of a stress response can be maladaptive, disruptive and costly to the body (Schwartz et al., 2003). This tendency can also increase an individual's proclivity to stress-related diseases (Guyll, Mathews, & Bromberger, 2001). The body's stress responses to psychological stressors (for example, worries and perceived oppression) are more likely when there is a perception of lack of control, predictability, outlets for frustration, or social support. An individual's interpretation of the stressor (for example, others don't value my ethnic group) can chronically activate the body's stress response system and thereby increase his or her risk for stress-related disorders (Sapolsky, 2004).

Specific to humans, the most common form of hierarchical ranking is socioeconomic status (SES). As individuals fall lower and lower in SES, they have an increasingly greater risk for higher morbidity and mortality (Lorant et al., 2003). In fact, income inequality, or poverty amid plenty, is associated with worse health outcomes and higher mortality rates than is poverty alone (Wilkinson, 2000). Social capital, such as a person's social networks, also decreases, resulting in a subsequent increase in psychological stressors (for example, depression) and decrease in social support (Lorant et al., 2003). Therefore, stressors associated with social status have serious health consequences.

Mendelson et al. (2008) conducted an experiment to test the hypothesis that a subordinate social status can cause psychological distress and cardiovascular arousal. They randomized 44 women of different ethnic groups to either a condition that artificially induced a subordinate social status or a condition that artificially induced a dominant social status. The procedures to induce the women's manipulated social status were based on the status construction theory of Ridgeway & Erickson (2000). Each woman's blood pressure and mood were repeatedly measured over the course of her involvement. It was found that women in the subordinate condition perceived themselves as having a lower status while women in the dominant condition perceived themselves as having a higher social status. Furthermore, the women in the subordinate condition were significantly more likely to report depressed mood and elevated systolic blood pressure than were women in the dominant condition over the short course of the study. Mendelson et al.'s findings lend strong support to the notion that a person's social status can have detrimental psychological and physiological effects over time, highlighting how SES "gets under the skin" of a person to influence his or her health.

As reviewed in the previous section, Kānaka Maoli are disproportionately represented in the lower SES and are underrepresented in higher education, both of which are social factors that could be associated with their higher mortality and morbidity rates. We just illustrated the relationship between social status and health in all humans. In the next section, we provide an historical overview to illustrate how the social standing of Kānaka Maoli has changed since foreigners arrived in Hawai'i and to describe some of the current events that continue to threaten their social standing and, thus, their health outcomes.

The changing social world of Kānaka Maoli and Hawai'i

Since the arrival of James Cook and his expedition to Hawai'i in 1778, the social world of Kānaka Maoli has been forever changed. Change is inevitable for all societies, but the manner in which change occurs (for example, imposed from outside or from within), as well as the outcomes experienced (for example, loss, gain, or maintenance of political autonomy), can vary drastically. Indeed, Kānaka Maoli have experienced drastic and rapid change on all fronts—from depopulation to US occupation.

Stannard (1989) estimates that 800,000 to 1,000,000 Kānaka Maoli lived in what is now called the Hawaiian archipelago when Cook arrived in 1778. In their journals, Cook and his crew wrote that the native people were "...above middle size, strong, well made....a fine handsome set of people" (Beaglehole, 1967, p. 1178). They further noted that Kānaka Maoli were "...truly good natured, social, friendly, and humane, possessing much liveliness and...good humour" (Beaglehole, 1967, p. 1181). Commenting about that time, Blaisdell (1993) asserts that Kānaka Maoli were healthy and robust individuals flourishing under a sophisticated socio-religious system of government. The first observations by Cook of Hawai'i and the assertion made by Blaisdell are in sharp contrast to the current social status and health status of contemporary Kānaka Maoli as reviewed earlier. What has changed?

Beginning in 1778, foreign (mostly American) beliefs, values and customs began to be imposed on Kānaka Maoli. Perhaps the single greatest change to the Kānaka Maoli worldview was the introduction of Christianity in 1820 by the strict and moralistic New England Calvinists following the abolishment of the traditional Hawaiian socio-religious system (Kuykendall, 1965). Many of the traditional practices and beliefs of Kānaka Maoli were condemned by the American missionaries, including hula (traditional Hawaiian dance) and traditional healing practices. Other American ideologies were imposed on Kānaka Maoli, such as capitalism with the enactment of the Māhele in 1848. Thus, the traditional communal land use system was abolished and replaced with the Western system of land privatization, a foreign concept to Kānaka Maoli at the time and one that contrasted sharply with their traditional worldview and relationship to their land (Kame'eleihiwa, 1992).

Overlapping all these drastic social and political changes in the 1800s was the decimation of the Kānaka Maoli population because of infectious diseases, such as gonorrhea, syphilis, small pox and measles, brought by European and American foreigners (Bushnell, 1993). With no natural immunity against these diseases, the Kānaka Maoli population declined from about 800,000 in 1778 to barely 40,000 by 1893 so that, by the end of the 1800s, Kānaka Maoli were a minority in their own homeland (Stannard, 1989). As the native population was on the decline in the 1800s, the foreign population in Hawai'i was on the rise with the migration of not just Europeans and Americans, but also immigrants from Japan, China and Portugal (McDermott, Tseng, & Maretzki, 1980). Describing the population decline of Kānaka Maoli, Bushnell (1993) writes:

> Beyond all doubt, psychological traumata of almost intolerable intensity and variety afflicted most Hawaiians after foreigners with their strange artifacts and alien values disrupted the indigenous society. Those new psychological stresses, as well as the new kinds of microbes [diseases], most certainly played important parts in the long dying of the Hawaiian race. (pp. 55–56)

> The illegal American-supported overthrow in 1893 of Queen Lili'uokalani, the sovereign ruler of the Kingdom of Hawai'i, was the most adverse social change for Kānaka Maoli in that it forever altered their social ranking in their own homeland. Certainly, the psychological trauma experienced by Kānaka Maoli of this period was incredible, with adverse psychological effects that have been carried into the present. Rezentes (1996) writes that contemporary Kānaka Maoli share in a "collective sadness and moral outrage" and that it stems "...from events such as the 1848 Māhele, the 1887 Bayonet Constitution, or the 1893 overthrow of the ruling monarch...." He goes on to write:
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> > Hawaiians were coerced into submitting to foreign institutions, laws, and cultures and forced to either give up or be punished for practicing their traditional culture. Some Hawaiians have internalized their oppressors' messages. They have become trapped in vicious cycles of poor health practices, abuse of 'ohana [family] members, neglect or prostitution of traditional Hawaiian culture, and the abandonment of their spirituality. (Rezentes, 1996, p. 37)

Since the 1893 overthrow, Kānaka Maoli have continuously experienced social and political changes that further erode their social status in their own homeland. They were eventually made to abandon their native language for the English language exclusively through legislative acts in the early 1900s (for example, Act 57; Kahumoku, 2003). Hawai'i became a territory of the US and eventually its 50th state in 1959. Kānaka Maoli have seen more and more foreigners come to their shores with the arrival of immigrants from the Philippines, Puerto Rico, Korea, Southeast Asia and other Pacific Islands (McDermott et al., 1980). Kānaka Maoli intermarried readily with these groups, as they did with the previous immigrant groups to Hawai'i in the 1800s, making Kānaka Maoli the most racially diverse people in the world (Olson, 2002). Despite having a diverse ethnic ancestry, 81% of Kānaka Maoli choose their Kanaka Maoli heritage as their primary ethnic identification (Kaholokula, 2007, 2009).

We present the ethnic composition of Hawai'i from 1900 to 2000 in Table 1 to show the change in demography and the overall population size over time. The large drop in the Kānaka Maoli population between 1910 and 1920 and the continuing low numbers through to 1990, especially in 1970, is suspect. This drop might reflect a combination of factors: poor data collection, inconsistency in the definition of Kanaka Maoli, higher infant mortality rates among Kānaka Maoli and/or Kānaka Maoli not wanting to identify as such because of the social stigma associated with this ethnic identity during these decades. Many kūpuna (elders) have shared how some Kānaka Maoli during these times were ashamed to be Kanaka Maoli and, if they could pass as another ethic group, they would. Regardless of the unreliability of the data, they illustrate the growth of the general population in Hawai'i as well as that of specific ethnic groups, in particular the Caucasian population. The "other" ethnic group category comprises Koreans, Southeast Asians and other Pacific Islanders, and also increased during the 1900s.

Table 1. Hawai'i's total population and breakdown by ethnic group from 1900 to 2000.

Ethnic Group	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
Kanaka Maoli	24%	20%	16%	14%	15%	17%	16%	9%	12%	13%	23%
Caucasian	19%	11%	11%	14%	26%	25%	32%	39%	33%	33%	24%
Chinese	17%	11%	9%	7%	7%	6%	6%	7%	6%	6%	5%
Japanese	40%	41%	43%	38%	37%	37%	32%	28%	25%	22%	17%
Filipino	NR	1%	8%	17%	12%	12%	11%	12%	14%	15%	14%
Other	NR	16%	13%	10%	3%	3%	3%	5%	10%	11%	17%
Total Population	154,001	191,874	255,881	368,300	422,770	499,794	632,772	769,913	964,691	1,108,229	1,211,537

Note. The low percentages of the Kanaka Maoli population from 1920 through 1990 might reflect a combination of factors: poor data collection, inconsistency in the definition of Kanaka Maoli, higher infant mortality rates among Kānaka Maoli, and/or Kānaka Maoli not wanting to identify as Kanaka Maoli because of the associated social stigma during these decades. NR = no report. Data is from Budnick (2005) and US Census Bureau (2000).

Modernization and globalization for Kānaka Maoli have been challenging to say the least, not only for their socio-political effects but for their psychological consequences as well. Negative stereotypes of contemporary Kānaka Maoli are widespread. One well known example is the misconception by other social groups that Kānaka Maoli are lazy, uneducated, irresponsible and violent. As Young (1980: 21) points out, "These stereotypes...have hindered many young Hawaiians from seeking high goals." His observation is consistent with Rezentes' (1996) comment that many Kānaka Maoli have internalized these negative messages, which in turn has led to increased maladaptive behaviours (for example, domestic violence) and further social discord for contemporary Kānaka Maoli.

The struggle for Kānaka Maoli to regain their social standing in their own homeland continues today. Over these last two decades, Kānaka Maoli rights and entitlements, social status as native people, and institutions have been threatened with lawsuits and opposition by non-Kānaka Maoli. The Kānaka Maoli-only voting for trustees of the Office of Hawaiian Affairs, a state office created to manage trust assets for Kānaka Maoli, was challenged in the US Supreme Court (Rice vs. Cayetano, 2000). The court's decision to overturn the Kānaka Maoli-only voting requirements has given non-Kānaka Maoli a say on matters that directly affect Kānaka Maoli. Sparked by this legal case, other non-Kānaka Maoli have challenged Kānaka Maoli educational and social institutions, such as the only private school for Kānaka Maoli children (Doe vs. Kamehameha Schools, 2003) and the Department of Hawaiian Homelands (Arakaki vs. Lingle, 2005) calling them unconstitutional because they give preference to Kānaka Maoli. Such lawsuits threaten the already limited rights and entitlements of Kānaka Maoli, which can only serve to further alienate them from the larger society. Thus, the social world of Kānaka Maoli continues to change, and this change continues to be imposed by non-natives using the US Constitution to legitimize their ethno-centric aspirations.

The laws and policies of a society reflect the cultural beliefs, practices, preferences (or biases) and aspirations of that society. What are the laws and policies of the State of Hawai'i and the USA reflecting when they do not appreciate or respect the values, practices and aspirations of the host culture and its native people? Kānaka Maoli are continuously being made to assimilate toward a cultural group and way of life that is foreign to their worldview. Essentially, practices that do not promote tourism or create the façade of happy natives are not encouraged (for example, the "aloha spirit" slogan and exotic hula girls) (Trask, 1999).

We do not assume that all contemporary Kānaka Maoli are equally troubled or negatively affected by the US occupation of Hawai'i and the compulsory acculturation toward the American way of life. Indeed, many contemporary Kānaka Maoli embrace the values and aspirations of the American society and consciously choose to integrate, if not assimilate, toward it. By all accounts, a significant number of Kānaka Maoli of the time strongly objected, in fact protested against, the 1893 overthrow (Silva, 2004), but little is known about the attitude of contemporary Kānaka Maoli in regard to that historical event and the current events we discussed earlier. Regardless, the lower social status assigned to contemporary Kānaka Maoli in general may still have adverse health effects. For example, Kānaka Maoli wanting to assimilate toward the American culture may be met with challenges such as not being fully accepted by the American mainstream while being marginalized by the Kānaka Maoli community. Kānaka Maoli choosing to maintain a strong cultural affiliation are also met with challenges, and examples of these challenges are described throughout this paper. As studies with African-Americans show, even those with a higher SES experience similar social stressors (for example, racism) as those in a lower SES and, when compared to Whites with an "equivalent" SES, they still have higher morbidity and mortality rates (Williams, 1999).

The evidence for the connection between social status and health outcomes in Kānaka Maoli

A body of scientific evidence is slowly mounting to support the idea that larger social issues are impacting the psychological and physical health and well-being of Kānaka Maoli. In particular, studies that examine psychosocial correlates of health-compromising behaviours (for example, tobacco use) and the prevalence of chronic diseases (for example, diabetes) among Kānaka Maoli have been conducted. Studies from the Kōhala Health Research Project (KHRP; formerly known as the Native Hawaiian Health Research Project) out of the University of Hawai'i have also examined the relationship between acculturation strategies and health outcomes in Kānaka Maoli (Kaholokula, Nacapoy, Grandinetti, & Chang, 2008).

We refer the reader to Berry (2003) for a more detailed discussion of acculturation strategies and their relationship to health and well-being. Briefly, Berry theorizes that an individual

from an acculturating group, despite the reasons for entering into an acculturation process (for example, immigration or conquest), eventually adopts one of four acculturation strategies: integrated (or bi-cultural), separated (referred to here as traditional), assimilated or marginalised. Integrated, or bi-cultural, persons are characterized by a strong identity with, or strong preference toward, both their traditional ethnic cultural group and the mainstream cultural group (American culture in our case). Traditional persons are characterized by a strong identity with their traditional ethnic cultural group exclusively, while assimilated persons are characterized by a strong identity with the mainstream cultural group exclusively. Marginalized persons are characterized as neither identifying with their traditional ethnic cultural group nor that of the mainstream. Social and psychological factors influence the effects these four acculturation strategies have on a person's health status. These include the reasons for entering into the acculturation process (for example, immigration versus conquest), the attitude of the acculturating person toward acculturation, and the larger group's attitude toward the acculturating individual and his or her social group (Berry, 2003). Studies among immigrants and refugees to the US often find that an integrated acculturation strategy is associated with less acculturative stress and better mental health outcomes (Farver, Bhadha, & Narang, 2002; Jang, Kim, Chiriboga, & King-Kallimanis, 2007).

Berry's (2003) four acculturation strategies and their association with symptoms of depression and diabetes prevalence were examined in two separate KHRP studies. The first study examined the relationship between the four acculturation strategies and depression symptoms in 521 adult Kānaka Maoli (Kaholokula, 2007). It was found that 70% of Kānaka Maoli could be characterized as having an integrated acculturation strategy while 23% had a traditional acculturation strategy. A minority of Kānaka Maoli was characterized as assimilated (1%) and marginalized (6%). The main finding was that traditional Kānaka Maoli reported significantly more symptoms of depression than integrated Kānaka Maoli, even after taking into account differences in socio-demographics (for example, age and education level), degree of Kānaka Maoli ancestry and social support. A likely explanation for this finding is that traditional Kānaka Maoli are experiencing more acculturative stress, such as perceived racism and oppression, and a greater sense of social injustice toward their ethnic group (Kaholokula, 2007). Other researchers have found that acculturative stress is associated with depression in other US ethnic groups (Hovey, 2000), and that both acculturative stress and depression are lower in integrated individuals (Jang et al., 2007).

The other KHRP study that employed Berry's (2003) four acculturation strategies examined their relationship to type 2 diabetes prevalence in a community-based sample of 496 adult Kānaka Maoli (Kaholokula et al., 2008). Similar to the previous KHRP study, 77% of Kānaka Maoli could be categorized as integrated while 17.4% were categorized as traditional, with a minority categorized as assimilated (1.6%) or marginalized (3.8%). It was found

that traditional Kānaka Maoli were significantly more likely to have a diagnosis of diabetes (27.9%) than integrated Kānaka Maoli (15.4%), even after taking into account differences in socio-demographics, degree of Kānaka Maoli ancestry and biological correlates of diabetes. To put this in perspective, the overall prevalence of diabetes across all Kānaka Maoli is estimated to be 19% (Grandinetti et al., 2007). Again, the likely hypothesis is that traditional Kānaka Maoli are experiencing more acculturative stress in the same ways as described earlier. Several studies have found that people with depression are at risk for developing type 2 diabetes (Knol et al., 2006), two conditions found to be most prevalent in Kānaka Maoli with a traditional strategy of acculturation.

Among Kānaka Maoli youth, other researchers found a similar relationship between Kanaka Maoli identity and health-threatening behaviours. Yuen et al. (2000) examined the lifetime suicide attempts in 3,094 adolescents, of which 62% were Kānaka Maoli, and associated socio-demographic factors and psychiatric symptoms. Not only did they find higher rates of suicide attempts in Kānaka Maoli adolescents (12.9%) compared to non-Kānaka Maoli adolescents (9.6%), they also found that a stronger Kanaka Maoli cultural affiliation was predictive of suicide attempts as well as depression, substance abuse and main wage earner's educational achievement. It was again hypothesized that perhaps Kānaka Maoli with a stronger Kanaka Maoli identity are experiencing more cultural conflict and acculturative stress because they are culturally Kanaka Maoli living in a Western environment that may not entirely support their traditional values and practices.

Glanz, Maskarinec and Carlin (2005) examined a concept called "sense of coherence" and its relationship to cigarette smoking in over 3,000 adolescents, including Kānaka Maoli. The concept of sense of coherence is believed to reflect a view that the world makes sense to a person and that he or she has the emotional and physical resources to deal with any life stressor that may arise (Antonovsky, 1979). Glanz et al. found that in all of the adolescents in the study a lower sense of coherence was associated with both smoking initiation and having smoked in the last month. Moreover, Kānaka Maoli adolescents had a lower sense of coherence compared to the other adolescents, and they also had the highest prevalence of smoking. Interestingly, these findings suggest that how Kānaka Maoli perceive themselves in the larger social context, and whether they believe they can deal with life’s challenges, can influence their health-related behaviours.

To further examine the idea that cultural conflict or acculturative stress could be affecting Kānaka Maoli physical well-being, two recent independent studies were undertaken to examine the role of racism. Kaholokula, Iwane and Nacapoy (in press) examined the effects of perceived racism on hypertension (high blood pressure) prevalence in 94 adult Kānaka Maoli. They found that Kānaka Maoli who had a stronger Kanaka Maoli identity were more likely to report that other social groups discriminated against them because they are Kānaka Maoli (perceived racism). When examining the effects of both a strong

Kanaka Maoli identity and perceived racism, they found that only perceived racism was significantly associated with hypertension prevalence in Kānaka Maoli. Again, their findings point to environmental stressors as a culprit for the health inequities of Kānaka Maoli.

In the other study, Kaholokula, Mau, Nacapoy, Kingi and Grandinetti (in review) examined the relationship between perceived racism and two physiological stress indices—cortisol level and blood pressure—in 143 adult Kānaka Maoli. They found that Kānaka Maoli who reported a greater Kanaka Maoli identity also reported more racism in their environment. However, it was a greater perception of racism that was significantly associated with lower cortisol levels in Kānaka Maoli. This relationship held up across Kānaka Maoli with different socio-demographic, biological and psychosocial characteristics. Contrary to the normal response of increased cortisol in situations of acute stress, low levels of cortisol output is believed to be indicative of chronic stress, which has been observed in victims of domestic violence (Seedat, Stein, Kennedy, & Hauger, 2003), caregivers for ill family members (Miller, Cohen, & Ritchey, 2002) and people diagnosed with post-traumatic stress disorder (PTSD) (Yehuda et al., 2000). Additionally, it is associated with a risk for stress-related disorders, such as atherosclerosis, hypertension, obesity and diabetes (Bjorntorp, Holm, & Rosmond, 1999; Cohen et al., 2006).

The six empirical studies reviewed here lend support to the idea that larger societal factors could be influencing the physical health and well-being of Kānaka Maoli and that these are operating via psychological factors. We want to further elaborate on these findings and put them in a larger context so that erroneous conclusions are not drawn from them. Although Kānaka Maoli with a stronger cultural identity were found to be under more psychological and physical distress, it does not, in any way, imply that a strong Kanaka Maoli identity is detrimental to Kānaka Maoli. In fact, Kaholokula et al. (in press) found that it may actually be that Kānaka Maoli with a strong cultural identification are experiencing more racism and that this perceived racism is having an adverse impact on their physical health. It stands to reason that the Kānaka Maoli most impacted by threats to their way of life are those with a stronger identification to Kanaka Maoli modes of living.

The findings of the six studies also point to the importance of context and larger socio-political influences. If the Kingdom of Hawai'i had not been occupied by the USA in 1893 and if Kānaka Maoli had retained political control today, the Kānaka Maoli with the strongest cultural identity might have the highest social standing and thus, the better health outcomes. As it turns out, this is not the case. Kānaka Maoli with a stronger Kanaka Maoli identity are experiencing more cultural conflict and acculturative stress because they are operating in a Western environment that may not entirely support or appreciate their traditional values and practices (Crabbe, 1999).

Sapolsky's (2004) work illustrates that as individuals fall toward the lower socioeconomic strata their risk for morbidity and mortality increases. What is interesting is that when you add social inequality (for example, unequal distribution of wealth or political influence in the larger society) to a low SES, the health outcomes and mortality rates are worse than when you consider poverty in the absence of social inequality. Again, the findings of the six empirical studies reviewed here support the idea that many Kānaka Maoli may believe that their ethnic group is not appreciated by other social groups and, given that many reside in the lower SES, the combination of low SES and a sense of social inequality between themselves and other ethnic groups may be contributing to their poorer collective health status.

The resiliency and fortitude of Kānaka Maoli

Most of our review thus far has highlighted the adverse effects of acculturation and social changes on Kānaka Maoli physical and psychological well-being. However, we would like to also highlight the resilience and fortitude of Kānaka Maoli who have withstood many adversities and remain steadfast in their cultural beliefs, practices and aspirations. What the findings of the KHRP studies highlight is that nearly all Kānaka Maoli (94%), regardless of blood quantum, strongly identify with their Kanaka Maoli heritage. This is a testament to the importance and relevance of Kanaka Maoli cultural heritage to contemporary Kānaka Maoli amidst a multi-ethnic, but American-dominated, society. Tengan (2008), in praising the progress Kānaka Maoli have made over the last 40 years since the Hawaiian Renaissance of the 1970s, writes:

> The progress made by the cultural and political movements has been impressive. Additional voyaging canoes have been built, Hawaiian language immersion programs have proliferated, Hawaiian studies and language centers at the University of Hawai'i have awarded undergraduates and graduate degrees, traditional dance and chant have been revived, and there has been an overall revaluing of things Hawaiian. Despite the fact that Hawaiian control over land, government, and resources has not materialized, there has been a paradigmatic shift in thinking since the 1960s on the reality of sovereignty and decolonization for Hawaiians. (p. 57)

Two strong examples of Kānaka Maoli resiliency we would like to highlight are the dramatic increase in the Kānaka Maoli population and native language revitalization. As we mentioned earlier, the Kānaka Maoli population dwindled from about 800,000 in 1778 to barely 40,000 by 1893, but more than 410,000 Kānaka Maoli are alive today. Although this is less than half of the Kānaka Maoli population just prior to Western intrusion, it is more than 10 times greater than it was in 1893. Certainly, the Kānaka Maoli race is far from the extinction many predicted early in the last century. The second example of Kānaka Maoli resilience is the revitalization of the native language with the ever-growing number of language immersion and charter schools that provide a Kanaka Maoli culturally based education.

A strong example of their fortitude is the paradigm shift Kānaka Maoli are making as stated by Tengan (2008). The possibility of regaining political sovereignty is a growing hope among Kānaka Maoli, a hope that was on the wane in the mid-1900s. Moreover, many kūpuna who were once ashamed of being Kanaka Maoli and who discouraged their children from learning and speaking the Hawaiian language are now proudly proclaiming their Hawaiian identity and encouraging their grandchildren to adopt Hawaiian modes of living. In preparation for political decolonization, many initiatives have sprung up to begin the cultural and psychological decolonization by reintroducing Kanaka Maoli social institutions (for example, the Hale Mua) and revitalizing Kanaka Maoli values, beliefs and practices. Indeed, this renewed pride and determination can only have positive effects on the social, psychological, spiritual and physical health and well-being of Kānaka Maoli by once again creating an environment that supports and reinforces these aspirations.

Social justice as a public health imperative for Kānaka Maoli

It was our intent in this paper to elucidate the relationship between the social status and health status of contemporary Kānaka Maoli. Although it is not a novel notion, as Sapolsky's (2004) review of the subject shows, it is one that has yet to be fully appreciated and explored by public health and medical professionals and health researchers in Hawai'i, especially in regard to the health of Kānaka Maoli. One reason research in this area might be lacking is the political nature of examining social status in relationship to health outcomes. Often, larger socio-political forces influence social inequity, such as laws and policies that benefit one social group over another or the larger society's attitude toward a particular social group. Even the use of the term "model minority" by some Americans suggests that certain ethnic minority groups are more accepted and tolerated by the US mainstream than others (McGowan & Lindgren, 2006).

Moreover, our intent in this paper was to show the interplay between social, psychological and physical factors that impact Kānaka Maoli health and well-being while emphasizing the "upstream" effects of the social factors. This notion does not only apply to Kānaka Maoli, but to any social group in a similar situation. A person's low social ranking is associated with certain psychological (for example, depression and acculturative stress) and physical (for example, diabetes) conditions and these conditions serve to maintain or worsen a person's social ranking. The Native Hawaiian Educational Assessment Project (1983) explained such interactions with the Cultural Loss/Stress Hypothesis, which was later elaborated on by Hammond (1988) and Crabbe (1999). We refer the reader to these authors for more details about the Cultural Loss/Stress Hypothesis. Briefly, based on a socio-ecological framework, the hypothesis explains that larger socio-political events (macro system) influence the degree of cultural loss (exo system) and the maintenance of cultural beliefs, practices, and institutions (meso system). The degree to which the

latter is maintained has a direct influence on the health and well-being of Kānaka Maoli communities, families (micro system) and individuals. Of course a negative feedback loop occurs at every juncture of these complex systems to either perpetuate or attenuate their effects on previous systems, good or bad.

The notion of person–environment interaction is not new to the Kanaka Maoli worldview. Ancient Kānaka Maoli believed that health and well-being are maintained by a positive balance between the spiritual, physical and social or environmental dimensions of one's self and the world. These beliefs are illustrated in the traditional values of pono (balance or harmony), lōkahi (unity) and mālama 'āina (land stewardship). Moreover, this worldview is based on a reciprocal, interdependent relationship where an imbalance in one dimension can affect the others. Many contemporary Kānaka Maoli continue to hold this worldview. It would appear that ancient Kānaka Maoli were very much aware of the importance of environmental factors in influencing health and well-being.

Given the relationship between the social status and health status of Kānaka Maoli in Hawai'i, the most effective health intervention might be one that focuses on social justice for this group. Social justice exists in a society where all individuals and social groups are afforded fair treatment and an equitable share of the benefits and burdens of society (Gostin & Powers, 2006). Many Kānaka Maoli would argue that political independence from the USA is the only means for them to achieve social justice and we agree with this notion. However, until such time that Kānaka Maoli regain their political sovereignty, something must be done to improve their social status and related health outcomes.

Public health initiatives and interventions are, at their core, intended to address social justice for socially disadvantaged groups. The central mission of public health, as it was historically set up, was to help socially disadvantaged groups by addressing the multiple causal pathways (for example, poverty, poor education and social disintegration) leading to disadvantages and the effects such disadvantages have on health and well-being (Gostin & Powers, 2006). Describing the task of public health, Gostin and Powers (2006, p. 1054) state, "Inequalities beget other inequalities, and existing inequalities compound, sustain, and reproduce a multitude of deprivations."

Increased attention has been given to medical and psychological interventions that focus on the individual and his or her behaviours, attitudes and beliefs, and biological state, but not to the social systems in which they develop and operate. Public health traditionally places a heavy emphasis on the larger societal and political issues that impact a disadvantaged social group's health and well-being. Gostin and Powers (2006) argue, however, that public health in the USA has strayed away from its core value and mission because of political forces. For example, they argue that a very small amount of health dollars goes to prevention and population-based services and, when monies are provided, they are often used to fund biomedical solutions (individual-focused) or to address emergencies

(for example, natural disasters) as they arise. However, the establishment of public health initiatives can prove to be an effective way of improving both the social status and health status of Kānaka Maoli. More importantly, such initiatives are in line with Kanaka Maoli cultural values, beliefs and practices.

The ancient Kanaka Maoli socio-religious order of laws and regulations known as the kapu system was, in part, a public health programme that was in place prior to 1778. Kapu is often defined as restriction or prohibition but it also means privilege, perhaps suggesting an intricate system for maintaining balance (social justice) in areas such as equal access and distribution of resources. As Else (2004) indicates, the health of Kānaka Maoli, and their social standing, declined with the breakdown of the kapu system and the subsequent influence of Western ideologies, laws and practices. Although the ancient Kanaka Maoli society was based on a structured hierarchy of social order and classes (for example, chiefly and commoner classes), as are most societies, this social order was based on an interdependent and mutually beneficial relationship shared amongst aliʻi (chiefs), kāhuna (spiritual leaders) and makaʻāinana (common citizens) in order to ensure fair division of labour, resources and an equitable distribution of the benefits and burdens of society. Perhaps these ancient practices, developed out of a need for cooperation, can serve as a guiding framework to improve the social and physical health of modern Kānaka Maoli in their ancestral homeland.

We close our paper as we opened it, with the prophecy made by Kapihe, a prophet from Kona on the island of Hawaiʻi. It is reported that in the early 1800s he prophesied the following: E iho ana ʻo luna, e piʻi ana ʻo lalo, e hui ana nā moku, e kū ana ka paia. The English translation often reads as follows: "That which is above shall come down, that which is below shall be raised up, the islands shall be united, and the walls shall stand upright." Many interpretations of Kapihe's prophecy have been offered. The one we offer here is that Kapihe was concerned with the changes to Kanaka Maoli society brought on by foreign intrusion and diseases and he was predicting a return to better times. As Charlot (2004, p. 376) writes, "Kapihe foresees a resurrection of old Hawaiʻi, not just as it was, but with a wondrous intensification of its powers for living successfully and communicating with forebears and gods." Let us accelerate the fulfillment of Kapihe's prophecy. Let us return to social justice for Kānaka Maoli.

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Glossary

Hawaiian	**English**
aliʻi	chiefs
hula	traditional Hawaiian dance
kāhuna	spiritual leaders
Kapu	restriction, prohibition; privilege
kūpuna	elders
lōkahi	unity
makaʻāinana	common citizens
mālama ʻāina	land stewardship
pono	balance, harmony

References

Antonovsky A. (1979). *Health, Stress and Coping*. San Francisco: Jossey-Bass Publishers.

Arakaki v. Lingle, 477 F.3d 1048 (2007).

Balabis, J., Pobutsky, A., Kromer Baker, K., Tottori, C., & Salvail, F. (2007). The Burden of Cardiovascular Disease in Hawaii 2007. Honolulu: Hawaii State Department of Health.

Beaglehole, J. (Ed.) (1967). *The Journals of Captain James Cook on his Voyage of Discovery¸ Vol. III The Voyage of the Resolution and the Discovery, 1776–80*. London: Cambridge University.

Berry, J. (2003). Conceptual Approaches to Acculturation. In K. Chun, P. Organista, & G. Marīn (Eds.), *Acculturation: Advances in Theory, Measurement, and Applied Research* (pp. 17–37). Washington, DC: American Psychological Association.

Blaisdell, K. (1993). Historical and Cultural Aspects of Native Hawaiian Health. *Social Process in Hawai'i, 31*, 37–57.

Bjorntorp P., Holm G., Rosmond R. (1999). Hypothalamic Arousal, Insulin Resistance and Type 2 Diabetes Mellitus. *Diabetes Medicine, 16*(5), 373–383.

Budnick, R. (2005). *Hawaii's Forgotten History: The Good...the Bad...the Embarrassing*. Honolulu, HI: Aloha Press.

Bushnell, O. (1993). *The Gift of Civilization: Germs and Genocide in Hawai'i*. Honolulu: University of Hawai'i Press.

Charlot, J. (2004). A Note of the Hawaiian Prophecy of Kapihe. *The Journal of Pacific History, 39*(3), 375–377.

Cho, S., Salvail, F., Gross, P., Crisanti, A., Gundaya, D., & Smith, J. (2006). *Depression and Anxiety Among Adults in Hawai'i: A Focus on Gender and Ethnicity*. Retrieved February 3, 2009, from the Hawaii State Department of Health website at: hawaii.gov/health/statistics/brfss/reports/nri_samhsa_poster_hi.pdf

Cohen S., Schwartz, J.E., Epel, E., Kirschbaum, C., Sidney, S., & Seeman T. (2006). Socioeconomic Status, Race, and Diurnal Cortisol Decline in the Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Psychosomatic Medicine, 68*(1), 41–50.

Crabbe, K. (1999). Conceptions of Depression: A Hawaiian Perspective. *Pacific Health Dialog, 6*(1), 122–126.

Doe v. Kamehameha Schools, 295 F. Supp. 2d 1141 (D. Haw. 2003), aff'd, 470 F.3d 827 (9th Cir. 2006) (en banc), *cert. dismissed*, U.S., 127 S. Ct. 2160 (2007).

Else, I. (2004). The Breakdown of the Kapu System and its Effect on Native Hawaiian Health and Diet. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being, 1*(1), 241–255.

Farver, J., Bhadha, B., & Narang, S. (2002). Acculturation and Psychological Functioning in Asian Indian Adolescents. *Social Development, 11*(1), 11–29.

Glanz, K., Maskarinec, G., & Carlin, L. (2005). Ethnicity, Sense of Coherence & Tobacco Use Among Adolescents. *Annals of Behavioral Medicine, 29*(3), 192–199.

Grandinetti, A., Kaholokula, J., Theriault, A., Mor, J., Chang, H., & Waslien, C. (2007). Prevalence of Diabetes and Glucose Intolerance in an Ethnically Diverse Rural Community of Hawai'i. *Ethnicity & Disease, 17*(2), 245–250.

Gostin L., & Powers, M. (2006). What Does Social Justice Require for the Public's Health? Public Health Ethics & Policy Imperatives. *Health Affairs (Millwood), 25*(4), 1053–1060.

Guyll, M., Matthews, K., & Bromberger, J. (2001). Discrimination and Unfair Treatment: Relationship to Cardiovascular Reactivity Among African American and European American Women. *Health Psychology, 20*(5), 315–325.

Hammond, O. (1988). Needs Assessment and Policy Development: Native Hawaiians as Native Americans. *American Psychologist, 4*, 383–387.

Heaney, C., & Israel, B. (2008). Social Networks and Social Support. In K. Glanz, B. Rimer, & K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice* 4th Edition (pp. 189–210). Hoboken, NJ: John Wiley & Sons, Inc.

Hovey, J. (2000). Acculturative Stress, Depression, and Suicidal Ideation Among Central American Immigrants. *Suicide & Life-Threatening Behavior, 30*(2), 125.

Jang, Y., Kim, G., Chiriboga, D., & King-Kallimanis, B. (2007). A Bidimensional Model of Acculturation for Korean American Older Adults. *Journal of Aging Studies, 21*(3), 267–275.

Johnson, D., Oyama, N., LeMarchand, L., & Wilkens, L. (2004). Native Hawaiians Mortality, Morbidity, and Lifestyle: Comparing Data from 1982, 1990, and 2000. *Pacific Health Dialog, 11*(2), 120–130.

Kaholokula, J. (2007). Colonialism, Acculturation and Depression Among Kānaka Maoli of Hawai'i. In: P. Culbertson, M. Agee, & C. Makasiale (Eds.), *Penina Uliuli: Confronting Challenges in Mental Health for Pacific Peoples*. Honolulu, HI: University of Hawai'i Press.

Kaholokula, J., Nacapoy, A., Grandinetti, A., & Chang, H. (2008). Association Between Acculturation Modes and Type 2 Diabetes Among Native Hawaiians. *Diabetes Care, 31*(4), 698–700.

Kaholokula, J. (2009). [Native Hawaiian Research Project]. Unpublished Raw Data.

Kaholokula, J., Iwane, M., & Nacapoy, A. (in press). Effects of Perceived Ethnic Discrimination & Acculturation on Hypertension in Native Hawaiians. *Hawaii Medical Journal*.

Kaholokula, J.K., Mau, M.K., Nacapoy, A.H., Kingi, T.K., & Grandinetti, A. Effects of Perceived Racism on Physiological Stress Indices in Native Hawaiians. Manuscript in review.

Kahumoku, W. (2003). A Tragic Indigenous Mo'olelo: The Decline of Kanaka Maoli Linguistic Identity. *'Ōiwi3: A Native Hawaiian Journal: Huli Au, Pō* 160–167.

Kame'eleihiwa, L. (1992). *Native Land and Foreign Desires: Pehea La E Pono Ai? How Shall We Live in Harmony*? Honolulu, HI: Bishop Museum Press.

Kana'iaupuni, S., Malone, N., & Ishibashi, K. (2005). *Ka Huaka'i: 2005 Native Hawaiian Educational Assessment*. Honolulu, HI: Kamehameha Schools, Pauahi Publications.

Knol, M., Twisk, J., Beekman, A., Heine, R., Snoek, F., & Pouwer, F. (2006). Depression as a Risk Factor for the Onset of Type 2 Diabetes Mellitus. A Meta-Analysis. *Diabetologia, 49*(11), 837-845.

Kuykendall, R. (1965). *The Hawaiian Kingdom: 1778–1854*. Honolulu, HI: University of Hawaii Press.

Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, M. (2003). Socioeconomic Inequalities in Depression: A Meta-Analysis. *American Journal of Epidemiology, 157*, 98-112.

Marsella, A., Oliveira, J., Plummer, C., & Crabbe, K. (1995). Native Hawaiian (Kanaka Maoli) Culture, Mind, and Well-Being. In H. McCubbin, E. Thompson, & J. Fromer (Eds.), *Resiliency in Ethnic Minority Families: Native Immigrant American Families* (pp. 93–113). Madison: The University of Wisconsin, Center for Excellence in Family Studies.

McDermott, J., Tseng, W., & Maretzki, T. (Eds.) (1980). *People and Cultures of Hawai'i: A Psychocultural Profile*. Honolulu, HI: University of Hawai'i Press.

McGowan, M., & Lindgren, J. (2006). Testing the "Model Minority Myth". *Northwestern University Law Review, 100*(1), 331–377.

Mendelson, T., Thurston, R., & Kubzansky, L. (2008). Affective and Cardiovascular Effects of Experimentally-Induced Social Status. *Health Psychology, 27*(4), 482–489.

Miller, G.E., Cohen, S., Ritchey, A.K. (2002). Chronic Psychological Stress and the Regulation of Pro-Inflammatory Cytokines: A Glucocorticoid-Resistance Model. *Health Psychology, 21*(6), 531–541.

Native Hawaiian Educational Assessment Project (1983). *Native Hawaiian Educational Assessment Project Report*. Honolulu, HI: Kamehameha Schools/Bernice Pauahi Bishop Estate.

Office of Hawaiian Affairs (2006). *Native Hawaiian Data Book*. Honolulu, HI: Office of Hawaiian Affairs.

Office of Hawaiian Affairs (1998). *Native Hawaiian Data Book*. Honolulu, HI: Office of Hawaiian Affairs.

Okamura, J. (2008). *Ethnicity and Inequality in Hawai'i*. Philadelphia, PA: Temple University Press.

Olson, S. (2002). *Mapping Human History: Genes, Race, and Our Common Origins*. New York, NY: Mariner Books.

Park, C., Braun, K., Horiuchi, B., Tottori, C., & Onaka, A. (2009). Longevity disparities in multiethnic Hawaii: An analysis of 2000 life tables. *Public Health Reports, 124*, 579–584.

Rezentes, W. (1996). *Ka Lama Kukui: Hawaiian Psychology: An Introduction*. Honolulu, HI: 'A'ali'i Books.

Rice v. Cayetano, 528 U.S. 495, 120 S.Ct. 1044 (2000).

Ridgeway, C. & Erickson, K. (2000). Creating and Spreading Status Beliefs. *American Journal of Sociology, 106*, 579–615.

Sapolsky, R. (2004). Social Status and Health in Humans and Other Animals. *Annual Review of Anthropology, 33*, 393–418.

Seedat, S., Stein, M.B., Kennedy, C.M., Hauger, R.L. (2003). Plasma Cortisol and Neuropeptide Y in Female Victims of Intimate Partner Violence. *Psychoneuroendocrinology, 28*(6), 796–808.

Schwartz, A., Gerin, W., Davidson, K., Pickering, T., Brosschot, J., Thayer, J., et al. (2003). Toward a Causal Model of Cardiovascular Responses to Stress and the Development of Cardiovascular Disease. *Psychosomatic Medicine, 65*, 22–35.

Silva, N. (2004). *Aloha betrayed: Native Hawaiian Resistance to American Colonialism*. Durham, NC: Duke University Press.

Stannard, D. (1989). *Before the Horror: The Population of Hawai'i at the Eve of Western Contact*. Honolulu: Social Science Research Institute, University of Hawai'i.

Steptoe, A., Feldman, P., Kunz, S., Owen, N., Willemsen, G., & Marmot, M. (2002). Stress Responsivity and Socioeconomic Status: A Mechanism for Increased Cardiovascular Disease Risk? *European Heart Journal, 23*, 1757–1763.

Tengan, T. (2008). *Native Men Remade: Gender and Nation in Contemporary Hawai'i*. Durham: Duke University Press.

Trask, H. (1999). *From a Native Daughter: Colonialism and Sovereignty in Hawai'i* (Rev. ed.). Honolulu: University of Hawai'i Press.

Wilkinson, R. (2000). *Mind the Gap: Hierarchies, Health, and Human Evolution*. London: Weidenfeld & Nicolson.

Williams, D. (1999). Race, Socioeconomic Status, and Health: The Added Effects of Racism and Discrimination. *Annals New York Academy of Sciences, 896*, 173–188.

Yehuda, R., Bierer, L.M., Schmeidler, J., Aferiat, D.H., Breslau, I., Dolan, S. (2000). Low Cortisol and Risk for PTSD in Adult Offspring of Holocaust Survivors. *American Journal of Psychiatry, 157*(8), 1252–1259.

Yuen, N., Nahulu, L., Hishinuma, E., & Miyamoto, R. (2000). Cultural Identification and Attempted Suicide in Native Hawaiian Adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(3), 360–367.

Young, B. (1980). The Hawaiians. In J. McDermott, W. Tseng, & T. Maretzki (Eds.), *People and Cultures of Hawaii: A Psychocultural Profile* (pp. 5–24). Honolulu: University of Hawaii Press.