

IMPACTS OF HAWAIIAN LANGUAGE LOSS AND PROMOTION VIA THE  
LINGUISTIC LANDSCAPE

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE  
UNIVERSITY OF HAWAI'I AT MĀNOA IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PUBLIC HEALTH

AUGUST 2014

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Keywords: Native Hawaiian health, linguistic landscape, cultural trauma

## **ACKNOWLEDGEMENTS**

This dissertation study was supported by a Native Hawaiian Health Research Scholarship from the Department of Native Hawaiian Health at the John A Burns School of Medicine at the University of Hawai‘i. The contents of this dissertation are solely the responsibility of the author and do not necessarily reflect the official views of the funding agency.

I would like to thank my committee members for their inspirational mentorship and encouragement, especially my committee Chairperson J. Keawe‘aimoku Kaholokula. Your advice, support, and patience have been invaluable. My deep appreciation also goes to my community partners at Kula no na Po‘e Hawai‘i and Ke Ola Mamo for their assistance with this study. I would also like to thank Shelley Soong, for volunteering her time as a researcher to assist me with the focus groups and qualitative data analysis. Of course, I would also extend my sincere appreciation to my parents, aunts, uncles, and grandparents for serving as a source of inspiration. And finally, I’d like to give my warmest appreciation to all of my friends and loving boyfriend who have supported me during my academic and research pursuits.

## **ABSTRACT**

Social factors, such as cultural trauma via colonization, are increasingly being examined as important determinants of health. The decline in the Hawaiian language is an aspect of cultural trauma for Native Hawaiians. Indigenous health experts argue that revitalizing the Hawaiian language promotes positive self-esteem and cultural identity. True revitalization of the Hawaiian language involves promoting its use in the broader community. A bilingual linguistic landscape (BLL) may promote the Hawaiian language throughout Hawai‘i, improve its status, and increase Native Hawaiians’ connection to their culture.

This dissertation research aims to: 1) through focus groups, describe the impact of Hawaiian language decline on Native Hawaiians and their views on the impact of a BLL, 2) through focus group data and relevant literature, identify key constructs related to support for a BLL and modify a survey to accurately measure those constructs, and 3) through survey administration, describe attitudes toward the Hawaiian language and toward the creation of a BLL.

Focus group participants believed that learning the language strengthens their cultural identity, self-esteem, and the Hawaiian community, and that a BLL would improve the status of the Hawaiian language and Native Hawaiian health. A survey was modified to measure socio-demographic (e.g., age, ethnicity), attitudinal (e.g., support for a BLL), and behavioral (e.g., participation in the Hawaiian language) variables. This survey was administered to a random sample of 260 adult residents of Hawai‘i. The results indicate that Hawai‘i residents, regardless of ethnicity, have positive attitudes toward the Hawaiian language and support the idea of creating a BLL. Constructs significantly associated with this support were Hawaiian language skills, American

identity, belief in the impact of a bilingual signs on the Hawaiian language and Native Hawaiian health, and belief in the importance of Hawaiian language perpetuation.

This research improves the understanding of how language loss has influenced Native Hawaiians and their perceptions of the impact of a bilingual linguistic landscape. The most influential factors in determining support for bilingual signs among adult residents of Hawai‘i are attitudes, which are malleable. This has promising implications for state-wide Hawaiian language promotion campaigns.

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## CHAPTER 1. INTRODUCTION

“I ka ‘ōlelo ke ola, i ka ‘ōlelo nō ka make”

“Life is in the word/language as well as death”

- (Silva, 2006)

Culture is defined as a complex and dynamic system of shared knowledge and practices that provides structure and meaning to individuals and groups within a society (Fiske, Kitayama, Markus, & Nisbett, Fiske, 1998). Shared knowledge includes norms, values, attitudes, and beliefs; shared practices include language, law, and kinship relations (Halloran, 2004). When these shared knowledge and practices are subjected to prolonged suppression, cultural trauma may occur, affecting the society to which the culture belonged. Cultural trauma is said to operate when a society’s “values become valueless, or demand unrealizable goals, norms prescribe unfeasible actions; gestures and words signify something different from what they meant before; beliefs are refuted, faith undermined, trust breached” (Sztompka, 2000, p. 458). The terms cultural trauma and historical trauma are used interchangeably in the extant literature. Sztompka (2000) argues that trauma to a society by any definition, including historical trauma, is a cultural phenomenon. Thus, cultural and society-wide historical trauma are conceptually very similar. The term “cultural trauma” will be used throughout this manuscript.

Colonization is a prime example of a fracturing social change that can result in cultural trauma. Colonization is the extension of political and economic control by an outside nation over a previously independent territory through the founding, maintenance, and expansion of colonies comprised of individuals from that outside nation (Kohn, 2012). According to international law, Hawai‘i is occupied rather than colonized.<sup>1</sup> Despite this legal distinction, the annexation of Hawai‘i by the United States (US) is an

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<sup>1</sup> Throughout the 1800s, the Kingdom of Hawaii was recognized as a sovereign state via international treaties and, as a sovereign state, cannot be colonized, according to international law. Therefore, saying that the Kingdom of Hawaii was colonized is not technically correct. However, regardless of the term used, occupied or colonized, the cultural trauma and its negative effects are the same. For simplicity’s sake, I will be using the term colonized, acknowledging that occupied may be more accurate. For more information on the occupation of the Kingdom of Hawaii, see Sai, D.K. (2004) "American Occupation of the Hawaiian State: A Century Unchecked," *Hawaiian Journal of Law and Politics*, vol. 1 online journal at: <http://www2.hawaii.edu/~hslp/journal.html>.

extension of the US's political and economic control, aligning the situation closely with the definition of colonization.

Sotero (2006) offers a conceptual model to explain how cultural trauma leads to negative psychosocial and physical health consequences in primary (i.e., the generation(s) experiencing the trauma first hand), secondary, and subsequent generations of a traumatized cultural group (Figure 1). According to Sotero (2006), historical trauma is initiated by at least four elements of subjugation: (1) overwhelming physical and psychological violence, (2) segregation and/or displacement, (3) economic deprivation, and (4) cultural dispossession (Sotero, 2006). The dominant group, in this case the colonizers or occupiers, enforces subjugation through military force, biological warfare, national policies of genocide, incarceration, dispossession of land, and laws that prohibit freedom of movement, economic development, and language and cultural expression of the indigenous people. Over time, overt subjugation is replaced by institutional (e.g., boarding schools for Native Americans and the Bureau of Indian Affairs' policies of relocation) and subtle (e.g., ethnically-based professional sports mascots, such as the Redskins) racism and discrimination. This serves to perpetuate existing social and economic disadvantages (e.g., privatization of land which disenfranchised indigenous peoples) and create new ones. A detailed discussion of how Sotero's model applies to Native Hawaiians can be found in Appendix A.

### **Loss of Language as a Consequence of Cultural Trauma in Hawai'i**

An aspect of cultural trauma cited specifically by Sotero is the loss of a people's native language. Loss of one's native language is believed to be detrimental to that native population's social and health status. Language is a major aspect of both individual and group identity (McIvor, 2005). The loss of a native language lowers self-esteem, increases anti-social behavior, and engenders a sense of deprivation, collectively and individually (Grimes, 2001). In testimony before the US Congress, American Indian and Alaska Native representatives cite a significant connection between language maintenance and cultural preservation and the importance of both language and culture to ethnic identity and self-esteem in native populations (Native American Languages Act of 1991. Hearings on S. 2044 To Assist Native Americans in Assuring the Survival and Continuing Vitality of Their Languages, before the Select Committee on Indian Affairs,

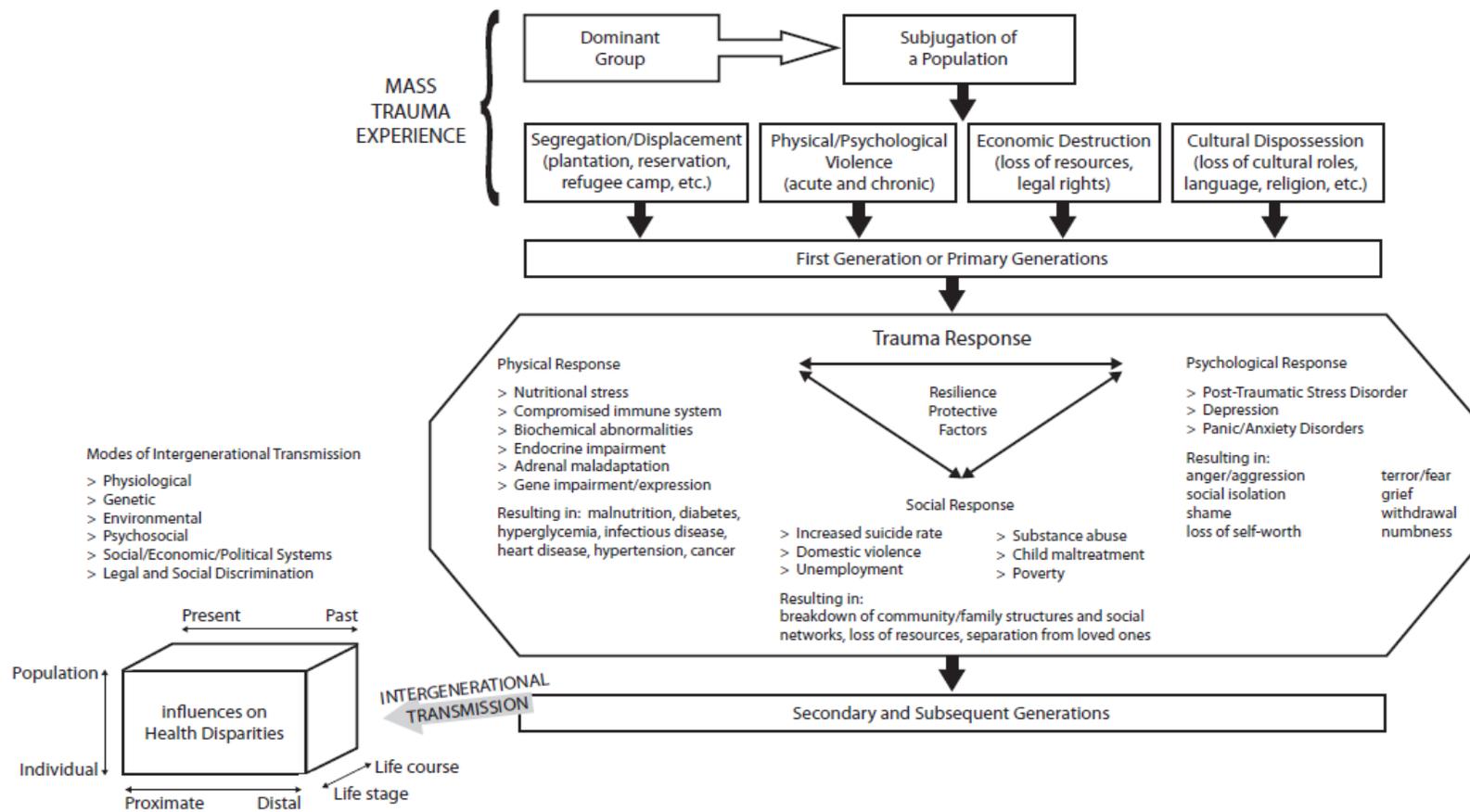


Figure 1. Conceptual Model of Historical Trauma. Reprinted from “A conceptual modal of historical trauma: Implications for public health practice and research,” by M. M. Sotero, 2006. Journal of Health Disparities Research and Practice, 1(93-108). Copyright 2006 by the Center for Health Disparities Research

1992). Researchers have emphasized that revitalizing indigenous culture and language is a necessary component to any successful policy or program aimed at halting transmission of cultural trauma (Brave Heart, 1999a; Brave Heart, 2000; Gone, 2009). The revitalization “of culture, language, and tradition can help repair the ruptures of cultural continuity that have occurred with colonization” (Kirmayer, Dandeneau, Marshall, Phillips, & Williamson, 2011, p. 84).

Until 1820, Hawaiian was an unwritten language; thus, traditions, knowledge, and practices were transmitted orally. The oral transmission of culture through language continues to be important today. It is through learning their native language that children learn their culture, values, and identity (Fowler, 1996). Silva (2006) writes that Native Hawaiians regarded both spoken and written words to be very powerful. As the ‘ōlelo no‘eau (Hawaiian proverb) states at the beginning of this chapter, “I ka ‘ōlelo ke ola, i ka ‘ōlelo nō ka make,” life is in the word/language as well as death (Silva, 2006). Wong (2011) argues that one’s native, or heritage, language is “good for you.” Like fruits and vegetables, language has a “role in providing sustenance that enhances the health and well-being of its speakers” (Wong, 2011, p. 3).

Soon after arriving in 1820, US missionaries to Hawai‘i helped to express the oral language in writing, and Hawaiian began being used in print media and literature. Hawai‘i became a very literate society. Prior to the missionaries’ arrival, Hawaiian was the dominant language in the Kingdom of Hawai‘i used by Hawaiians and non-Hawaiian alike in all aspects of daily life, from government affairs to commerce. However, the Hawaiian language then experienced a precipitous decline (Kupau, 2004). The education system was stratified with an increasing number of well-funded private institutions teaching in English and a decreasing number of public schools teaching in Hawaiian. In 1893, the Hawaiian Monarchy was illegally overthrown and annexed by the US. A law passed in 1896 prohibited the use of Hawaiian in public and private school instruction (Kupau, 2004). In 1898, Hawai‘i became a US territory, and two years later the Organic Act of 1900 was passed mandating that all government business be conducted in English (Kupau, 2004). These trends in public and private education and laws prohibiting the official use of Hawaiian in schools and government effectively made English a symbol of

power and status in the islands (Kahumoku, 2003). These policies precipitated a wholesale shift to English and left less than 2% of Native Hawaiians fluent in Hawaiian (Language Materials Project: Hawaiian, 2010; Salvail, Nguyen, & Liang, 2010).

Despite the dwindling number of native Hawaiian language speakers and policies that diminished the value of the Hawaiian language, the 1970's saw a political and cultural revival among Native Hawaiians. This resilience in the face of almost overwhelming opposition is "a testament to the importance and relevance of Kānaka Maoli (Native Hawaiian) cultural heritage to contemporary Kānaka Maoli" (Kaholokula, Nacapoy, & Dang, 2009). The Hawaiian Renaissance has included Hawaiian language revitalization, establishing a bachelor's program in Hawaiian language at the University of Hawai'i in 1972, the creation of Pūnana Leo in 1983 (a collection of non-profit Hawaiian immersion preschools), and the creation of Kula Kaiaupuni in 1987 (the Hawai'i Department of Education's kindergarten through 12<sup>th</sup> grade immersion program). In 2002, 1,612 students were enrolled in the Kula Kaiaupuni, and 220 children were enrolled in the 11 Pūnana Leo preschools (Wilson, 2002). There is also an increase in enrollment in the K-12 non-immersion Hawaiian language programs, including Hawaiian as a second language programs in public and private high schools and programs at community colleges and universities (Ka'awa & Hawkins, 1997). Current estimates put the number of Hawaiian speakers at approximately 8,000 (Language Materials Project: Hawaiian, 2010).

In 1978, during the Hawaiian Renaissance, the constitutional convention passed several amendments that promoted the Hawaiian language. The Official Languages Amendment of the Constitution of Hawai'i made Hawaiian one of the State's official languages. The amendment reads, "English and Hawaiian shall be of the official languages of Hawai'i, except that Hawaiian shall be required for public acts and transactions only as required by law." Article X, Section 4 of the state constitution was also enacted and mandates that, "the State promote the study of Hawaiian culture, history, and language" (Lucas, 2000). The reason behind this amendment, as described at the 1978 Constitutional Convention, was "to revive the Hawaiian language, which is essential to preservation and perpetuation of Hawaiian culture" (Lucas, 2000). The

amendment was meant to recognize the contribution of the Hawaiian people to all ethnic groups of the state (Barnard, 1984). These changes to the state constitution were meant “to overcome certain insults of the past where the speaking of [Hawaiian] was forbidden in the public school system, and of today where [Hawaiian] is listed as a foreign language...at the University of Hawai‘i” (Proceedings of the Constitutional Convention, 1980, p. 1016).

Article XII section 7 of the Hawai‘i state constitution, also passed at the 1978 Constitutional Convention, asserts that the “State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural, and religious purposes” (Lucas, 2000, p. 17). While not expressly supporting the Hawaiian language as the previous articles mentioned, Article XII can be used to support language rights. Using the courts’ interpretation of Article XII, section 7 from *Public Access Shoreline Hawai‘i v. Hawai‘i County Planning Commission (PASH)*, if a particular right is customarily or traditionally practiced, then the burden of proof shifts to the resisting entity. For instance, in the case of writing checks in Hawaiian, since it was accepted that this right is customarily practiced, a financial institution must now show proof of harm if they refuse to accept checks written in Hawaiian (Lucas, 2000).

While the Official Languages Amendment and Articles X and XII promote Native Hawaiian rights and customs, they do not include much guidance in the way of implementation or enforcement. Because of this lack of implementation and enforcement, the Official Languages Amendment is weak and has had little success in protecting language rights. In *Tagupa v. Odo*, the plaintiff, Tagupa, attempted to respond in Hawaiian during his oral deposition, but was ordered to respond in English. The judge did not grant his appeal dismissing the plaintiff’s argument. In the opinion of the judge, the official language amendment to the state constitution does not provide guidance on whether individuals may “assert” their right to provide oral testimony in Hawaiian when they are fluent in English. Additionally, the judge reasoned that the Native American Language Act, which states that the rights of Native Americans to express themselves in “Native American languages shall not be restricted in any public proceeding” (Kupau, 2004, p. 509) was not intended to be applied to court proceedings and that the federal rule

providing for a just and speedy trial would be hampered by the use of Hawaiian and the necessary translators (Kupau, 2004).

The lack of implementation and enforcement criteria is compounded by the codicil attached to the Official Languages Amendment. Often left unmentioned, the codicil holds that the English version of any state law is binding should a significant difference between the Hawaiian and English versions be found. This amendment both grants official status to the Hawaiian language and allows the state to shirk their responsibility for any actual implementation.

The two-sidedness of granting Hawaiian official status but lacking enforcement plans is illustrated by the language struggle at the University of Hawai‘i at Mānoa. The University’s strategic plan includes the following bullet points “Promote the study of Hawaiian language, culture, and education” and “Support advanced research and scholarship on Hawaiian language and culture” (Wong, 2004, p. 35). However, the University’s actual commitment to this mission has yet to be fully actualized. The university’s style guide encourages either the consistent use or non-use of diacritical marks. However, the guide itself used them inconsistently, omitting the macron in kahakō but including the glottal stop in ‘okina (Wong, 2004). Students are given the option to receive their diploma in English, Hawaiian, or both. Yet students wishing to receive their diploma in Hawaiian only must also submit a waiver releasing the University from the responsibility of verifying the language. The University of Hawai‘i at Mānoa’s newspaper, Ka Leo o Hawai‘i, has policies on their acceptance of articles in Hawaiian which vary with the editor. At times, there has been acceptance of articles in Hawaiian without requiring an English translation, but there have also been times when Hawaiian articles required translations or were rejected outright (Wong, 2004).

Tagupa v. Odo, the PASH case, and policies at the University of Hawai‘i at Mānoa illustrate the judiciary’s disinclination to enforce Hawaiian language rights due to: a) the belief that the legal right to choose one’s language is determined by one’s need to communicate (Kupau, 2004) and b) a lack of clearly defined implementation or enforcement guidelines. Without changes in this belief, further legislation, and additional

policies language revitalization efforts end in schools and homes with no place for ‘ōlelo Hawai‘i (Hawaiian language) in government or business (Kupau, 2004).

### **Measuring Language Use**

The need to promote a threatened language, such as Hawaiian, in government and business is supported by Fishman’s (1997) Graded Intergenerational Disruption Scale (GIDS). This scale describes the level of language disruption from the edge of extinction, with only a few elderly speakers (stage eight) to use in higher levels of government and higher education (stage one). GIDS is a quasi-implicational scale in which the higher stages imply that the majority of the characteristics of the lower stages are also present.

This scale has served to provide the cornerstone for most language revitalization researchers (Lewis & Simons, 2010). Revised scales have been published more recently, such as UNESCO’s language endangerment scale and Ethnologue language vitality scale (Lewis & Simons, 2010). Lewis and Simons (2010) combined and elaborated on the GIDS, UNESCO’s scale and Ethnologue’s scales to create a scale of 13 levels, aptly called the E(xpanded) GIDS. This revised scale is particularly useful in assessing the Hawaiian language, as the EGIDS can be modified to allow application to language revitalization. This modified, 12-level EGIDS is presented in Table 1 below.

Evaluating a language using this scale is done by answering five questions regarding the identity function (i.e., how the language is identified in society), vehicularity (i.e., level of official use), state of intergenerational language transmission, literacy acquisition status, and a societal profile of generational language use (Lewis & Simons, 2010). Refer to Lewis and Simons (2010) for an in-depth description of language categorization.

Briefly, the first question, “What is the current identity function of the language?” has four possible answers: historical (i.e., no remaining speakers), heritage (i.e., no native speakers but some non-native speakers), home (i.e., used at home daily by some), vehicular (i.e., lingua franca). If the language has an identity function of historical or heritage, it will be classified as reawakened (8a), reintroduced (8b), or rediscovered (9) and only this question needs to be answered. However, if the answer to the first question

is vehicular or home, then a second question is asked to gauge extent of vehicularity- “What is the level of official use?”- with four answer choices: international, national, regional, and not official. These two questions need to be answered to categorize a language in the top four levels of the EGIDS; international, national, regional, or trade. To classify a language in the remaining levels, written, vigorous, re-established, or revitalized, the last three questions need to be answered. These questions, and their

Table 1. *Expanded Graded Intergenerational Disruption Scale*

<b>Level</b>	<b>Label</b>	<b>Description</b>
0	International	The language is used internationally for a broad range of functions.
1	National	The language is used in education, work, mass media, government at the nationwide level.
2	Regional	The language is used for local and regional mass media and governmental services.
3	Trade	The language is used for local and regional work by both insiders and outsiders.
4	Educational	Literacy in the language is being transmitted through a system of public education.
5	Written	The language is used orally by all generations and is effectively used in written form in parts of the community.
6a	Vigorous	The language is used orally by all generations and is being learned at home by all children as their first language.
6b	Re-established	Some members of a third generation of children are acquiring the language in the home with the result that an unbroken chain of intergenerational transmission has been re-established among all living generations.
7	Revitalized	A second generation of children are acquiring the language from their parents who also acquired the language in the home. Language transmission takes place in home and community.
8a	Reawakened	Children are acquiring the language in community and some home settings and are increasingly able to use the language orally for some day-to-day communicative needs.
8b	Reintroduced	Adults of the parent generation are reconstructing and reintroducing their language for everyday social interaction.
9	Rediscovered	Adults are rediscovering their language for symbolic and identificational purposes.

answers, are as follows: 1) “Are all the parents transmitting the language to their children?” (yes/no); 2) “What is the literacy status?” (institutional [i.e., literacy is acquired via institutional means], incipient [i.e., literacy is acquired outside of sustained

institutions], none [i.e., insignificant number of people are literate]); and 3) “What is the oldest generation that are first language speakers?” (great-grandparents/grandparents/parents/children).

Applying this scale across the State of Hawai‘i, the current identity function of the Hawaiian language is heritage. Excluding some communities in Hawai‘i, i.e., Ni‘ihau,<sup>2</sup> there are very few remaining native speakers, some speakers learning Hawaiian as a second language, and much of the Hawaiian language use is for symbolic and ceremonial purposes. A heritage identity function places Hawaiian in the bottom three levels. Upon closer examination and with current revitalization efforts in mind, Hawaiian may be in level 8a “Reawakened - Children are acquiring the language in community and some home settings and are increasingly able to use the language orally for some day-to-day communicative needs” (Lewis & Simons, 2010, p.117).

Movement toward the top of the scale involves elevating the status of a language such that its usage throughout the State in workplaces and government is encouraged (Reyhner, 1999). True language revitalization requires a focus on the “life of the language,” not merely bilingual education or empty policy conferring a symbolic status (Fishman, 1996). Lifting the status of a minority language can encourage more commitment to revitalization efforts from the minority language speakers as well as from the general population (Nicholson, 1997). One way that communities can participate in this effort is to use the language in businesses, markets, community centers, and local agencies (Reyhner, 1996), going beyond the tokenism that is present in Hawai‘i today in the form of slogans, names, and marketing.

### **Hawai‘i’s Linguistic Landscape**

One method for elevating the status of the Hawaiian language and focusing on the life of the language for continued language revitalization efforts in the wider community is via a bilingual linguistic landscape. Linguistic landscape is defined as the language of

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<sup>2</sup> Niihau is one of the eight major Hawaiian islands however it was purchased by Elizabeth Sinclair in 1864 from the Kingdom of Hawaii and remains privately owned. Niihau is by and large closed to the public with the exception of relatives of the owners and invited guest.

all visible signs including, public road signs, billboards, street names, place names, commercial shop signs, and signs on government buildings.

The decline, and subsequent promising revitalization, of spoken Hawaiian has been accompanied by a decline, and subsequent revitalization, of Hawaiian in the linguistic landscape. Prior to the introduction of writing by the missionaries in 1820, there was no linguistic landscape in Hawai‘i, as the language was not written. However, had there been a linguistic landscape, it would most assuredly have been only in Hawaiian, as that was the only language spoken at that time. The current linguistic landscape in Hawai‘i is dominated by English. The Hawaiian present in the linguistic landscape of Hawai‘i today is limited to street/place names, token local business names (e.g., “Kama‘aina Plumbing”), and a few well known words (e.g., aloha and mahalo). When languages other than English do appear on commercial or public signs, it is often Japanese or Chinese, such as in Waikīkī or downtown Honolulu. Aside from street and place names, very few official, i.e., public, signs are in Hawaiian or are bilingual (Hawaiian-English). These official signs convey authority and express power relations. Unofficial signs, i.e., commercial signs, have less authority (Backhaus, 2006). The token use of the Hawaiian language in the linguistic landscape, such as “mahalo” on trashcans or “aloha” over entrances, transfers little authority to the Hawaiian language. Thus, despite the presence of Hawaiian on some commercial signs, English remains the sole language on many official signs and reinforces the existing language power dynamic.

There are various statutes that regulate the linguistic landscape at the county level which promote Hawaiian to a degree. Section 22-8.3 (a), adopted in 1979, of the revised ordinances of Honolulu states, “Street names selected shall consist of Hawaiian names, words or phrases and shall be selected with a view to the appropriateness of the name to historic, cultural, scenic and topographical features of the area.” Maui and Kaua‘i County ordinances are similar in scope. However, Hawai‘i County does not have an ordinance requiring Hawaiian street names. The regulations for parks and memorials do not require, but do allow for, a Hawaiian language name through Section 22-9.3 (2). The City and County of Honolulu also has specific guidelines that apply to all other signs, such as

directory, introductory, and roof signs. These regulations require that the dominant language be either English or Hawaiian.

Honolulu City and County regulations require new street names to be in Hawaiian, but street names alone make up a very limited slice of the linguistic landscape. Regulations on naming new and existing city and county parks, sites, and facilities, another small slice of the landscape, allow for names to be in either English or Hawaiian. This leaves the rest of the linguistic landscape produced by the state in English only, including a myriad of road signs (e.g., speed limit, construction ahead), instructional signs (e.g., no swimming, monk seal warnings), and informational signs, such as those in public buildings and at public sites (e.g., descriptions of exhibits in museums).

### **Bilingual Linguistic Landscape as Health Promotion**

One strategy expanding the realm of Hawaiian language revitalization efforts is establishing a bilingual (Hawaii-English) linguistic landscape. The effect of Hawai‘i’s linguistic landscape addresses the environmental and psychosocial pathways for intergenerational transmission of cultural trauma from Sotero’s model. Following is a description of the pathways as they apply to Hawai‘i’s linguistic landscape and Native Hawaiian health and wellbeing.

**Environmental transmission.** The linguistic landscape is an important aspect of the built environment which serves multiple functions in society. Some of these functions are informational in nature, such as marketing, directing, and educating (Gorter, 2006). In addition to its informational functions, the linguistic landscape also serves “symbolic functions as a marker of the relative power and status of the linguistic communities” (Landry & Bourhis, 1997, p. 28). From this perspective, signs are symbolically important in bilingual countries, states, or provinces (Gorter, 2006; Hicks, 2002).

Landry and Bourhis (1997) examined the relationship between the linguistic landscape and perceptions of language vitality in 11th and 12th grade Francophone students in Canada. Their results indicated that the linguistic landscape was positively associated with perceptions of language health and usage. Additionally, the authors suggest that linguistic landscape may provide a stimulus to use native language, thereby increasing its use in the community. Other places have used policy changes in linguistic

landscape to promote indigenous and minority languages. A prime example is in Wales, where English language signs were seen as “symbols of injustice, symbols of oppression, and a ubiquitous proclamation of the superiority of the English language and everything English” (Merriman, 2008). Welsh language rights activists proclaimed that public road signs were “the most blazingly aggressive manifestation of the inferiority, the non-existence almost, of Welsh as an official public language” (Merriman, 2008). The Welsh community was able to establish bilingual road signs in order to communicate, across generations and ethnic groups, the importance of Welsh (Merriman, 2008). A similar case could be made for Hawai‘i.

The relative position of competing languages in the linguistic landscape is one measure of the dominant group’s treatment of the linguistic minorities inhabiting the given territory (Landry & Bourhis, 1997). This is especially true in places where language is important to ethnic identity and culture (Macalister, 2010). Such is the case in Hawai‘i where the language remained unwritten until 1820 with oral transmission of practices, traditions, and knowledge. The prominence of different languages in the linguistic landscape of an area communicates the power and status differentials that exist between the various language groups. The prominence of “X” language over “Y” language in the landscape lets people know that “X” is the preferred language. It communicates that, compared to “Y”, “X is the language of business, society and what is normally spoken in that area (Landry & Bourhis, 1997).

Increasing the presence of a minority language in the linguistic landscape can encourage more commitment to revitalization efforts of minority language speakers as well as the general population (Nicholson, 1997). A 2005 study by Daily, Giles, and Jansma found that linguistic landscape had a significant role in determining language attitudes. Specifically, they found that among Hispanic people, the more Spanish they perceived in their linguistic landscape, the less favorably they rated Anglo accented speakers; while the more English they perceived in their linguistic landscape, the more favorably they rated Anglo accented speakers (Dailey, Giles, & Jansma, 2005). This research suggests that creating a bilingual linguistic landscape to include a minority language can positively affect attitudes toward a minority language group.

**Psychosocial transmission.** The linguistic landscape may influence the psychosocial transmission of cultural trauma, and its negative health and well-being consequences, in Native Hawaiians via two pathways; connection to culture, in this case language, and subjective social status. Cultural trauma severed people's connection to many aspects of their native culture, a major aspect being their native language (Wurm, 1991). A report generated from the International Symposium on the Social Determinants of Indigenous Health in Adelaide (2007) identifies several areas of action to help guide advocacy for indigenous health, one of which is to address the process of colonization through, "facilitating the restoration of cultural heritage, *including language*" [emphasis added] (Mowbray, 2007, p. 30). Indigenous language experts believe that knowing one's native language is essential in the development of a positive cultural identity (Wong-Fillmore & Valadez, 1986; Stiles, 1997; Fishman, 1991), a sense of belonging (Brittain, 2002; Cummings, 1997; Crystal, 1997; Royal Commission on Aboriginal Peoples, 1996), and resiliency (Fowler, 1996). The health of indigenous languages is tied to the health of indigenous people (McIvor, 2005). Due to the importance of language as an aspect of identity, promotion of an indigenous language "would have an unquestionable positive effect on health for future generations" (Puzey, 2007, p. 27). A literature review published in the *Lancet* states that, "Language revitalisation can be seen...as a health promotion strategy" (King, Smith, & Gracey, 2009, p. 78).

Rezentes (1996), a Native Hawaiian psychologist, states that effective therapy for Native Hawaiians with psychological problems encompasses "continued learning regarding traditional Hawaiian culture and healing practices" (p. 89). Specifically, he encourages helping clients become more aware of their "Hawaiian-ness" and advocates for clients to practice traditional farming and cultural activities, such as hula, paddling, or fishing, and to learn the Hawaiian language (Rezentes, 1996). Thus, he believes that increasing a connection to Native Hawaiian culture via revitalizing the Hawaiian language is tantamount to promoting Hawaiian health.

The second pathway through which the psychosocial transmission of cultural trauma occurs is social status. There are two types of social statuses: achieved and ascribed status. Achieved statuses are those which people can gain or lose through their

ability or merit, while ascribed statuses are those based on innate characteristics, such as gender, ethnicity, or physical ability. Today, Native Hawaiians, as a group, suffer from both low achieved and low ascribed social status (Okamura, 2008); however, this research focuses on ascribed status.

The low ascribed social status of Native Hawaiians is another means by which the effects of cultural trauma are manifested and linked to poor health along a psychosocial pathway. Since Western contact and until the mid-20<sup>th</sup> century, the Hawaiian people and culture were devalued as described earlier, resulting in a lower ascribed social status for Native Hawaiians (Okamura, 2008).

The influence of a lower ascribed social status for Native Hawaiians on their health and well-being is borne out today in the link between acculturation mode and depressive symptoms. Crabbe, Kaholokula, Kenui, and Grandinetti (1996) examined the association between individual adaptation to the acculturation process, i.e., acculturation mode, and depressive symptoms in Native Hawaiians. They found that Native Hawaiians who reported identifying strongly with traditional Hawaiian culture had considerably more depressive symptoms than those who reported being bi-cultural (i.e., identifying with both traditional Hawaiian culture and the western culture). Suggesting that identifying with a lower status ethnic group may contribute to depressive symptoms. Kaholokula, et al. (2011) examined the relationship between racism and health in Native Hawaiians. They found that participants who perceived more racism were more likely to report having hypertension, even after controlling for education, and degree of Hawaiian and American cultural identities. This association with hypertension suggests the lower status of Native Hawaiians as a group may increase their odds of developing hypertension compared to high status groups. The authors also examined cortisol levels as an indicator of hypothalamic–pituitary–adrenal (HPA) activity. Chronic over stimulation of the HPA axis results in lower cortisol levels (Fries, Hesse, Hellhammer, & Hellhammer, 2005; Susman, 2007). The authors found that Native Hawaiians who perceived more racism had lower HPA activity. These results may be attributed to a prolonged exposure to racism or discrimination. Similar results have been found in studies of people with stress-related disorders (e.g., PTSD) and in victims of domestic

violence (Gold & Chrousos, 2002; Rohleder, Joksimovic, Wolf, & Kirschbaum, 2004; Seedat, Stein, Kennedy, & Hauger, 2003).

**Focus of Dissertation**

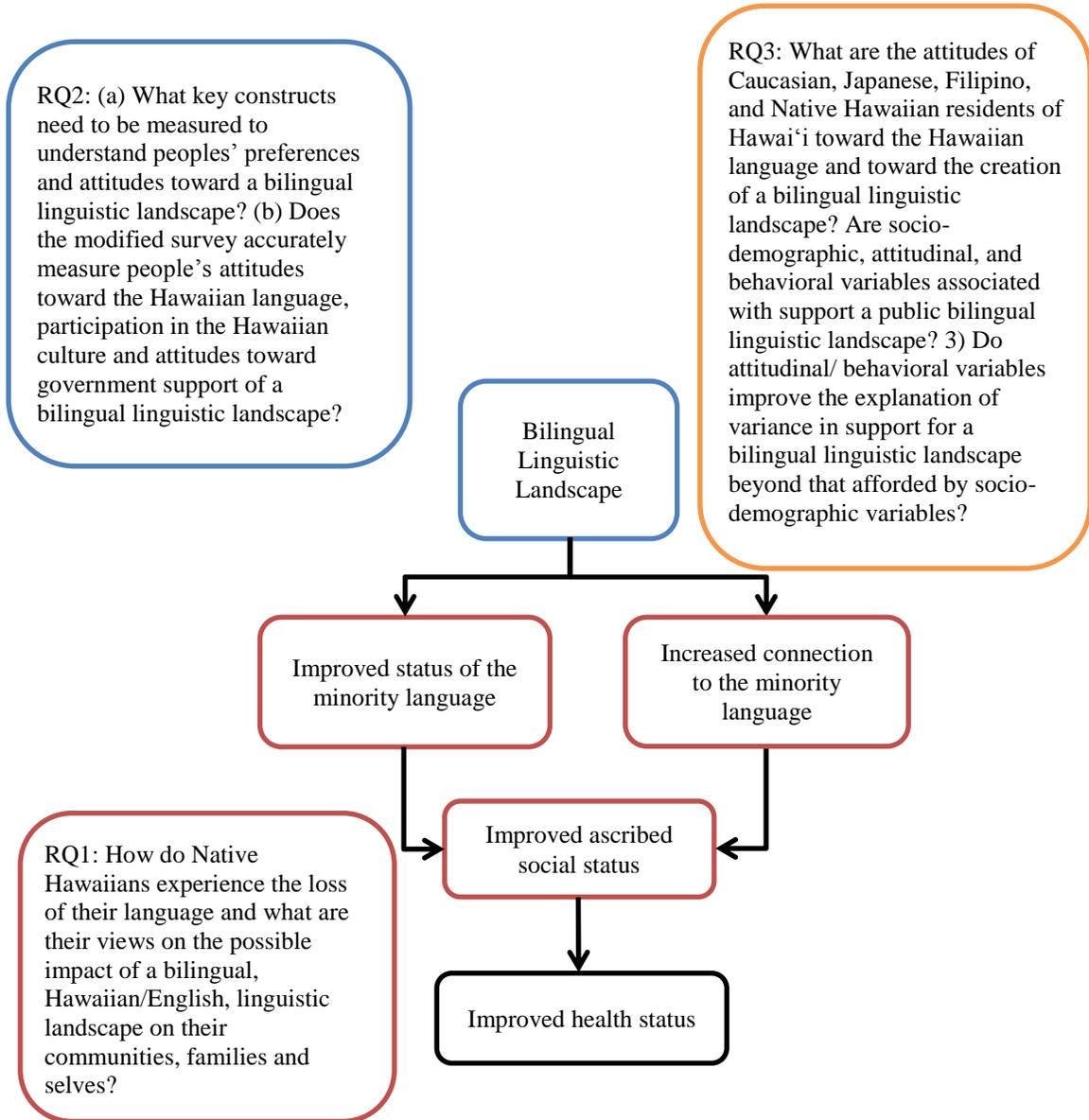


Figure 2. Conceptual Model and Research Questions for Proposed Dissertation

This dissertation research assumes that the creation of a Hawaiian-English linguistic landscape will increase the visibility of the Hawaiian language. This increased of the Hawaiian language in a linguistic landscape may communicate that it is on parity with English, thereby elevating its status. This dissertation research is guided by the

conceptual model presented in Figure 2. Given the official status of the Hawaiian language in the state and the movement to revitalize it, this dissertation research focuses on 1) the impact language loss has had on the well-being of Native Hawaiians and 2) the attitudes toward the potential effects of a Hawaiian-English linguistic landscape held by Native Hawaiian and other non-Native Hawaiian residents of Hawai‘i. This increase

Table 2. *Impact of a Bilingual Linguistic Landscape across Modes of Behavior*

<b>Behavior Modes</b>	<b>Impact of a Bilingual Linguistic Landscape</b>	<b>Association with Health</b>
<b>Cognitive</b> (thinking/reasoning)	<ul style="list-style-type: none"> <li>• Improved subjective social status</li> <li>• Improved attitudes toward the Hawaiian language</li> <li>• Improved attitudes toward the sustainability of the Hawaiian culture and language</li> <li>• Improved self-esteem</li> <li>• Increased feeling of value</li> </ul>	<ul style="list-style-type: none"> <li>• High social status is linked to good health</li> <li>• Improved attitudes may lead to decrease in dissonance and a subsequent improvement in health</li> <li>• Improved mental health status</li> </ul>
<b>Affective</b> (feelings/attitudes)	<ul style="list-style-type: none"> <li>• Validated</li> <li>• Increased sense of connection and belonging</li> </ul>	<ul style="list-style-type: none"> <li>• Improved sense of belonging, self-esteem, and being valued are associated with good health</li> </ul>
<b>Overt/Motoric</b> (actions)	<ul style="list-style-type: none"> <li>• Increased engagement in Hawaiian cultural activities</li> <li>• Increased enrollment in Pūnana Leo, Hawaiian studies</li> </ul>	<ul style="list-style-type: none"> <li>• Social engagement is linked to good health</li> <li>• Cultural engagement is linked to good health</li> </ul>

connection to their native language, which is elevated in status, can contribute to an improvement in their health and well-being (Native American Languages Act of 1991. Hearings on S. 2044 To Assist Native Americans in Assuring the Survival and Continuing Vitality of Their Languages, before the Select Committee on Indian Affairs, 1992; Mowbray, 2007). However, exploratory research is needed to elucidate the effects of language loss on Native Hawaiians, its association with their subjective health and well-being, and people’s attitudes toward a bilingual linguistic landscape. This conceptual model is further described in Table 2, which lists the impacts of a bilingual linguistic landscape on three modes of behavior and their probable health impacts.

To further aid in understanding the relationship between a bilingual linguistic landscape and Native Hawaiian health, the conceptual model to guide this proposed research is also presented using a social-ecological framework (Figure 3). It depicts the factors operating at a policy level, community level, and intrapersonal level. The policy level lists the various factors of a linguistic landscape, e.g. place names, informational

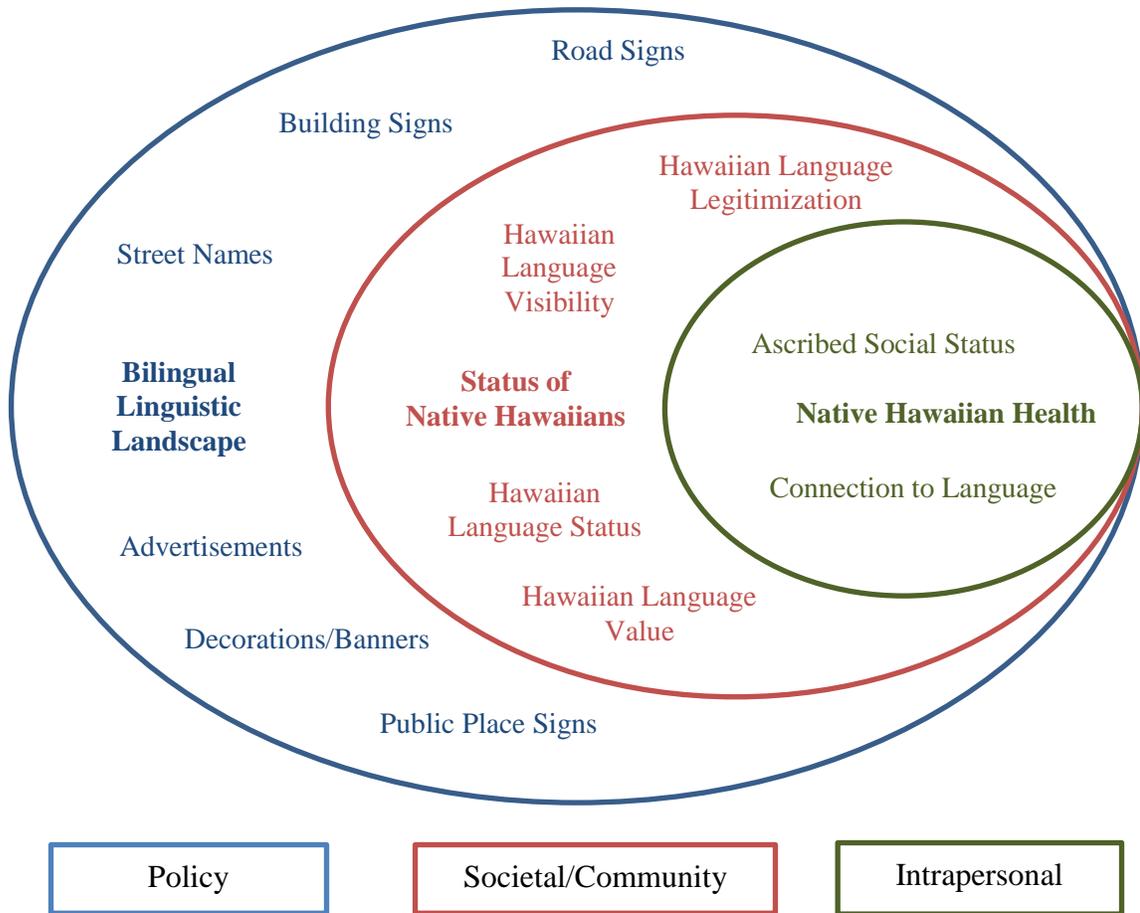


Figure 3. Relationship of Bilingual Linguistic Landscape to Native Hawaiian Health

signs, and advertisements. The second ring contains community level factors of language status, e.g., improved visibility and value, affected by a bilingual linguistic landscape. The final level of the model contains intrapersonal factors, such as improved connection to the Hawaiian language and improved status as a Native Hawaiian person, which are expected to change as a result of the changes at the policy and community levels. This figure depicts how a bilingual linguistic landscape, situated in the policy level, is

hypothesized to influence community's and society's perceived status of Native Hawaiians, which can in turn influence Native Hawaiians' collective status and health.

Despite these possible benefits to Native Hawaiians depicted in this model and the "official" status of the Hawaiian language, a truly bilingual linguistic landscape does not exist in Hawai'i. This dissertation proposes to answer three research questions to better understand language loss in the Native Hawaiian community and Hawai'i residents' current attitudes and preferences toward government support for a bilingual linguistic landscape. These research questions are:

- RQ1 –How do Native Hawaiians experience the loss of their language, and what are their views on the possible impacts of a bilingual, Hawaiian-English, linguistic landscape on their communities, families and selves?
- RQ2 –What key constructs need to be measured to understand peoples' preferences and attitudes toward a bilingual linguistic landscape, and does a Aotearoa New Zealand survey modified to Hawai'i accurately measure people's attitudes toward the Hawaiian language, participation in the Hawaiian culture, and support for a bilingual linguistic landscape?
- RQ3 –What are the attitudes of Caucasian, Japanese, Filipino, and Native Hawaiian residents of Hawai'i toward the Hawaiian language and toward the creation of a bilingual linguistic landscape? Are socio-demographic, attitudinal, and behavioral variables associated with support a public bilingual linguistic landscape? Do attitudinal/ behavioral variables improve the explanation of variance in support for a bilingual linguistic landscape beyond that afforded by socio-demographic variables?

The Hawaiian language is tied to Native Hawaiian health, such that policies that promote the Hawaiian language also would promote Native Hawaiian health. This health promotion is assumed to occur through psychosocial benefits (e.g., positive self-identity) of reconnecting to Hawaiian culture and through the elevated status of Native Hawaiians resulting from an elevated status of their native language. An important step in language promotion via a bilingual linguistic landscape is gaining a better understanding of how Native Hawaiians experience the loss of their language and their views on the creation of a bilingual linguistic landscape to promote the Hawaiian language.

Another essential step is to assess the attitudes and preferences of non-Native Hawaiian residents' toward the Hawaiian language, creation of a bilingual linguistic landscape, and use of government funds to create such a landscape. Proposing, adopting,

and implementing a broad reaching policy, such as the creation of a bilingual linguistic landscape, can greatly benefit from broad based support of Hawai'i residents. Although Native Hawaiians are the indigenous people of the Hawaiian Islands, they comprise only a quarter of the state's current population and are underrepresented in government, business, and education. It is, therefore, imperative that we understand Native Hawaiians' and non-Natives' attitudes and preferences toward government support of a bilingual linguistic landscape. The importance of native language promotion to native peoples and the continued resurgence of culture and language makes this research important to the public health of Native Hawaiians and Hawai'i as a whole. The purpose of this dissertation is to better understand the impact language loss has had on the health and well-being of Native Hawaiians and describe the attitudes toward, and potential effects of, a Hawaiian-English linguistic landscape.

## **CHAPTER 2. NATIVE HAWAIIANS' PERCEPTIONS OF THE IMPORTANCE OF THE HAWAIIAN LANGUAGE AND THE IMPACT OF A BILINGUAL LINGUISTIC LANDSCAPE**

### **Abstract**

Scholars, indigenous and otherwise, have described the significance of the indigenous languages to indigenous cultures and people. To date, the empirical literature on the importance of the Hawaiian language to Native Hawaiians is scant. In this Chapter, we examine the importance of Hawaiian language to Native Hawaiian culture and people and Native Hawaiians' perceptions of the current and ideal statuses of the Hawaiian language and the creation of a Hawaiian-English linguistic landscape. Four focus groups were conducted with a convenience sample of 37 Native Hawaiian adults, approximately nine participants per group. Participants were recruited through Native Hawaiian-serving, community-based organizations. Using a focus group guide, the facilitator asked participants questions regarding the aforementioned topics. Probes were used to elicit more specific and in-depth information. The transcripts were independently analyzed by two researchers according to a code dictionary created around potential themes. The researchers compared their analyses to check for agreement. Results from this study indicate that the Hawaiian language is an important aspect of Native Hawaiian culture and identity, that Native Hawaiians support revitalization of the Hawaiian language, and that a bilingual linguistic landscape could positively impact not only the Hawaiian language but the Native Hawaiian community as well. This research supports the belief that language loss and revitalization may be influential in the well-being of indigenous people and suggests future studies to better understand this relationship.

## **Introduction**

In this chapter, the concept of cultural trauma and how it may have contributed to, and sustained, the poor mental and physical health of Native Hawaiians compared to other ethnic groups is explored. One of the consequences of the cultural trauma for Native Hawaiians is the loss of their native language. Many scholars have suggested that cultural trauma plays a contributory role in Native Hawaiian health (Tsark, Blaisdell, & Aluli, 1998; Cook, Withy, & Tarallo-Jensen, 2003; Liu & Alameda, 2011). However, little empirical research on the topic of cultural trauma has been done, and none focusing specifically on language loss.

Only one empirical study to date has explicitly linked the notion of cultural trauma (i.e., colonization) to poor health and well-being (i.e., depression and low social status) in Native Hawaiians. Ta et al. (2010) conducted semi-structured interviews with 30 Native Hawaiian women from a Hawaiian homestead community and a college population. The women also completed demographic questionnaires and the Center for Epidemiologic Studies Short Depression Scale (CES-D). The interviews inquired about their cultural background and the causes of depression. A majority of the women cited social stressors as contributing to depression and alluded to the colonization of Hawai'i and their resulting low social status as a native people as a major social stressor (Ta, 2010).

Despite the relative lack of empirical research on cultural trauma and language loss in Native Hawaiians, many researchers and Hawaiian cultural experts agree that the colonization, illegal overthrow, continued U.S. occupation, and discriminatory social and economic practices have contributed to poor mental and physical health outcomes among contemporary Native Hawaiians. Rezendes (1996), Crabbe et al. (1999), and Kaholokula (2007) have described the negative mental health effects of cultural loss and compulsory acculturation on Native Hawaiians, such as depression. Various other scholars have mentioned cultural trauma as a contributing factor in the low life expectancies and poor health outcomes for Native Hawaiians (Tsark et al., 1998; Mokuau, 1999). Cook, Withy, and Tarallo-Jensen (2003) explain how the drastic changes to religion and gender roles

for Native Hawaiians could serve as explanations for the health disparities faced by Native Hawaiians today.

The state of knowledge in this field is nascent and, thus, exploratory qualitative research needs to be done to elucidate the lived experiences of Native Hawaiians in regards to native language decline, its perceived impact on their health and well-being, perceptions of the current and ideal usage of Hawaiian, and attitudes toward making the Hawaiian language more visible in society.

The purpose of this exploratory, qualitative study was to investigate the importance of Hawaiian language to Hawaiian culture and people, the perceived current status of the Hawaiian language in Native Hawaiian communities and Hawai'i, the impact of current use of Hawaiian language, the ideal use of Hawaiian, and the impact of a bilingual linguistic landscape on the Hawaiian language and the Native Hawaiian community. Native Hawaiian participants were asked to discuss their perceptions, attitudes, and opinion on these topics. For the purpose of this research, a Native Hawaiian is defined as any individual who self-identifies as a Native Hawaiian (Kaholokula, Braun, Kana'iaupuni, Grandinetti, & Chang, 2006).

## **Methods**

### **Participants**

Four focus groups, each with between seven and eleven participants, were conducted with a convenience sample of 37 self-identified Native Hawaiians aged 18 years old or older. Participants were recruited with the help of two Native Hawaiian serving organizations--Ke Ola Mamo (the Native Hawaiian Health Care System on O'ahu) and Kula no nā Po'e Hawai'i (a non-profit, community-based organization in Papakōlea Homestead). Leaders from these two community organizations recruited potential participants from the clients or residents that frequently visited their programs and by word of mouth. Two focus groups were conducted at Papakōlea community center, one at the Ke Ola Mamo office in Nānākuli, and one at a community center in Wai'anae.

Participation in this study was voluntary. Exempt status for human subjects research was approved by the University of Hawai'i Human Studies Program. The PI

instructed participants that the information shared during the focus group was confidential. The focus group attendees in this study were adults and are not considered a vulnerable population. Once approved by the dissertation committee, results from this study will be summarized and presented to interested participants and community leaders.

### **Study Design**

The use of focus groups as a qualitative methodology is appropriate to better understand attitudes and perceptions. Focus groups offer several advantages over other qualitative data collection techniques. Compared to individual interviews they are more cost-effective, eliciting several perspectives about the same topic during a similar time frame (Kitzinger, 1995). And compared to questionnaires, focus groups could yield deeper, more complete data, and allow the facilitator to probe unanswered or unexpected issues (Kitzinger, 1995). Focus groups as a methodology is particularly appropriate in research with Native Hawaiians as it is sensitive to Native Hawaiians' tradition of oral communication and better enables participants to judge the researcher's intentions (Braun, Mokuau, & Tsark, 1997; Braun, Mokuau, Hunt, Kaanoi, & Gotay, 2002; Kaholokula, 2008; Pukui, Haertig, & Lee, 1979). It is well suited for this research, which explores the collective experience and opinions of Native Hawaiians regarding language loss and its effects on their communities and families.

There are also some disadvantages to using focus groups. Analysis of qualitative focus group data is subjective in nature, and thus threatened by the biases of the researchers. To help address this, a codebook was developed *a priori* and the data were independently analyzed by two researchers and compared for agreement. Another disadvantage of using focus groups is the subjective nature of the information collected. However, qualitative methods are useful and necessary in eliciting the thoughts and views of understudied populations and adapting instruments to a new population (Cresswell, 1994) and thus are appropriate for this research.

It is possible that dominant, verbose, charismatic or outspoken individuals may steer the group's conversation in a manner that is inconsistent with group consensus, presenting another possible limitation of the focus group approach. This type of dynamics may also result in quieter group members being less willing to voice their opinions,

especially if they run contrary to the opinions of more outspoken group members (Pini, 2002). Facilitator training and proper preparation reduces the influence of outspoken participants and encourage participation from quieter participants. The PI has attended and conducted focus groups with Native Hawaiian participants and attended a two-day training to improve her facilitation skills. She prepared for each focus group by reviewing the focus group guide, consent form, and participant information sheet.

There is also a risk of what Smithson (2000) terms facilitator bias through the facilitator's behavior and attitudes during the focus group. This refers to the possibility that the facilitator's actual or perceived attributes (e.g., ethnicity) bias the group discussion. While one possible solution is to have a facilitator from the same background as the participants, Hughes and DuMont (1993) assert that focus groups are particularly useful for researching the perspectives of members of ethnic groups different from that of the researcher. Additionally, compared to individual interviews, the group has a collective power in their shared knowledge that the facilitator lacks, decreasing the possibility that the facilitator will be perceived as more powerful.

Each focus group was conducted in a private room in the community which the participants are recruited. Participants received a \$20 gift card to a local store as compensation for their time. Focus groups were audio recorded and lasted approximately 120 minutes, including the completion of the informed consent process and a demographic and informational questionnaire. The consent form is provided in Appendix B. The PI facilitated the focus groups along with a master's level research assistant employed at the John A Burns School of Medicine in the Department of Native Hawaiian Health.

### **Assessment Instruments**

**Demographic/Informational questionnaire.** Focus group participants completed a short questionnaire collecting several demographic and Hawaiian language variables. This demographic/informational form is shown in Appendix C. The variables measured included: age (in years); gender (1 = female, 2 = male); marital status (1 = single, 2 = partnered, 3 = divorced/separated/widowed); description of overall health (1 = poor, 2 = fair, 3 = good, 4 = excellent); employment status (1 = employed full-time, 2 = employed

part-time, 3 = unemployed, 4 = retired, 5 = student); education level (1 = no high school diploma, 2 = high school diploma or GED or CBase, 3 = some college, technical, or vocational training, 4 = college graduate or above); Hawaiian language skills (0 = none to 6 = native speaker); Hawaiian language instruction (1 = immersion education, 2 = formal classes/instruction, 3 = through participation/training in hula or another Native Hawaiian tradition, 4 = family members and friends, 5 = other); views on the amount of Hawaiian currently spoken in Hawai‘i (1 = more than enough, 2 = enough, 3 = not enough); participation in Hawaiian cultural activities (0 = rarely to 4 = frequently); and importance of Hawaiian language in maintaining Hawaiian cultural identity (0 = not at all important to 4 = very important). Items inquiring about age, gender, employment status, education level, Hawaiian language skills, views on the amount of Hawaiian spoken, and participation in Hawaiian cultural activities were all adapted from the “Attitudes Toward the Māori Language Survey” (The Ministry of Māori Development, 2010). The items assessing Hawaiian language instruction were collapsed into those who learned through family and friends and those who did not.

**Discussion guide.** The focus group guide, shown in Table 3, was developed based on the literature review presented in Chapter One and was rationally-derived based on the stated purpose of this research. Using the guide, the facilitator asked participants about their perceptions of the importance of the Hawaiian language to them and their culture, the impact of the Hawaiian language decline (both personal and community wide), the ideal use of Hawaiian language in Hawai‘i today, and perceptions of the impact of a bilingual linguistic landscape (see Appendix D). Probes specific to these topic areas were used to inquire about the impact on health and wellbeing (e.g., How has the loss of the Hawaiian language impacted your health and wellbeing?). Additional questions were introduced by the facilitator during the focus groups in order to obtain more detailed information from the participants. Key concepts and responses were recorded on flipcharts during the focus groups to ensure that participants’ ideas were accurately captured.

A codebook was developed around the areas of interest listed in Table 3, including: importance of Hawaiian language to Hawaiian culture and people, current

Table 3. *Focus Group Guides Domains and Example Questions*

<b>Areas of Interest</b>	<b>Focus Group Questions</b>
Importance of Hawaiian language to Hawaiian culture and people	1) Describe the importance of Hawaiian language to Hawaiian culture and people. <u>Probes</u> a. What about for you and your family personally? b. What about for the Hawaiian community as a whole? c. How is it important to your health or well-being?
Current status of Hawaiian in Native Hawaiian communities and Hawai‘i.	2) Describe the current status of the Hawaiian language in your community? <u>Probes</u> a. Is it spoken regularly or only for cultural activities or ceremonies? b. Are there any native speakers or speakers in general? c. What are some reasons for how Hawaiian is currently used? d. How do you feel about how Hawaiian is currently used in your home and community?  3) Describe the current status of the Hawaiian language in Hawai‘i in general? <u>Probes</u> a. When is Hawaiian used? b. How do people react to its use? c. How do you feel about how Hawaiian is currently used in Hawai‘i? d. What effect, if any, does this status and use have on your community?
Impact of current use of Hawaiian language.	4) How does the current use or lack thereof affect Native Hawaiians? <u>Probes</u> a. What about for you and your family personally? b. What impact does it have on the community as a whole? c. How does it affect Native Hawaiians’ health and well-being? d. How does it affect their social position or status?

Table 3. (Continued)

<p>Ideal use of Hawaiian</p>	<p>5) How would you like to see Hawaiian used in your community?  <u>Probes</u>  a. How would you like to have it used in your home?  b. If Hawaiian was used that way today, how do you think this would affect the Native Hawaiian community? What makes you think that?  c. How could this be achieved?</p>
<p>Impact of a bilingual linguistic landscape</p>	<p>6) Regardless of whether or not you speak Hawaiian, what effects would a Hawaiian-English linguistic landscape have on you and your community?  <u>Probes</u>  a. What would the effect be on Hawai‘i in general?  b. How would it affect Native Hawaiians’ health/well-being?  c. How would it affect their status?</p> <p>7) Changing all of the signs to bilingual ones would be costly, does the cost effect your opinion of having bilingual signs?  <u>Probes</u>  a. Would you support the city and county and/or state government spending tax money on establishing a bilingual linguistic landscape? Why or why not?  b. What do you think would help/hurt an effort to establish a bilingual linguistic landscape?</p>

status of Hawaiian in Native Hawaiian communities and Hawai‘i, impact of current use of Hawaiian language, ideal use of Hawaiian, and impact of a bilingual linguistic landscape. Subthemes were added based on the probes and responses. The researchers structured data analysis around these themes and subthemes. The subthemes were further categorized using the social ecological model presented in Figure 3 – policy, society/community, and intrapersonal. Categorizing the data this way aided in understanding how Hawaiian language loss has impacted the Native Hawaiian community and the possible effects of a bilingual linguistic landscape.

The audio recordings of the focus group conversations were transcribed. Two researchers (the PI and a research assistant) independently analyzed the focus group data using a thematic data analysis technique (Morse & Field, 1995). Table 4 presents the

themes and levels of the Social Ecological Framework that were used to analyze the data. The themes and modes of intergenerational transmission were developed *a priori* based on the purpose of this research and the focus group guide. The topics emerged during the thematic analysis of the data. The focus group transcripts were reviewed to identify salient quotes under each theme. These quotes were then grouped under the relevant theme from which emerged topics. The ideas expressed by the quotes were further grouped under each topic into subthemes, presented in Table 5. Subthemes were extracted based on: (1) their mention in the focus group, (2) their elaboration or endorsement by other group members, and (3) their mention in at least two of the four focus groups (Kaholokula, 2008).

Table 4. *Codes Created from Focus Group Data*

<b>Theme</b>	<b>Topics</b>	<b>Social Ecological Framework</b>
Importance of the Hawaiian Language	Importance to self and family Importance to Hawaiian community as a whole General importance	Policy Society/Community Intrapersonal
Current Status of the Hawaiian Language	Current status of the Hawaiian language Reasons for the current status Impact of current status	
Impact of the Current Status	Ideal status of the Hawaiian language Impact of ideal status Methods to achieve ideal status	
Bilingual Linguistic Landscape	Impact of a BLL on Native Hawaiians Sources of contention Methods for achieving a BLL	

The researchers met twice over a 1-month period to discuss their selection and categorization of data and any independently identified themes. Newly identified themes that were similar in nature were aggregated into a single representative theme. There were discrepancies in 5% of the coding which were discussed until consensus was reached.

## Results

Four focus groups were conducted, two at Papakōlea with 11 and seven participants, one in Wai‘anae with 10 participants, and one at the Ke Ola Mamo office in Nānākuli with nine participants. Of the 37 participants, most were female (80%), with two reporting a gender of other. Mean age was 54.5 years old (SD=14.2). Most participants were employed full or part time (62.2%), described their health status as “good” (67.6%), and had an elementary command of the Hawaiian language or less (67.6%). Despite this limited proficiency in the Hawaiian language, most participants believed that “not enough” Hawaiian is currently spoken (91.4%) and that the Hawaiian language is very important (77.1%) in maintaining their Hawaiian cultural identity. Descriptive demographic statistics of the participants are presented in Table 5.

### Thematic Analysis

Five themes, which covered 15 topics, were identified in the analysis. These themes, topics, and relevant subthemes are summarized in Table 6. The five themes were: importance of the Hawaiian language, status of the Hawaiian language, future status of the Hawaiian language, bilingual linguistic landscape, and cross-cutting themes.

**Theme 1: Importance of Hawaiian language.** The first theme is the importance of the Hawaiian language. The topics discussed under this first theme were the importance of the Hawaiian language to participants and their families, the importance of the Hawaiian language to the Native Hawaiian community, and the importance of the Hawaiian language to the wider community or State.

**Topic 1.1: Individual and family importance of Hawaiian language.** In discussing the importance of the Hawaiian language among themselves and with their families, three subthemes emerged: 1) cultural identity, 2) cultural connection, and 3) cultural perpetuation. Participants believed that the Hawaiian language was important to their cultural identity. The Hawaiian language was culturally important to all the participants, regardless of their ability to speak it. As one participant stated, “It’s [the Hawaiian language] important to me personally, culturally.” Another said, “it gives me an identity, my cultural identity. It roots me here in Hawai‘i.” Similar to this subtheme, participants also expressed that the Hawaiian language provided them with a cultural

Table 5: Focus Group Participants Socio-Demographic Characteristics and Attitudes

Variable	N = 37
Gender	
Male	7 (19%)
Female	28 (76%)
Other	2 (5%)
Age (y)	54.5 ± 14.2
Education	
high school/GED	11 (30%)
some college	17 (46%)
college grad	9 (24%)
Relationship Status	
never married	11 (30%)
currently married	14 (38%)
partnered	1 (3%)
divorced/separated	3 (8%)
widowed	8 (21%)
Employment Status	
Full/Part time	17 (46%)
unemployed	5 (14%)
retired	13 (35%)
student	2 (5%)
Health Status	
poor	3 (8%)
fair	9 (24%)
good	25 (68%)
Hawaiian Language Ability	
none	4 (11%)
elementary	21 (58%)
limited	8 (22%)
> limited	3 (9%)
Learned Hawaiian at Home	24 (65%)
Participation in Hawaiian Culture	
None/a little	12 (33%)
Some/a lot	24 (67%)
View on the Amount of Hawaiian Currently Spoken in Hawaii	
too much	3 (8%)
enough	2 (5%)
not enough	32 (87%)
Importance of the Hawaiian Language to Hawaiian Culture	
a little	1 (3%)
somewhat	9 (24%)
very	27 (73%)

Data shown as M ± SD or n (%).

connection. Participants said that learning the Hawaiian language provides knowledge and insight into the Hawaiian culture, which connects people to their culture in a deep

and meaningful way. Finally, the Hawaiian language was seen as important as it perpetuates the Hawaiian culture. Some of the participants regretted the lack of language transmission and cultural promotion when they were young compared to current efforts. However, they are happy to see their children and grandchildren perpetuating the language and, with it, the Hawaiian culture.

***Topic 1.2: Importance of the Hawaiian language to the Hawaiian community.***

The Hawaiian language was also thought to be important to the broader Native Hawaiian community. The following subthemes emerged during the discussion of this topic: 1) language provides a link to the past and 2) unity and strength. Culturally, the Hawaiian language was believed to be very important to the Hawaiian community by linking it to the past. Participants expressed that the language keeps the culture alive for future generations, helps people to “know where they came from,” and “helps us be tied to roots, helps to find perspective wherever we are, [and] helps us to pass on habits, lifestyles, you know, values.” The other subtheme in this topic was that the Hawaiian language is important to the Native Hawaiian community as a source of unity and strength. One participant expressed that knowing the Hawaiian language gives the community “access to all the stories” in Hawaiian history, showing the variety in Hawaiian cultural values, and providing “relevance” to the community. This relevance was believed to make the Native Hawaiian community stronger. Additionally, participants believed that the Hawaiian language helps to unite the community by providing a common basis for communication and some insulation from outside intrusion.

***Topic 1.3: General importance of the Hawaiian language.*** The subthemes that emerged through the discussion on the importance of the Hawaiian language to Hawai‘i in general included: 1) lack of importance to state and 2) mainstream views of the language. Overall, the Hawaiian language was seen as unimportant to the State of Hawai‘i despite having participants in all four focus groups who knew that Hawaiian is an official language of the State. While some saw this official status as evidence of the language’s importance to the State, many participants believed that the Hawaiian language is not valued by the State of Hawai‘i. For instance, participants thought that it is

Table 6. *Focus Group Theme, Topics, Subthemes, and Representative Quotes*

<b><i>Theme</i></b>	<b><i>Topics</i></b>	<b><i>Subthemes</i></b>	<b><i>Representative Quotes</i></b>
Importance of the Hawaiian Language	1.Importance to self and family	Important culturally and personally Cultural perpetuation Cultural identity	“It gives me an identity, my cultural identity. It roots me here in Hawai‘i.”
	2.Importance to the Native Hawaiian Community	Link to the past Unity and strength	“I think it helps us to be better Hawaiians... create and foster and strengthen that connection that we have...”
	3.General Importance	Lack of importance to the State Mainstream view of the language	“We see it as being part of us. They want to sell it.”
Status of the Hawaiian Language	1.Current status of the Hawaiian Language	Some resurgence Struggling Generational gap in speakers	Hawaiian is spoken “only within your family group, your community group, you know. Only specific little groups it’s not networked island wide or state.”
	2.Reasons for the current status	Suppression of language and culture Pride in being Hawaiian Lack of reasons for learning	“The only reason for learning it nowadays is solely cultural, for you own wanting to learn because there’s nowhere to utilize it every day.”
	3.Impact of current status	Loss of identity Loss of connection Division in the community Upsetting, angering	“Because I don’t speak the language, I lose half the world. I don’t understand. I cannot interpret these lands. I cannot interpret these sites. I can’t interpret these place names that are so informative to us.”

Table 6. (Continued)

<i>Theme</i>	<i>Topics</i>	<i>Subthemes</i>	<i>Representative Quotes</i>
Ideal status of the Hawaiian Language	1. Ideal status of the Hawaiian language	Widespread, spoken and printed All Hawaiians speak Hawaiian Balance between Hawaiian and English	“It would be mandatory. I can go up anywhere and order my plate lunch in Hawaiian. I can go to a doctor. Everywhere I go its everywhere... That I hear it every day. And richly, you know.”
	2. Impact of ideal status	Increase knowledge of the past Improved sense of community Increase in pride, self-esteem	“Furthers their knowledge and development of who they are and how significant they are.”
	3. Methods to achieve ideal status	Learning opportunities Motivation to learn Importance of family Lack of optimism	“Make it a perk. But you know there’s no perk for it. There’s people wanna learn it. Yes it’s a culture, it’s an identity...to take away the stigmatism of what the past has brought upon us. But we’re in a society where everything is ‘what’s in it for me.’ And sadly you know there’s not enough, there’s not enough.”

Table 6. (Continued)

<i>Theme</i>	<i>Topics</i>	<i>Subthemes</i>	<i>Representative Quotes</i>
Bilingual Linguistic Landscape	1.Impact of a BLL on Native Hawaiians  2.Sources of contention  3.Methods for achieving a BLL	Increase interest in Hawaiian Increased pride, self-worth Improved health Loss of kaona  Lack of other languages Expense Government intentions and abilities Division in the Hawaiian community  Start small Political advocacy and democratic participation	“When you bring value into people, their language, their culture. I think when they feel that value they become, they become, they know they have worth.”  “People might say, hey this is not only for Hawaiians. They might have second thoughts like eh, they got to share this island. This is not only the Hawaiians.”  “Maybe start small in our communities and areas that we have control over”
Cross-cutting themes	1.Connection between language and culture  2.Benefits and costs of Hawaiian immersion schools  3.Language suppression		“I think they [culture and language] have to go hand in hand. I don’t think you can just teach the language.”  “They [students] come out speaking the language really well, they can converse and stuff like that. But the academia is really low.”  “It’s not by accident that our own education system doesn’t support the language because that was part of the overthrow. That’s part of taking over the culture... you suppress the language, you suppress their religion and their practices. That’s how you conquer the people. There is still that subliminal suppression of our language.”

not well taught by the Department of Education in the public school system. “They [Department of Education] deem little to no value to the language.” Participants also believed that most non-Native Hawaiian residents did not value the language despite the interest expressed by some discrete groups, such as Japanese tourists. One participant expressed this sentiment by stating, “I don’t think that they [mainstream society in Hawai‘i] take it seriously,” citing common mispronunciations of Hawaiian words as an example. Despite this lack of importance to the State of Hawai‘i and many of its residents, participants believed that as the host culture “it should be very important. It should be more than just street names and statues in Waikīkī.” This discrepancy between the importance of the Hawaiian language to Native Hawaiians and the Native Hawaiian community and its relative lack of importance to the broader Hawaiian community was not lost on participants. As one participant expressed, “we [Native Hawaiians] see it as being part of us” while the State of Hawai‘i wants to sell it.

**Theme 2: Status of the Hawaiian language.** The second theme identified was the current status and uses of the Hawaiian language, comprised of the following topics: current status, reasons for that status, and impact of the current status.

**Topic 2.1: Current status.** Three subthemes emerged in the discussion of the current status of the Hawaiian language: 1) resurgence in recent decades, 2) struggling, and 3) generational gap in speakers. The first subtheme was the belief that the current status of the Hawaiian language has improved over the past several decades with more people learning and teaching the language. Many participants believed that, despite the resurgence and revitalization efforts, the Hawaiian language is still nowhere near as prominent as it should be. The Hawaiian language was thought to be struggling. Currently Hawaiian is spoken “only within your family group, your community group, you know. Only specific little groups... it’s not networked island wide or state [wide].” Participants also reported hearing Hawaiian used in Hawaiian cultural functions or activities, such as at gatherings at ‘Iolani Palace, hula performances, and Pūnana Leo events and in Hawaiian music. The third subtheme in this topic was the generational gap in Hawaiian language speakers. Many participants said that their grandparents spoke Hawaiian, but there the Hawaiian language was not transmitted to either the participants or the participants’ parents. This has created a gap across generations’ in their knowledge

of the Hawaiian language such that the younger ones are learning and the older one can still speak, but those in the middle do not have the language skills of their parents but feel they are too old to learn.

**Topic 2.2: Reasons for current status.** The following subthemes were identified under the theme of current status: 1) past suppression coupled with current increased pride and 2) lack of incentives to learn. Some reasons for the current struggling status of the Hawaiian language were seen to stem from past suppression of the language and the stigma associated with being Hawaiian. Participants discussed how their grandparents weren't allowed to speak Hawaiian in school and how they or their parents were discouraged from learning Hawaiian. However, there is pride in being Hawaiian, which has helped to increase interest in the language and improve its status as mentioned above. The second subtheme that emerged was the lack of incentives for learning. This discussion included having only personal and cultural reasons for learning Hawaiian and a lack of opportunities to use the language. The only reasons that participants cited for learning the Hawaiian language were personal and cultural. Participants believed that satisfying these interests may not be enough to motivate a majority of Native Hawaiians to learn the language. College students at UH Mānoa were cited as an exception to this rule, in that they need to take a language for graduation and therefore have extrinsic motivation. Participants believed that a lack of opportunities outside of school works against Pūnana Leo students. As one stated, "What's outside of the hale is English. So it's going to be like we have to try to build it [a place to speak Hawaiian] somewhere else."

**Topic 2.3: Impact of current status.** The four subthemes that emerged during the discussion of the impact of the current status were: 1) loss of identity or voice, 2) loss of connection, 3) division in Native Hawaiian community, and 4) negative emotions. Participants expressed that the loss of the Hawaiian language has resulted in a loss of identity and voice. As one participant expressed, without the Hawaiian language "we don't know how to voice our opinion, we don't know how to confront, come in a group and stand up." The second subtheme that emerges was the "disconnect" of people from their culture. One participant stated, "Because I don't speak the language, I lose half the world." Another participant stated that, "our kids suffer this disconnect" because they do not know the Hawaiian language. Participants discussed a division in Hawaiian language

speakers between those who are university learners and those who learned at home. One participant described the impact of this division well by saying, the loss of the Hawaiian language “makes us feel like strangers in our own place. Make us feel like we can’t even talk to each other. Now we got to choose between one native speaker and one university one. How much more things they going to think up to try and make us more further apart?” Participants believed that this division could be lessened if everyone could come together around a common language. The final subtheme that emerged was the association of negative emotions with the current status of the Hawaiian language. The decline of the Hawaiian language described as upsetting and angering. Many participants expressed a feeling of discontent and anger at the past suppression of the Hawaiian language, culture, and people. Participants found it upsetting to hear others, such as local Samoans or Japanese, speak their native languages knowing that most Native Hawaiians cannot speak the own.

**Theme 3: Ideal status.** The third theme that was identified was the ideal status of the Hawaiian language. This theme covered three topics: description of the ideal status of the Hawaiian language, impact if this ideal status is achieved, and methods for achieving this status.

**Topic 3.1: Ideal status.** Participants varied in their description of the ideal status of the Hawaiian language, but their thoughts can be categorized by three subthemes: 1) Hawaiian language spoken throughout the Native Hawaiian community, 2) spoken statewide, and 3) well-balanced with English. Some participants believed the ideal status of the Hawaiian language was one in which it could be spoken and understood throughout the Hawaiian community. As one participant stated, “I would like to see all Hawaiians speak Hawaiian.” Other participants believed that the ideal status of the Hawaiian language is more widespread. They would like to see it throughout the State, from advertisements to the news, from being taught in all schools to reversion of all the place names back to Hawaiian. To these participants, Hawaiian would be ubiquitous and used even in the mundane. “It would be mandatory. I can go up anywhere and order my plate lunch in Hawaiian. I can go to a doctor. Everywhere I go it’s everywhere... That I hear it every day and richly.” And still other participants believed that Hawaiian should be well-balanced with English. As one participant said, we would still need to keep a

balance “cause they (kids) need both to keep our Hawaiian language going strong, but they also need the English language for the outside world.”

**Topic 3.2: Potential impact of ideal status.** In the next topic discussed, the impact of the achievement of the ideal status of the Hawaiian language, four themes emerged: 1) increase knowledge of the past, 2) improve sense of community, 3) pride/self-esteem, and 4) cultural identity. Participants believed that if the Hawaiian language achieved its ideal status, their knowledge of the past would increase. Participants believe that “if we knew the correct language, if we knew the correct story, if we had a better connection to our past, [we] could have learned from the mo‘olelo (stories, legends, and philosophical sayings) we could learn from our history on that.” Achieving the ideal status for the Hawaiian language would contribute to a sense of community among Native Hawaiians. Participants believed that, “the greater the language, the greater the number of speakers, the more we start to identify with one another.” One participant even likened saving the language to saving themselves, “Our language lives, our people live.” Participants also believed that achieving an ideal status for the Hawaiian language would improve Native Hawaiians’ sense of pride and self-esteem. Learning the language would further “their knowledge and development of who they are and how significant they are.” Participants also spoke about feeling proud of their children who are learning Hawaiian. Thus, a sense of pride may not be limited to the language learners themselves. Another participant believed that revitalizing the language would bring back the Hawaiian cultural values and that this “would be healthy both emotionally, physically, and mentally” for Native Hawaiians.

**Topic 3.3: Methods for achieving ideal status.** Four subthemes emerged from the discussion of how to achieve an ideal status for the Hawaiian language: 1) increasing learning opportunities, 2) improve motivation for learning, 3) importance of family, and 4) doubt the possibility of achieving the ideal status. Some ideas for achieving the ideal status centered on increasing access and availability of Hawaiian language learning opportunities via free/low cost programs in the community (e.g., Alu Like, churches, homesteads, and ‘Aha Kāne) and integrating language learning into other cultural practices (e.g., music, cooking, and hula). Participants believed that Native Hawaiians do not currently have the motivation to learn Hawaiian due to a lack of opportunities to use

the language. Increasing the opportunities to use Hawaiian in the community (e.g., via bilingual media) was seen as a potential method for increasing motivation to learn the language. They believed that increasing the presence of the Hawaiian language in the broader environment would provide people with a place to speak, read, and hear the language. Several participants mentioned the importance of incorporating the family into language education, “I think it starts at home first, home base.” Another participant stated that it is important to “incorporate it [language learning] as a family activity so that they can start it at home.” Participants also suggested that these classes could include learning and teaching in families with either parents teaching kids or even kids teaching parents. Some participants expressed skepticism toward the plausibility of successful language revitalization. They cited all the past efforts contrasted with the current struggling status of the Hawaiian language today as evidence. One participant stated that, it “feels like there’s this invisible overseeing that somehow keeps suppressing it from being able to, to flourish and strengthen...”

**Theme 4: Bilingual linguistic landscape.** The theme of bilingual linguistic landscape covered several topics: possible impact of a bilingual linguistic landscape, sources of contention for creating a bilingual linguistic landscape in Hawai‘i, and possible methods for creating a bilingual linguistic landscape in Hawai‘i.

**Theme 4.1: Impact of bilingual linguistic landscape.** The first topic, possible impact of a bilingual linguistic landscape, included four themes: 1) increase interest in Hawaiian, 2) increase pride and value, 3) improve health, and 4) loss of kaona (i.e., hidden meaning or concealed reference). Participants believed establishing a bilingual linguistic landscape would increase interest in the Hawaiian language because the bilingual linguistic landscape is visual and mainstream. As one participant stated, the impact would be “huge, it would increase interest from everyone in Hawai‘i. I’m going to learn it. I’m going to force myself.” Participants said that a bilingual linguistic landscape would help them to take more pride “in who we are, where we come from, who our families are, what our genealogy is.” Simply living in Hawai‘i with a bilingual linguistic landscape would increase participants’ perception of value of the Hawaiian language. Participants also expressed that creating a bilingual linguistic landscape would have a positive impact on Native Hawaiians’ health. One participant explained that a bilingual

linguistic landscape would communicate to people “that you [Native Hawaiians] are valued, your culture is valued, it is valuable.” She believed that this could lead to improved health behaviors. Another participant echoed this belief saying that, “They might become more active you know... But at least they will believe that they have that right.” Despite the general agreement that a bilingual linguistic landscape would be a good idea, some participants offered caution and dissenting views. They cautioned that it should not just become a vocabulary exercise and lose the kaona and feeling of connectedness. One participant phrased this belief well by saying, “I think having the language in every place is important but it has to have that feeling connected.” Without this connection to the culture, bilingual signs could be, “very surface, it [bilingual signs] doesn’t help us perpetuate the true meaning of” the words.

**Topic 4.2: Contention about a bilingual linguistic landscape.** The following four subthemes emerged from the discussion of possible sources of contention surrounding a bilingual linguistic landscape: 1) Hawaiian versus other languages, 2) expense, 3) government’s (in)effectiveness, and 4) lack of unity within the Hawaiian community. The first possible area of contention is that the signs would be in English and Hawaiian but not other languages spoken in the state. Participants discussed the possible resistance that members of ethnic groups with heritage languages other than English and Hawaiian, such as Filipinos or Japanese, might express because their heritage language wouldn’t appear on the signs. However, other participants stated that a Hawaiian-English linguistic landscape would be appropriate because Hawaiian is the host culture and is an official state language. Expense was another source of possible contention. Participants believed that making a bilingual linguistic landscape a priority in the current economic climate of budget cuts and limited job growth would be challenging. However others believed that “if we don’t start somewhere then we’re just saying that you know the status quo is great.” Participants expressed skepticism toward the government’s ability to get this type of policy established and toward the a majority of the legislature and other policy makers’ intentions on serving the Hawaiian community. Some participants believed that government was generally ineffective, “It’s one thing to say, this is what we’d like to have done and then it’s another thing to see it get done. Many of us will probably not see it because everything is talk, talk, talk.” Other participants believed that the “government

prevents Hawaiian people from moving forward, from growing” so would therefore not support the creation of a bilingual linguistic landscape. The lack of unity in the Hawaiian community was also a possible source of contention regarding a bilingual linguistic landscape. Participants thought that the support of certain people or groups might result in the alienation of others. Additionally, participants predicted that the decisions on who would regulate, set standards, and decide on the phrasing for the signs would be contentious within the Hawaiian community.

**Topic 4.3: Creating a bilingual linguistic landscape.** The final topic under the general bilingual linguistic landscape theme is ideas for creating a bilingual linguistic landscape, which included two subthemes: 1) start small and 2) advocacy/democratic participation. The first subtheme for creating a bilingual linguistic landscape is to start small in certain communities and areas. One participant summed up this belief saying, “Maybe start small in our communities and areas that we have control over. I would like to see it. In certain areas and certain families and properties you see but only their certain areas.” The ahupua‘a signs erected by the Hawaiian civic clubs were cited by participants as an example of this. These signs mark the boundaries between traditional divisions of land (i.e., ahupua‘a). The second subtheme for creating a bilingual linguistic landscape was to promote significant and organized political advocacy and democratic participation in order to get bilingual linguistic landscape policies through the political system. As one participant said, “Everything has to go through the political system. So if we don’t go through them, it won’t get done.”

**Theme 5: Cross-cutting themes.** There were three recurring topics mentioned across the five themes described above: 1) the connection between language and culture, 2) impact of Hawaiian immersion schools, and 3) suppression.

**Topic 5.1: Connection between language and culture.** The first cross-cutting topic was the inseparability of Hawaiian culture and language. After discussing methods for perpetuating the Hawaiian language, one participant stated, “I think they [culture and language] have to go hand in hand. I don’t think you can just teach the language.” Another participant stated, “I think it’s kinda superficial for us just to say language. Because I think that language, learning the language you’re actually you know diving into the whole culture.” The intimate connection between language and culture was

echoed in each group and always met with agreement from the other participants. Thus, discussions that started with promoting the Hawaiian language invariably lead to discussions of promoting the culture.

**Topic 5.2: Impact of Hawaiian immersion schools.** The second cross-cutting topic was the impact of Hawaiian immersion schools. All of the groups had participants whose family members were attending or had attended immersion school, which was considered a positive attribute. Despite the fondness expressed for immersion schools, participants mentioned some drawbacks. Several participants described parents pulling their children from immersion school over a concern for their English ability. Other participants believed that the academics taught in immersion schools were below the standard that they wished for their children. This was mentioned as another reason why parents may hesitate to enroll their children in immersion schools or take them out early.

**Topic 5.3: Suppression.** The final cross-cutting topic was past and current suppression of the Hawaiian language and culture. One participant described the stigma attached to speaking Hawaiian, “There was this stigma, even if it was subjective and not necessarily overt, although it was... And it keeps passing on. And the generation before me would get lickings if they spoke Hawaiian so this kind of deep hurt is still implanted.” Another participant mentioned that she was discriminated against growing up because she was Hawaiian, “They [other students] made me feel ostracized. So then you get this domino effect...” which negatively affected her attitudes and well-being. Several participants mentioned that suppression of the Hawaiian language is institutionalized and still occurring today. “There is still Hawai‘i government suppression, especially in our education system. They deem little to no value to the language. It’s not by accident that our own education system doesn’t support the language... There is still that subliminal suppression of our language.” Additionally, participants believed that the truth about colonization in Hawai‘i had been suppressed in schools, “We all had to learn it by word of mouth, grandma, grandpa, tūtū, you know.”

### **Social Ecological Analysis of Focus Group Data**

The subthemes were also analyzed using the three levels of the Social Ecological Framework that explains the transmission of trauma due to language loss across

generations: 1) intrapersonal, 2) community/societal, and 3) policy. This analysis is depicted in Figure 4.

**Intrapersonal level.** Participants described the language as being important to them personally and culturally. This personal and cultural importance to people was cited as the main reason that people choose to learn Hawaiian. The intrapersonal level effects of the loss of the Hawaiian language have been a loss of connection to one's culture and identity and feelings of anger and frustration. Also, on the intrapersonal level is a lack of optimism regarding revitalization of the Hawaiian language. Discussion of the impacts of a bilingual linguistic landscape yielded several intrapersonal level impacts: increased interest in the Hawaiian language, increased pride and self-worth, improved health, and concerns regarding the possible loss of kaona.

**Community/Societal level.** There are a variety of community/societal-level factors related to Hawaiian language revitalization. Participants believed that the Hawaiian language was a unifying force in the community and that it would help the community perpetuate the culture. This importance to the community was contrasted with the relative lack of importance to the state as a whole. Despite this importance to the community, and its resurgence, the language is still rarely heard throughout the community, which is seen as a barrier to further revitalization. Encouraging language revitalization leads to community-wide pride in being Hawaiian. Participants also described possible community-level barriers to a bilingual linguistic landscape, including a lack of other languages on the signs, the expense of creating and installing new signs, and divisions in the Hawaiian community that may serve to fracture support for new signs.

**Policy level.** Policy-level suppression of the Hawaiian language (e.g., those that prohibited its use in schools) and lack of incentives for learning (e.g., no foreign language credit or resume points) were discussed as reasons for the current status of the Hawaiian language. Ideally, participants believed, there should be policies that would mandate Hawaiian language instruction throughout primary education, provide incentives (e.g., foreign language credit), and provide for a balance between Hawaiian and English. Expense and a need for government initiative were seen as barriers to creating a bilingual linguistic landscape policy. Ideas for addressing these barriers included starting in certain

areas (e.g., at OHA or DHHL) where establishing a bilingual linguistic landscape would be supported and devising creative funding mechanisms.

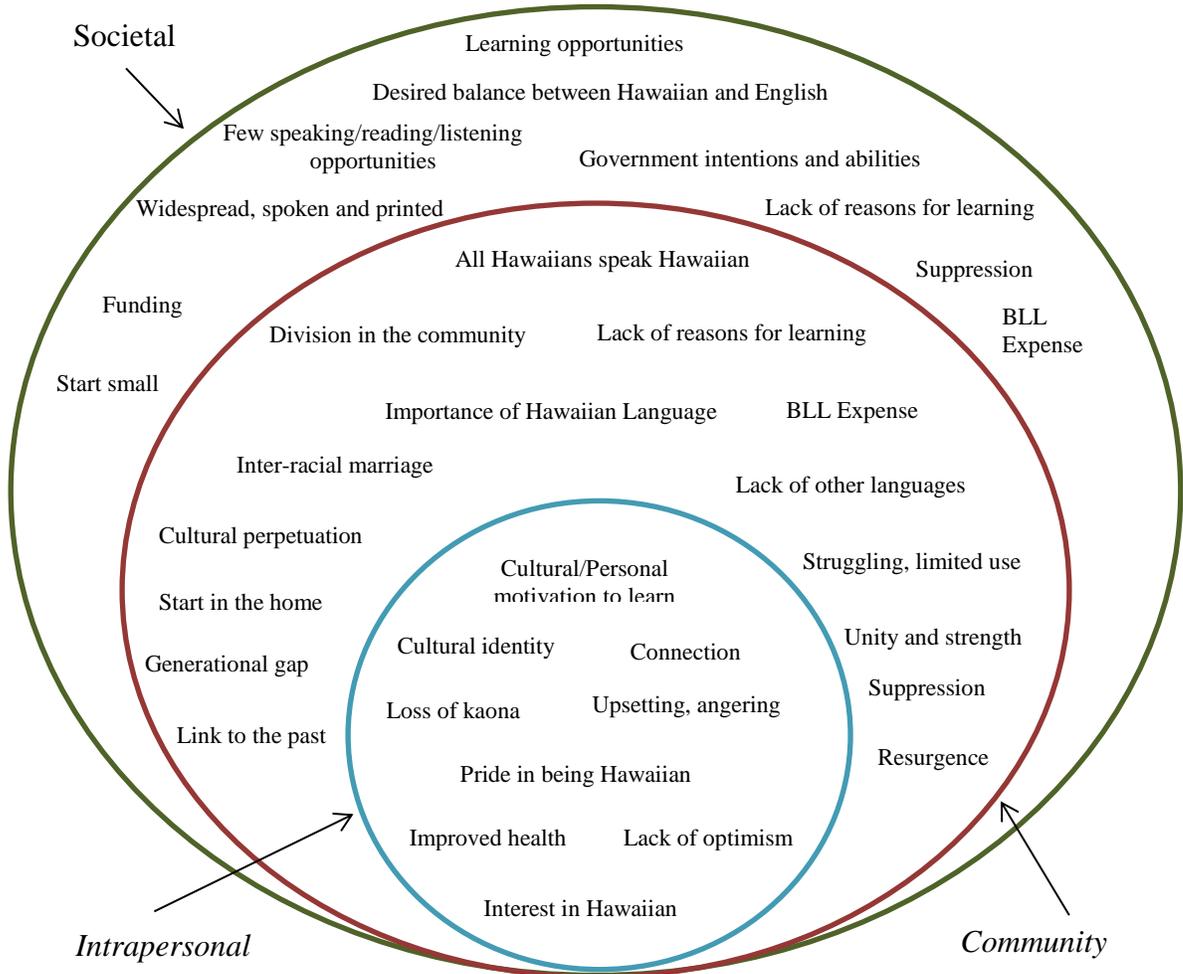


Figure 4. Intrapersonal, Community and Societal Level Categorization of Subthemes.

## Discussion

### Thematic Discussion

In Chapter one, how language loss has affected Native Hawaiians and their communities, views on the ideal usage of Hawaiian and possible impacts of achieving that ideal on Native Hawaiians, and perceptions of the impact of a bilingual linguistic landscape were examined. Based on current state statutes and the increase in Hawaiian language programs, proliferation of the Hawaiian language is an area of importance to the State of Hawai‘i and Native Hawaiians alike. This study helps to fill a current void in the empirical literature through its examination of the influence of language loss and language promotion on the well-being of Native Hawaiians.

There was broad agreement across participants of the focus groups that the Hawaiian language is important to Native Hawaiians themselves and to the community as a whole. The language helps to provide a sense of identity and grounding for Native Hawaiians. This finding is supported by indigenous language scholars (McIvor, 2005). However, the Hawaiian language is not perceived as being important to the broader community in Hawai‘i or to the State, even though Hawaiian is an official language of the State. This discrepancy between the personal, communal and cultural importance of the Hawaiian language to Native Hawaiians and the perceived lack of importance to the rest of Hawaiian society and the government was almost seen as expected. The western government and the Native Hawaiian community have often been at odds. This difference in the prioritization of language perpetuation can be viewed as one more example of this contentious relationship.

Over the past several decades, the Hawaiian culture and language have seen resurgence. Participants have pride in being Hawaiian and interest in the culture that they did not have earlier in their lives. Despite the perceived importance of the language and its resurgence, the Hawaiian language is still “struggling.” The effects of past suppression and stigmatization linger today. The struggling status contributes to a cultural disconnect and loss of cultural identity experienced by Native Hawaiians. There is a gap between native language speakers and what participants called “university learners.” While university learners were well regarded due to their interest in language and culture, participants were quick to point out that many seem to be condescending toward less formally educated cultural practitioners and language speakers. This division created by the Hawaiian language, which participants believed should be a unifying factor, is disappointing and discouraging for language promotion.

Currently, there is little incentive for people to learn the Hawaiian language aside from personal and cultural reasons. There are few opportunities to use the Hawaiian language, it is rarely recognized as an asset by potential employers, and many colleges in the continental U.S. do not grant foreign language credit for those students who have studied or are fluent in the Hawaiian language, as they commonly do for other languages. The creation of a bilingual linguistic landscape would provide Hawaiian language speakers and learners with opportunities to use their language skills.

Participants were supportive of Hawaiian language revitalization, which they believed will strengthen the Native Hawaiian community through improved collective esteem, pride, and physical and emotional health. Multiple methods of arriving at this ideal status for the language were offered, including mandating Hawaiian language education in schools, creating more learning opportunities in the community, and increasing incentives to learn the language by providing college credit and pay increases in employment. This variety of ideas is evidence of the forward thinking that the Native Hawaiian community has in the area of language promotion. Rather than just relegating language learning to schools and other formal settings, they want to see language learning and promotion throughout the community. This is the type of effort that is needed to improve the Hawaiian language's ranking on the Expanded Graded Intergenerational Disruption Scale (EGIDS) presented in the introduction. A bilingual linguistic landscape is one potential method for moving Hawaiian forward.

Overall results suggest that Native Hawaiians support the creation of a bilingual linguistic landscape in Hawai'i. Bilingual signs would increase the value of and interest in the language and this improved status would be felt by Native Hawaiians themselves. Additionally, there would be more opportunities to learn and use it thereby fostering its revitalization. A bilingual linguistic landscape would communicate official recognition and status which may help to address the continued stigma associated with the Hawaiian language and people. However, participants believed that creating bilingual signs alone would not be sufficient in revitalizing the Hawaiian language. Additionally, there are some concerns regarding a bilingual linguistic landscape including: a loss of the 'kaona' behind the words, resistance from other groups due to the lack of other languages, and expense.

Participants suggested several methods for creating a bilingual linguistic landscape. The most frequently mentioned were political advocacy and participation in the democratic process. While these methods are time consuming and require a broad base of support, their effectiveness in creating and adopting pro-Hawaiian legislation are evidenced by the 1978 Constitutional Convention and the Official Languages Amendment of the Constitution of Hawai'i which came out of it.

### **Social Ecological Analysis Discussion**

The use of the social ecological framework to examine the focus group data allows for the examination of how intrapersonal, community, and societal level factors interact to create the current Hawaiian language experience for Native Hawaiians. As illustrated in Figure 4, at the societal level there are few speaking, reading, listening opportunities for Hawaiian language speakers and the language is considered relatively unimportant. These factors are borne out in the intra-personal level. Rather than learning the language because there are societal benefits for doing so, e.g., improved employability or improved status, people's main reasons for learning the language are personal or cultural. They feel an increased connection to their culture and an improved sense of self-esteem and pride. It is difficult to argue which preceded the other, but today these societal and intra personal factors are mutually reinforcing. As long as people's motivation for learning the language remains personal, the language will see little increase in its importance throughout society. Similarly, as long as society does not consider the language important or provide opportunities for its use, people will only learn the language for personal reasons.

Another example of this interconnectedness is between the past societal suppression and current stigma toward the language and the division in language speakers in the Hawaiian community. The past suppression of the language at the societal level resulted in the current generational gap between language speakers. The oldest living generation of Native Hawaiians may have learned Hawaiian at home however the generation after them was not encouraged to learn the language or the culture. But the younger generations, those who are in their 30's and younger now have begun learn the language again and to encourage their children to do the same. The other community divide is between those who study the language and culture in school and those who learn both from family. People who learned the language informally feel denigrated by those who have studied it in school. These divisions in the Native Hawaiian community may be exacerbated by the lack of opportunities for learning the language, essentially creating a situation of language haves and have nots.

**Limitations.** There are several limitations in this study. As discussed previously, qualitative data is subjective in nature as well as subjective in interpretation. The subject nature of the data was considered a strength for this study as the aim was to gain a deeper

understanding of the importance of the Hawaiian language to Native Hawaiians. Thus eliciting people's thoughts on the importance of the Hawaiian language to Native Hawaiian well-being, the current status of Hawaiian language, and the potential effects of a bilingual linguistic landscape was appropriate. In order to address the subjective nature of data analysis, the PI and a graduate level researcher coded the data independently and compared the analyses. Any disagreements were discussed until a consensus was reached.

Other limitations of the current study include the low participation rates of men relative to that of women. Women tend to have higher research participation rates in the Native Hawaiian community compared to men, so this was not unexpected. Additionally, there is no evidence suggesting that gender influences views on the Hawaiian language so the predominance of women in the focus groups may not limit the generalizability of the results only to women. The limited variation in the locations of the focus groups is also a limitation on the generalizability of these results. Two of the four focus groups were conducted in the same community, and all four of the focus groups were conducted on the island of O'ahu in neighborhoods that are predominantly Native Hawaiian, i.e., Papakōlea, Nānākuli, and Wai'anae. Native Hawaiians living on other islands or in the continental US, or even in areas of O'ahu that are not predominantly Native Hawaiian, may have different experiences or views.

**Implications.** The results of this study improve our understanding of the importance of the Hawaiian language to Native Hawaiian well-being, the current status of Hawaiian language, and the potential effects of a bilingual linguistic landscape. Future research is needed to further examine the effects of the past decline and recent revitalization of the Hawaiian language. Longitudinal data from Hawaiian language learners to measure changes in their self-esteem, self-worth, and pride during the language learning process would allow for examination of the impacts of learning the Hawaiian language. Focus groups or key informant interviews with Hawaiian language speakers would allow for a retrospective look at these same relationships.

Furthermore, these results support the importance of the cultural adaptation of health promotion interventions, i.e., the integration of cultural practices and values into interventions for indigenous populations. Previous research has suggested that integrating

traditional practices and values, including language, can increase the intervention's saliency and effectiveness. These results suggest the integration of native language, practices, and values into a health intervention may be a functional intervention component in and of itself. More research can be done to understand the impact of cultural adaptations of interventions on native populations.

## **CHAPTER 3. MODIFICATION AND PRETEST OF THE ATTITUDES TOWARD THE HAWAIIAN LANGUAGE SURVEY**

### **Abstract**

The decline of the Hawaiian language is one aspect of the cultural trauma experienced by Native Hawaiians believed to negatively impact their health and well-being. Revitalization of the Hawaiian language is important to the Native Hawaiian community and would contribute to improved self-esteem, cultural identity, and self-worth for Native Hawaiians. However, further revitalization will require support from the Native Hawaiian community as well as from the State as a whole. The creation of a Hawaiian-English linguistic landscape is one method of language promotion that would require broad based support. In order to measure attitudes toward the Hawaiian language and support for its promotion, an accurate assessment tool must first be developed. The purpose of this study was to adapt and pre-test a multi-measure survey designed to assess socio-demographic, attitudinal, and behavioral variables, including participation in Hawaiian language and cultural activities, attitudes toward the Hawaiian language, and attitudes toward creation of a public bilingual linguistic landscape. These measures were adapted from the “Attitudes Towards Māori Language” survey which measures attitudes toward language to identify Māori language policy targets in Aotearoa New Zealand (The Ministry of Māori Development, 2010). This adaptation occurred in three phases: 1) item modification based on a review of the literature and focus group data presented in Chapter One, 2) expert panel review of modified items, and 3) pre-testing of the survey using cognitive interviews to evaluate response error, perceptions of the items, instructions, response format, and face and content validity. Based on focus group data and a review of the literature, ten new variables were added to the survey. Modifications based on two rounds of cognitive interviews and two rounds of expert review resulted in a final survey with 44 items measuring 21 constructs. This novel survey instrument can be used to assess public attitudes toward the Hawaiian language, support for a bilingual linguistic landscape, and other related constructs.

## Introduction

Culture revitalization is important in the health promotion of indigenous peoples, such as Native Hawaiians (Puzey, 2007). Revitalizing the Hawaiian language is an integral part of that effort. The importance of the Hawaiian language to the Hawaiian culture, the Native Hawaiian community, and Native Hawaiian well-being was discussed in Chapter One and supported by data presented in Chapter Two. The Hawaiian language has been granted official status through a constitutional amendment; is being taught in state-sponsored programs; and is thriving in a popular immersion preschool program. However, promoting the Hawaiian language in greater fields of use (e.g., commerce and government) is a fundamental component of language revitalization (Fishman, 1996; Reyhner, 1999). Creating a bilingual, Hawaiian-English, linguistic landscape is one approach to promoting the use of the Hawaiian language in the mainstream society of Hawai‘i.

Bilingual linguistic landscape policies have been successfully implemented in other countries, such as Wales, Hungary, and the Czech Republic (Sloboda, 2010). Sloboda (2010) has described such policy changes based on a language management process. This process begins when there is a “deviation from a communicative expectation” (Sloboda, 2010, p. 96). The communicative expectation is the anticipation, based on beliefs or policies, of certain components of communication. Some examples include whether hospitals should provide translators for minority language speaking patients or whether airlines should provide safety information in several languages. A deviation occurs when the communicative expectation is not fully realized. There are four response stages to this perceived deviation: (1) recognize the deviation, (2) assess the deviation, (3) select or create an “adjustment design” (i.e., plan of how a communication object should look), and (4) put this adjustment design into effect. This process can stop at any stage, such as when a deviation is assessed but not recognized or assessed but lacks an adjustment design. Bilingual linguistic landscape policy is an “explicit ‘adjustment design’ that a group of social actors has arrived at and has agreed on in the course of organized language management” (Sloboda, 2010, p. 96).

In order for a bilingual linguistic landscape policy to be created in Hawai‘i, according to this model, a deviation from the communicative expectation must occur.

This deviation must then be assessed in such a way that the creation of a bilingual linguistic landscape is selected as an appropriate adjustment design, which must then be put into effect. This proposed research seeks to understand people's attitudes toward the Hawaiian language and government support of a bilingual linguistic landscape. By doing so, we will be better able to understand the communicative expectation in Hawai'i regarding the Hawaiian language and its presence in the linguistic landscape.

This policy model is exemplified by the Māori language revitalization in Aotearoa New Zealand. Judging from the Treaty of Waitangi, Māori had the 'communicative expectation' of the perpetuation and continued health of the Māori language. However, the Māori language experienced a decline due to increased presence of and emphasis on English and urbanization. In the 1970's, Māori concern about the decline in Māori language began to intensify. This suggests that people noted this decline as a 'deviation' from their expectations. As part of evaluating the deviation, research undertaken between 1973 and 1978 indicated that knowledge and use of the Māori language among the Māori population had fallen to critical levels. Māori groups and communities implemented a range of programs and activities to promote the Māori language, illustrating that this deviation was negatively assessed and that community-level 'adjustment designs' had been selected and implemented. Other adjustment designs, such as immersion preschools and Māori education in primary schools, have also been implemented. The Māori Language Strategy is an example of the explicit adjustment design described above.

The Aotearoa New Zealand cabinet agreed to Māori language policy objectives that provide focus and direction for the Māori Language Strategy; including "to foster among Māori and non-Māori positive attitudes towards, and accurate beliefs and positive values about, the Māori language so that Māori-English bilingualism becomes a valued part of Aotearoa New Zealand society" (The Ministry of Māori Development, 2010). It is out of this objective that the "Attitudes Towards Māori Language Survey" was developed to assess their progress.

The original "Attitudes Towards Māori Language Survey", conducted in 2000, was developed using previous surveys on language attitudes. It was further refined through a literature review and pilot testing. The previous surveys examined attitudes toward the role of Māori language in Aotearoa New Zealand, preferences for education in Māori, general

attitudes toward the Māori language, and the use of the Māori language (Survey of Attitudes, Values and Beliefs about the Māori Language, 2003). Based on this research, Te Puni Kōkiri, the Ministry of Māori Development, developed the framework and methods for the original “Attitudes Towards Māori Language Survey”. Each time the survey is used it is refined, most recently by 20 pretest interviews which resulted in minimal changes (Palmer & Fryer, 2009).

**Measure Support for Language Promotion.** The Aotearoa New Zealand government conducted a national “Attitudes Towards Māori Language Survey” in 2000, 2003, 2006, and 2009 with the following specific aims: to monitor attitudes, values, and beliefs toward the Māori language; to inform policies and programs for Māori language promotion; and to identify areas to serve as policy targets. The survey collects information on the six following areas: 1) participation in Māori cultural activities, 2) values toward the Māori language, 3) attitudes and beliefs about the Māori language, 4) general attitudes to the use of the Māori language, 5) attitudes toward government’s support of the Māori language, and 6) speaking and learning the language. Reported results compared the responses between Māori and non-Māori and were limited to attitudes toward the Māori language, participation in Māori cultural activities, and government support for Māori language.

The majority of the respondents to the 2009 survey reported positive attitudes toward the Māori language, though there was slightly less support among non-Māori than among Māori respondents. For example, 89% of Māori agreed or strongly agreed that it was good for Māori people to speak Māori in public places, while only 77% of non-Māori agreed or strongly agreed (The Ministry of Māori Development, 2010). Also, more Māori, compared to non-Māori, were active supporters of the language; such that, they had positive attitudes toward the language, were supportive of government involvement in language preservation, and participated in language and culture-related activities. Non-Māori were more likely to be passive supporters; reporting positive attitudes toward the Māori language but less support for government involvement and less participation in language and cultural activities. Despite the similar circumstances between Hawai‘i and Aotearoa New Zealand, no survey of attitudes toward the Hawaiian language or toward government support for the language has been conducted in Hawai‘i. Therefore, the

‘communicative expectation’ in Hawai‘i regarding the Hawaiian language in general, or the linguistic landscape in particular, remains unknown.

The purpose of this study was to adapt and pre-test a survey, originally designed for the Māori language in Aotearoa New Zealand, for use in Hawai‘i to measure socio-demographic, attitudinal and behavioral variables related to attitudes toward the Hawaiian language and support for a bilingual linguistic landscape. Given the focus of this dissertation, subscales from the “Attitudes Towards Māori Language Survey” relating to government support for, attitudes toward, and participation or interest in the Māori language were modified for the Hawai‘i context. To decrease the length of the survey, the two subscales on values toward the Māori language and speaking and learning the Māori language were excluded. The survey adaptation was done in three phases: 1) original item modification and new item generation based on a review of the literature and focus group data from the first study presented in Chapter Two, 2) expert panel review of modified items, and 3) pre-testing the questionnaire using cognitive interviews. This research developed a multi-measure survey to assess public attitudes toward the Hawaiian language and support for a bilingual linguistic landscape and newly identified related concepts, which allowed me to move to the next step of survey administration.

### **Methods**

The University of Hawai‘i Human Studies Program approved this study as exempt. Participation in this study was voluntary. Neither participant names nor identifying information was collected and, therefore, no identifying information is linked to the data. The participants in this study were adults ( $\geq 21$  years old) and not considered a vulnerable population. The “Attitudes Towards Māori Language” survey was adapted in three phases described in detail below.

#### **Phase One: Item Generation and Modification**

The “Attitudes Towards Māori Language” survey is a multi-item measure. Eight of the demographic questions, two items which assessed language skill and education, and three scales from this survey were adapted. The three scales had 29 total items: 1) ten items measuring attitudes toward the Māori language, 2) nine items measuring attitudes toward government intervention in the Māori language, and 3) ten items measuring participation in Māori cultural activities. The original demographic items and three scales

from the Māori version of the survey are shown in Appendix E. The survey questions were first modified to assess attitudes toward the “Hawaiian language”, attitudes toward government intervention in the “Hawaiian language”, and participation in “Hawaiian” cultural activities. The survey was further modified to reflect the Hawai‘i context. The Hawaiian language has a different status under Hawai‘i State law, less government involvement in its promotion, and no State sponsored, multi-level language promotion plan compared to the Māori language in Aotearoa New Zealand.

The items in the subscale assessing ‘attitudes toward government intervention in the Hawaiian language’ were modified to assess whether respondents would support government-led establishment of a bilingual linguistic landscape. The original survey asked participants to respond to statements that government intervention is “a good thing” or that the government “should” support Māori language in a variety of ways. These items did not make the expenditure of additional government funds overt. Items were added to capture this outlay of funds (e.g., the Government should spend tax money on creating bilingual road, street, and building signs). Instructions to the survey were also modified in this phase.

Additional item modification and generation was determined by a review of the literature. The local publications of ‘Ōiwi, a journal dedicated to the thoughts and works of Native Hawaiians, and Hūlili, a multidisciplinary research journal which focuses on Native Hawaiians, were searched using the terms: Hawaiian language, Hawaiian culture, Hawaiian language programs, Hawaiian language news/TV/radio, and Hawaiian cultural practices. This search was done to determine which language and cultural practices are still in common use to inform the modification of the ‘participation in Hawaiian cultural activities’ scale.

Psycinfo was searched using the follow terms “English-only” and “English-only movement” to identify articles for review to identify possible factors associated with support for or opposition to a bilingual linguistic landscape. The search was limited to research conducted in the US. While none of the empirical literature found had occurred in Hawai‘i, there are possible parallels between those who would support the English-only movement and those who might oppose a bilingual linguistic landscape in Hawai‘i. For instance, Barker (2002) found that White Americans’ support for English-only

education was negatively associated with a perceived increase in the size and influence of the Latino ethno-cultural group relative to the perceived size and influence of the Caucasian ethno-cultural group. This suggests that an item assessing perceived White American and Native Hawaiian group vitality may warrant inclusion and serve as either a support for or a barrier to a bilingual linguistic landscape in Hawai‘i.

Additionally, focus group data from study one was used for item generation or modification. The data were reviewed to suggest the inclusion of a question regarding the perceived relationship between health and well-being and a Hawaiian-English linguistic landscape. These data were further scrutinized to identify constructs possibly associated with support for government promotion of a bilingual linguistic landscape that are not already proposed. Novel survey items were developed to measure constructs that emerged from the focus groups were mentioned in at least three of the four focus groups and perceived by the PI to have a possible association with support for a bilingual linguistic landscape. The subthemes used for focus group data categorization were examined for guidance on modifying survey items relating to participation in Hawaiian culture and language, government promotion of Hawaiian language, and attitudes toward the Hawaiian language.

### **Phase Two: Expert Review**

The modified multi-measure survey was reviewed by six experts. Three of these individuals were selected based on their involvement in the Hawaiian community, such that they have familiarity with the cultural activities listed in the scale assessing participation in the Hawaiian culture. These experts were asked to evaluate the instructions and each survey item based on their knowledge of Hawaiian language and culture and to assess the items' general understandability and appropriateness. The other three individuals were experts in survey development with at least 5 years of experience in the field. They were asked to evaluate the items for clarity, understandability, and appropriateness of response options and to ensure questions avoided common errors (e.g., double-barreled questions or double negatives). The author provided each expert with an electronic copy of the survey and a description of its purpose. The experts individually reviewed the survey and suggested any new items or item modification. The survey was modified accordingly.

### **Phase Three: Cognitive Interviewing Pre-Test**

The final phase involved pre-testing the survey using cognitive interviews to evaluate response error, understandability of the survey items, instructions, response format, and face and content validity (Twiss, McKenna, Crawford, Tammaru, & Oprandi, 2011). Sixteen adult ( $\geq 18$  years old) residents of Hawai'i, in two independent, purposive samples of eight, were selected to participate. Each sample of eight contained two Native Hawaiians, two Filipinos, two Japanese, and two Caucasians to reflect the four major ethnic groups in Hawai'i. Sampling from these four major ethnic groups in Hawai'i has been used in published studies (Kaholokula, Braun, Kana'iaupuni, Grandinetti, & Chang, 2006) and reflects the sample used in the study presented in Chapter Four. In order to ensure that the modified survey items were interpreted the same way by respondents of both genders and all ages, the total sample of 16 adults included one older (i.e., born in or before 1953) and one younger (i.e., born after 1953) male and one older (i.e., born in or before 1953) and one younger (i.e., born after 1953) female from each ethnicity. The age of 60 was selected as the demarcation between old and young to distinguish between those individuals who were young adults (i.e.,  $\geq 25$  years of age) in 1978 at the time of the Constitutional Convention and during the Hawaiian Renaissance and those who were not. It is thought that individuals who were adults at the time of the convention and during the Hawaiian Renaissance may interpret the questions related to Hawaiian culture and language differently than those who were children or not yet born. Each sample contained two individuals from each ethnic group, one male and one female, one of which was  $\geq 60$  years old while the other was  $< 60$  years old. Individual interviews were conducted by the principle investigator (PI) and were approximately one hour in length.

There are currently no widely accepted standards in determining sample size for pretesting surveys via cognitive interviews. Blair and Conrad (2011) suggest larger (i.e.,  $\geq 35$ ) sample sizes are necessary to avoid at least 80% of serious problems in the survey (i.e., producing an incorrect answer) if those problems are rare. They recommend using various methods to pretest a survey and that iterative samples be used when using smaller sample sizes with cognitive interviews (Blair & Conrad, 2011). In this study, the multi-measure survey used was primarily based on a previously developed survey and modified with the input of experts helping to identify serious problems prior to the cognitive

interviews. Additionally, an iterative design was used such that interviews were conducted in a series of two small, independent samples of eight. The survey was amended using the results from the first sample, increasing the likelihood of problem identification (Blair & Conrad, 2011).

Cognitive interviewing focuses on the cognitive processes respondents employ in answering survey questions (Willis, 1999). Tourangeau’s model (1984) was used to guide the interviews. An adaptation of this model and the cognitive processes involved are shown in Table 7.

Table 7. *Tourangeau’s Model of Cognitive Interviewing*

<b>Cognitive Process</b>	<b>Definition</b>
Comprehension of the Question	<ul style="list-style-type: none"> <li>• What the respondent thinks the question is asking</li> <li>• What specific words in the question mean to the respondent</li> </ul>
Retrieval from Memory of Relevant Information	<ul style="list-style-type: none"> <li>• The type of information the respondent needs to remember to answer this question</li> <li>• The strategy used to remember the information</li> </ul>
Decision Processes	<ul style="list-style-type: none"> <li>• The amount of mental energy required to answer the question thoughtfully and accurately</li> </ul>
Response Processes	<ul style="list-style-type: none"> <li>• The concordance between the respondent’s answer and the answer categories provided.</li> </ul>

Verbal probing was used to elicit more specific information. The interviewer read the survey question, and the respondent provided an answer. This was followed by the interviewer asking for more information related to the survey question, the answer provided, or the answering process to better understand the basis for the respondent’s answer. The use of verbal probes by the interviewer places the interview burden on the interviewer rather than the respondent, as “talk aloud” technique does. Verbal probing also helps to avoid irrelevant or non-productive discussion that can occur in the “talk aloud” method of cognitive interviewing (Willis, 1999). Concurrent probing was used in which after the interviewer asks the respondent a single survey item, the respondent answers, and the interviewer asks probing questions relevant to the initial question or answer.

The six types of probes used are outlined in Table 8 (Willis, 1999), with examples from this study. A combination of all six probes was used. However, based on the structure and topic areas of this survey, the majority of the probes used were

comprehension, specific, paraphrasing, and general. Probes utilized unbiased language to prevent response bias. Both scripted and spontaneous probes were used. The use of scripted probes aids in the standardization of the interviews, while the use of spontaneous probes allows for the better understanding of unexpected answers and concerns (Willis, 1999). The interviewer also noted any non-verbal cues (e.g., shifting, confused looks) to help identify when spontaneous probes were appropriate.

Table 8. *Types of Probes for Cognitive Interviewing*

<b>Probe Type</b>	<b>Example</b>
Comprehension/ Interpretation probe	What does the term “cultural activity” mean to you? What does it mean for “all Hawaiians to be able to speak some Hawaiian”?
Paraphrasing Confidence judgment	Can you repeat the question I just asked in your own words? How sure are you that Native Hawaiians have most of the economic and business control in Hawai‘i?
Recall probe	How do you remember that you attended Hawaiian cultural groups very often?
Specific probe	Why do you think (or not think) public signage should be bilingual, in Hawaiian and English?
General probes	How did you arrive at that answer? Was that easy or hard to answer? I noticed that you hesitated - tell me what you were thinking.

During the interviews, the PI took notes on the respondents’ answers. After the first eight interviews were completed, the PI summarized the findings from each interview on a question-by-question basis to highlight specific problems with survey items and suggest strategies to rectify the problems. The PI then modified the survey according to these suggestions and repeated this process with the second sample of eight participants. The findings from these second eight interviews were summarized by item to identify specific problems and suggest strategies to rectify the problems.

To streamline the survey and shorten it to the proposed administration time of fifteen minutes, the PI and her Chair met to discuss the survey item by item. This discussion included the notes from each round of cognitive interviews, data from the focus groups, and research found in the literature review. Each item was assessed for clarity, importance to measuring the construct, and each construct was assessed for relevance to the research. The aim of this discussion was to shorten the survey and to

ensure each construct was relevant to, and hypothetically associated with, the outcome variable of support for a bilingual linguistic landscape.

## Results

### Phase One Results

**New Item Generation.** To supplement the focus group data in survey construct generation, a literature search was done in the local publications of Hūlili and ‘Ōiwi for articles mentioning language and health. Seven articles were found in those publications, with an additional two found from reviewing the literature cited by the first seven articles. The broader empirical literature base was also searched for articles related to English-only policies. This search yielded an additional seven articles. Of these 16 articles, 14 were deemed relevant to the current study. Together, the focus group analysis and literature review resulted in the suggested inclusion of 10 new survey constructs. Appendix F shows the version of the survey after phase 1 with a total of 24 constructs; 10 new constructs, eight demographic items, two Hawaiian language education and skill items, and one item assessing attitudes toward bilingualism, which was added to the survey during the dissertation proposal process. Following is the explanation for the inclusion and description of the 10 new constructs. Additionally, these constructs and their response options are presented in Table 9.

***Ethno-Linguistic group relative vitality.*** Power relations in society are often borne out in the relative statuses of the languages in that society. In Hawai‘i, English dominates Hawaiian via an elevated status, much wider use, and as “a factor in upward mobility” (Ho‘omanawanui, 2008). Language plays an important role in the reproduction of belief systems and the preservation of “social relations” (Cram, McCreanor, Smith, Nairn, & Johnstone, 2006). The English-only movement in the U.S. can be viewed as a strategy by the language majority to maintain the current power structure of society. In today’s society, language has become “a focal point for dissent when dominant groups feel a sense of insecurity due to the perceived increase in the vitality of other ethnic and social groups” (Barker & Giles, 2002). Ethno-linguistic group vitality is defined as the proportion and distribution of one’s ethnic group, and their control of the political, educational and media arenas (Barker et al., 2001). Relative group vitality (i.e., one group’s control of financial, economic, business, and political resources compared to that

of another) between Whites and Latinos has been shown to be negatively associated with support for English-only policies (Barker et al., 2001). Similar relationships may exist between the relative group vitality of ethnic group in Hawai‘i and a support for a bilingual linguistic landscape.

Table 9. *New Constructs from Literature and Focus Group Data*

<b>New Independent Variables</b>	<b>Response Options</b>
Ethno-linguistic group relative vitality	8 items, two sets of 4 items: None of the Resource (1) to All of the Resource (5); composite score for each set 4 to 20; relative score = own group vitality/Native Hawaiian Vitality or dominant group vitality/Native Hawaiian vitality
Hawaiian in the linguistic landscape	1-5 (1 indicates few to no signs in Hawaiian, 5 indicates all signs in Hawaiian)
Hawaiian language as a rejection of American culture	Strongly Disagree (1) to Strongly Agree (5)
Collective esteem and language group identity	4 items: Strongly Disagree (1) to Strongly Agree (5); composite score 4 to 20, higher scores indicate greater linguistic group identity
American Identity	Not American at all (1) to completely American (5)
Link between language and health	2 items: Strongly Disagree (1) to Strongly Agree (5); composite score 2 to 10, higher scores indicate greater belief in a connection
Importance of indigeneity of the Hawaiian language	Strongly Disagree (1) to Strongly Agree (5)
Political Efficacy	2 items: Strongly Disagree (1) to Strongly Agree (5); composite score 2 to 10, higher scores indicate greater political efficacy
Preservation of Hawaiian culture via language promotion	Strongly Disagree (1) to Strongly Agree (5)
Perceived impact of bilingual linguistic landscape	4 items: Strongly Disagree (1) to Strongly Agree (5); composite score 4 to 20, higher scores indicate greater belief impact of BLL

The Hawaiian renaissance may have prompted a sense of insecurity in the dominant ethnic groups in Hawai‘i due to a change in the perceived vitality of Hawaiians. Therefore, items to measure perceived ethno-linguistic group vitality were added to the survey. Respondents were asked four questions relating to the perceived control of economic resources, political resources, power, and wealth possessed by Native Hawaiians and the same four questions regarding their own ethnic groups. If the

respondent was Native Hawaiian, the second set of questions was asked in regards to the ethnic group he or she identified as most dominant in Hawai‘i. The responses were on a five point scale ranging from all of the control (5) to none of the control (1). These items were summed up to create a measure of perceived Native Hawaiian group vitality and perceived own group vitality. These scores were then compared to provide a measure of relative group vitality (Barker & Giles, 2004; Bourhis, Giles, & Rosenthal, 1981). Lower relative group vitality scores indicate that one’s ethnic group is perceived to have a lower vitality relative to Native Hawaiians, or to the dominant ethnic group if the respondent was Native Hawaiian.

***Hawaiian in the linguistic landscape.*** Barker, et al. (2001) found a negative association between support for English-only policies and amount of Spanish language perceived in the linguistic landscape, such that those who perceived there to be more Spanish in the linguistic landscape were more supportive of English-only policies. Applying these findings to the present study, the perceived amount of Hawaiian in the linguistic landscape may be positively correlated with support for a bilingual linguistic landscape. Thus an item to measure the perceived amount of Hawaiian in the linguistic landscape was added to the survey. Respondents were instructed to consider public signs of all kinds and disregard commercial signs when responding to the question, “What percentage of the signs that you see regularly are in Hawaiian?” Response options ranged from “zero to 19%” (1) to “80% to 100%” (5).

***Hawaiian language as a rejection of American culture.*** Another possible construct related to support for English-only policies that was identified by Barker, et al (2001) was the belief that Latinos’ efforts to maintain their language was a rejection of the English language and American cultural values. It is possible that support for a bilingual linguistic landscape in Hawai‘i might be negatively associated with the belief that learning/speaking Hawaiian is a means of rejecting American cultural values. An item to measure this belief was added to the survey. Respondents were asked to rate their agreement with the statement “People learn or speak their native language as a way of rejecting the American culture” on a scale from strongly disagree (1) to strongly agree (5).

***Language group identity and collective esteem.*** Related to the vitality theory, Barker and Giles (2002) found an association between high language group identity, as measured by a collective esteem scale, and support for English-only policies. Among White Americans a high language group identity was correlated with greater support for English-only policies (Barker & Giles, 2002). The use of this scale is supported by information gathered through the focus groups. Participants believed that learning Hawaiian could improve one's pride and self-esteem so that they will no longer be ashamed of their identity. Thus, the same measure of linguistic and group identity, modified to assess self-esteem in relation to affiliation with one's native language, was included in the present study. The scale is an amended collective esteem scale (Luhtanen & Crocker, 1992) comprised of four items assessing group-belonging and commitment to language. Respondents were asked to rate their agreement with each statement on a Likert scale from strongly disagree (1) to strongly agree (5), with one item reverse scored. Statements included "My native language is an important reflection of who I am" and "I often regret that I belong to a group that speaks my native language" (Barker & Giles, 2002). Scores range from 4 to 20, with higher scores indicating greater linguistic group identity.

***American identity.*** Barker and Giles (2002) also examined the relationship between American identity and support for English-only policies. They found that support for English-only policies is positively associated with American identity, such that those respondents who reported feeling 'completely American' were significantly more likely to endorse English-only policies than those who reported feeling 'not American at all.' Frensdreis and Tatalovich (1997) also found that support for English-only policies was positively related to national identity. Therefore it is possible that national identity, or how American one feels, may be negatively related to support for a bilingual linguistic landscape in Hawai'i. An item assessing national identity was added to the survey. It asked respondents to rate how American they feel, from not American at all (1) to completely American (5).

***Link between language and health.*** Native Hawaiian and other indigenous scholars have written about the connection between native language and health. Native Hawaiian health and wellness have been affected by the "loss of land, traditional

knowledge, language, and culture” (Trinidad, 2011, p. 190). Mental health experts advocate that effective services for Native Hawaiians should include Hawaiian cultural traditions, such as language (Carlton et al., 2011). This inclusion would help to maintain and improve well-being, self-worth, connectedness, and self-efficacy; thereby improving the patient’s “emotional, physical, mental/intellectual, social, and spiritual well-being”(Carlton, 2011, p. 167). Indigenous elders believe that language revitalization is inextricably related to health (Brown, McPherson, Peterson, Newman, & Cranmer, 2012). In addition to preserving cultural identity, speaking one’s native language can help increase self-esteem and serve as a protective factor against a variety of social and economic stressors (Brown et al., 2012, p. 53). In a qualitative study by Dana-Sacco (2012), Wabanaki participants, the native people of north-eastern North America, said that hearing or speaking their native language brought them joy and that Wabanaki people must speak their native language in order to be healthy (Dana-Sacco, 2012).

This sentiment was echoed in the focus groups described in Chapter two. Participants believed that revitalizing the Hawaiian language would improve both the mental and physical health of Native Hawaiians. Therefore, two items were added in order to assess respondents’ beliefs regarding the association between learning one’s native language and health. Respondents were asked to rate their agreement to the statements “learning and/or speaking one’s native language benefits one’s health” and “revitalizing the Hawaiian language will improve Native Hawaiian health and well-being.” Responses range from strongly disagree (1) to strongly agree (5), with scores ranging from 2 to 10, higher scores indicating greater endorsement of the statement.

***Importance of indigeneity of the Hawaiian language.*** Participants of the focus groups mentioned that Hawaiian is the indigenous language of Hawai‘i and, therefore, should have a special status in the state. As the “host culture it should be very important. It should be more than just street names and statues in Waikīkī.” Additionally, participants also discussed the possibility of local Japanese, Filipinos, or other ethnic group opposing a Hawaiian/English bilingual linguistic landscape because their native language would not be included. An item was added to assess the belief that the Hawaiian language, as the indigenous language of Hawai‘i, has a special status relative to other languages spoken in the state. Respondents were asked to rate their agreement with the

statement “Hawaiian language is the indigenous language of Hawai‘i and is, therefore, more important to promote than other languages spoken in the state, such as Japanese or Korean.” Responses range from 1 (strongly disagree) to 5 (strongly agree).

***Political efficacy.*** Several participants from the focus groups described a lack of faith in the government’s ability to protect their interests. One participant stated that the “government prevents Hawaiian people from moving forward, from growing.” This is not surprising based on the past relationship between Native Hawaiians and the US government, nor is it surprising in the current political context. However, attitudes toward the Hawai‘i State government may yield moderate support for a bilingual linguistic landscape, such that those who have negative attitudes toward the government might not support bilingual linguistic landscape policies due to a belief that the government is ineffective rather than disagreement with the policies themselves. Therefore, two items to assess respondents’ political efficacy (i.e., the belief that the government is responsive to their needs) were added. Respondents were asked to rate their agreement with the statements: “The Hawai‘i State government does a good job of protecting the interests of people like you” and “The Hawai‘i State government does a good job of protecting the interests of Hawai‘i residents.” Responses range from strongly disagree (1) to strongly agree (5). Scores range from 2 to 10, with higher scores indicating greater political efficacy.

***Link between the Hawaiian language and culture.*** Promoting the Hawaiian language was described in the literature as a means by which Native Hawaiians perpetuate their culture. The current laws of the State of Hawai‘i afford Native Hawaiians the ability to maintain their cultural traditions (Lucas, 2004). It is through this cultural perpetuation that Native Hawaiians are able “to maintain their own identity and self-respect as indigenous people and thus further their well-being in today’s society” (Lucas, 2004, p. 198). Many Native Hawaiian organizations promote the use of traditional Hawaiian values and practices, including language, with the belief that perpetuating the culture will better enable Native Hawaiians “to overcome socioeconomic disparities” (Serna, 2006, p. 145). All of the participants from the focus groups mentioned that language and culture are inextricably linked. One participant stated, “I think they [culture and language] have to go hand in hand. I don’t think you can just teach the language.”

Another said, “I think it’s kinda superficial for us just to say language. Because I think that language, learning the language you’re actually, you know, diving into the whole culture.” Thus, an item to assess the belief that language revitalization preserves Hawaiian culture was added to the survey. Respondents were asked to rate their agreement with the following statement, “People learn or speak their native language in order to perpetuate their native culture.” Responses are on a 5-point Likert scale from strongly disagree (1) to strongly agree (5).

***Perceived impact of a bilingual linguistic landscape.*** Data from the focus groups and the literature on linguistic landscape support the idea that the linguistic landscape of an area confers status and value to the featured language. Participants believed that creating a bilingual linguistic landscape would improve the value and status of the Hawaiian language in mainstream society in Hawai‘i. This view is supported by the literature. Elderman (2010) writes that “the symbolic function implies that the presence of one’s own language on signs can contribute to the feeling that this language has value and status within the sociolinguistic setting.” Therefore, four items were added to measure beliefs regarding the potential positive impact of a bilingual linguistic landscape in Hawai‘i. Respondents were asked to rate their agreement with the statements, “Bilingual signs would improve the status of the Hawaiian language,” “Bilingual signs would improve the value of the Hawaiian language,” “Bilingual signs would improve the social status of Native Hawaiians,” and “Bilingual signs would improve the value of Native Hawaiians”. Responses range from strongly disagree (1) to strongly agree (5), with scores ranging from 4 to 20. Higher scores indicate greater belief in the positive impact of a bilingual linguistic landscape.

**Item modification.** The focus group data were also examined to inform modifications of the Attitudes Toward the Hawaiian Language survey items regarding participation in the Hawaiian culture and language, support for a bilingual linguistic landscape, and attitudes toward the Hawaiian language. While these data were very informative in new item generation, they did not prove useful in suggesting modifications to original survey items. They did, however, support the inclusion of these items. For instance, in the attitudes toward the Hawaiian language scale, respondents are asked to rate their agreement with the statement, “Well-spoken Hawaiian is a beautiful thing to

hear.” Participants in each of the focus groups mentioned their enjoyment of hearing Hawaiian spoken.

Due to the inclusion of ten new constructs, the scales assessing attitudes toward the Hawaiian language and participation in Hawaiian cultural activities were shortened from nine to six items and from ten to seven items, respectively. The outcome variable, support for a bilingual linguistic landscape was based on the original nine-item measure, of attitudes toward government intervention in the Māori language. To better assess support for a bilingual linguistic landscape, the number of items decreased from nine to four and the items were changed to focus specifically on a bilingual linguistic landscape.

### **Phase Two Results**

The expert panel of reviewers identified 43 items or instructions that would be problematic. Ten changes to the instructions were identified. These changes were simple in nature and were recommended to make the survey more understandable or more pleasant sounding. An example of a change to improve understandability was the addition of the statement “By American, I mean whatever ‘feeling American’ means to you” to an item asking participants how American they feel. An example of a change to improve the politeness of the survey includes changing “Thank you for your time, but for this particular survey we are collecting information from the four predominant ethnic groups in Hawai‘i” to “Thank you, but we are trying to get equal numbers for each group in Hawai‘i.”

Fourteen items were identified as needing to be reworded. An additional eight items were reworded, identified as being potentially problematic, and marked for further scrutiny during the next phase. One of the items reworded was “Well-spoken Hawaiian is a beautiful thing to listen to.” This was changed to “Hawaiian is a beautiful thing to hear” due to doubts about respondents’ ability to discern what was well-spoken versus poorly spoken Hawaiian. Another example was the inclusion of the names of a Hawaiian cultural magazine and newsletter to improve the specificity of the item. The new item read, “How often do you read or browse Hawaiian cultural magazines or newsletters, such as Ka Wai Ola or MANA magazine?” The additional eight items that were reworded and marked for scrutiny during the cognitive interview phase included seven items that were double barreled in nature. These included, asking about people speaking Hawaiian

at home or in cultural settings, accessing websites about the Hawaiian language or culture, and visiting Native Hawaiian art, culture, or historical exhibits. For these items, it would be difficult to know to which part of the item they are responding. Additionally, respondents might not know how to answer if their responses differ depending on the section of the statement they are considering.

Seven individual items were identified as problematic due to typos, which were corrected. Finally, this phase also identified four items for further scrutiny during the next phase. These included, “How American do you feel?” and “How much power do Native Hawaiians have?” The expert reviewers were concerned that the respondents might not understand or know the answer to the questions. These items were validated by previous research. To preserve their integrity, no changes were made but, because they were thought to be problematic by the expert reviewers, these items were also marked for further consideration.

### **Phase Three Results**

Two rounds of cognitive interviews were conducted, each with an independent, purposive sample of 8 adult residents of the island of O‘ahu. The age category, gender, and ethnicity of the two samples are shown in Table 10.

*Table 10. Cognitive Interviewees’ Ethnic, Gender and Age Breakdown by Sample*

<u>Sample 1</u>			
Interviewee 1	Female	Japanese	Younger
Interviewee 2	Female	White	Younger
Interviewee 3	Male	Native Hawaiian	Younger
Interviewee 4	Male	Filipino	Younger
Interviewee 5	Female	Native Hawaiian	Older
Interviewee 6	Female	Filipino	Older
Interviewee 7	Male	White	Older
Interviewee 8	Male	Japanese	Older
<u>Sample 2</u>			
Interviewee 1	Female	Filipino	Younger
Interviewee 2	Female	Native Hawaiian	Younger
Interviewee 3	Male	Japanese	Younger
Interviewee 4	Male	White	Younger
Interviewee 5	Female	White	Older
Interviewee 6	Female	Japanese	Older
Interviewee 7	Male	Native Hawaiian	Older
Interviewee 8	Male	Filipino	Older

**Cognitive interviews: Sample one.** The first draft of the survey was comprised of 55 items measuring 24 constructs. The ten social demographic items (i.e., age, zip code, gender, ethnic identity, employment status, Hawaiian language instruction, subjective social status, Hawaiian language ability, education, and length of residency) were well understood by interviewees. Of the other 45 items, 22 items were identified as problematic, meaning that at least one interviewee misinterpreted or was confused by the item. The notes summarizing the issues identified by the first round interviews are presented in Appendix G.

Twelve of the problematic items were considered difficult to understand or confusing. These items were corrected by minor rewording. Examples include changes in the items assessing political efficacy. The original wording was “The Hawai‘i State government does a good job of protecting the interests of people in my ethnic group.” Several respondents were unsure what “protecting the interests” meant so this statement was changed to “representing the interests.” Another example is specifying “Hawaiian language” in the item that previously asked about perpetuating a native culture by promoting a native language. This was done to ensure that respondents considered only the Hawaiian language when responding to this item as several of the interviewees defined “native language” as one’s first language, thereby significantly altering the meaning of this item.

Four of the problematic items were open to a variety of interpretations and therefore required significant rewording. For instance, when asked how often respondents listened to Hawaiian radio many responded “often” or “very often.” However, after probing their responses, it was found that the respondents were including Hawaiian music radio stations as well as Hawaiian language radio shows. This item was changed to explicitly include only Hawaiian language radio shows. Another example of a significantly reworded item is, “It is not right that Native Hawaiians speak Hawaiian in front of people who might not understand what they are saying.” Several of the respondents interpreted this statement as a group of people interacting, some of whom were speaking Hawaiian while the others in their group did not understand. Others interpreted it as though several people were speaking Hawaiian in public and people, outside the Hawaiian speaking group, did not understand. The level of agreement with

this statement depended on which way they interpreted it. This item was changed to better reflect the second of the two interpretations.

Three items were removed. The first item removed assessed agreement with the statement, “Bilingual signs would increase the value of the Native Hawaiians.” One of the Native Hawaiian respondents found this item to be offensive. The second item removed measured agreement with the statement, “The State government should record how well the Hawaiian language is doing.” This item was confusing and not relevant to the outcome variable. The third item removed was in the attitudes toward the Hawaiian language scale, which assessed agreement with the statement, “People should limit the Hawaiian they speak in public to greetings.”

Other modifications to the survey included rephrasing of one item to make it less judgmental and two items to improve the ease of interpretation. Six modifications were made to the instructions to make the questions easier to understand and answer and to help transition from one section of the survey to the next. One of the demographic questions was moved to the end of the survey to help with flow as well. One of the items in the interest in the Hawaiian language and culture scale was consistently misinterpreted by the respondents. Respondents equated “participate in ceremonies or events” to “attend ceremonies or events.” This item was difficult to concisely reword so that respondents would only consider their active participation in ceremonies or events when responding to this item. Additionally, all of the respondents interpreted this item in the same way. Thus, rather than being removed, this item was marked for further consideration during the second round of interviews.

Two new items were added. One item was added to evaluate support for Hawaiian organizations funding bilingual signs. This was in response to several interviewees who were moderately supportive of the government funding bilingual signs but, after probing their reasoning, expressed the belief that Hawaiian organization should help to fund bilingual signs. The second item was added to test an alternate phrasing of an item to assess support for government implementation of bilingual signs; “the government should help to make and install bilingual signs.” The four items measuring language group identity and collective esteem were deemed only relevant for Native Hawaiian

respondents. Thus these items were administered only to Native Hawaiian respondents in the second round of cognitive interviews.

**Cognitive interviews: Sample two.** After the modifications from the first round of cognitive interviews, the survey contained 54 items. All of the demographic items continued to be well understood and remained unchanged. A summary of the notes from the second round of cognitive interviews can be found in Appendix H.

Twenty four items were labelled as problematic. Sixteen of these items contained small problems of clarity, which were satisfactorily addressed through minor rewording. These changes can be characterized as “fine tuning” the survey, while the changes from the first round were more substantial. These corrections included simplifying questions by limiting the context to which a statement might refer and correcting grammatical errors. Three items were removed for either unresolvable confusion or redundancy. The two confusing items that were removed asked about the social power controlled by various ethnic groups. Interviewees found the term “social power” difficult to define making a response to these items difficult. Changing the terminology to “social influence” did not alleviate this confusion. The third item was dropped because it was redundant; “the government should help to make and install bilingual signs” was dropped while “the government should fund bilingual signs” was retained.

Five of the problematic items were marked for further consideration in the final phase of survey modification. These items included: 1) “It’s a good thing that Native Hawaiian people speak Hawaiian at home and in cultural settings,” 2) “How often do you participate in ceremonies or events with Hawaiian welcomes and speeches?,” 3) “How often do you participate in Hawaiian cultural activities?,” 4) “Bilingual signs would increase the value of the Hawaiian language,” and 5) “What percent [of signs] are in Hawaiian?”

Other minor changes to the survey included the following. One item was added to the survey to help improve clarity and reduce the burden on the respondent. This new item asks Native Hawaiian respondents to name the most dominant ethnic group in Hawai‘i. Their answers were used in the questions on vitality, rather than continually referring to “the most dominant ethnic group.” The order of the items and some of the instructions were changed to improve understandability and flow. The response options

for assessing American identity were changed to ask respondents, “Rate how American you feel on a scale from one to five, with one being not American at all to five being completely American.”

**Final review.** After the modifications from the second round of interviews, the survey contained 52 items. To further refine the survey, shorten it for ease of administration, and decrease survey burden, the PI and her Chair reviewed the survey, item by item. This resulted in 17 changes; including rewording, removing, and adding items and rewording instructions. The final version of the survey, see Appendix I, has 44 items, measuring 21 constructs, and is described in detail in Chapter Four.

Two items were reworded to lessen the possibility for alternate interpretations and better measure the behavior or construct of interest. This included changing an item about frequency of listening to Hawaiian radio to frequency of listening to “radio talk shows in the Hawaiian language or about the Hawaiian culture.” The second item was shortened to ask about the importance of perpetuating the Hawaiian language as the indigenous language of Hawai‘i without reference to other languages spoken in Hawai‘i.

Nine items were eliminated from the final version of the survey. Two of these items were eliminated were deemed unnecessary after the addition of similar items. These included level of agreement with Hawaiian organizations funding bilingual signs and learning Hawaiian to perpetuate the Hawaiian culture. Five of the items were eliminated because of continued confusion, including regret for belonging to the group that speaks Hawaiian, belief that learning Hawaiian improves one’s health, two items on political efficacy, and frequency of participation in Hawaiian ceremonies or events. An item to assess respondents’ views on bilingualism was eliminated due to a perceived lack of variability in the sample population. Additionally, the open ended question at the end of the original survey which provided respondents with an opportunity to ask questions was eliminated. One additional item was created to measure endorsement of the belief that bilingual signs will increase interest in the Hawaiian language. This item is supported by focus group data presented in Chapter Two.

Five additional changes were made to the instructions. Some of these changes reflected other modifications in the survey instrument. For instance, one change was to reflect the new number of items in a particular section. Other changes to the instructions

included those for the items regarding signs. When asked about the amount of Hawaiian present on signs and support for a bilingual linguistic landscape, respondents were instructed to disregard street and place names

### **Discussion**

Focus group data from the qualitative study presented in Chapter Two and a review of the literature on English-only policies and Hawaiian culture supported the inclusion of ten new items or constructs: 1) perceived impact of a bilingual linguistic landscape, 2) indigeneity of the Hawaiian language, 3) political efficacy, 4) link between language and health, 5) preservation of Hawaiian culture via language promotion, 6) relative perceived ethno-linguistic group vitality, 7) amount of Hawaiian in the linguistic landscape, 8) learning/speaking the Hawaiian language as a rejection of American culture, 9) collective esteem and language group identity, and 10) American identity.

Phases two and three identified and addressed a variety of problematic survey items and instructions via expert review and cognitive interviews. Several of the problematic items identified in early rounds of modifications were left unchanged but were marked for further scrutiny in the next round. These items invariably remained problematic. This continued occurrence of problems with difficult items left unaddressed is supported by previous research and improves our confidences that those items identified as problematic are truly difficult in nature (Blair et al. 2007; Fowler 2004; Willis and Schechter 1997). The types of problems that occurred were mostly semantic in nature with the respondents' interpretations varying from what was intended. Many of these misinterpretations were fixed through rewording; however, several of the problematic items continued to be misinterpreted after modification and were removed from the final version of the survey.

**Limitations.** There is a lack of empirical literature on factors that contribute to support or opposition to bilingual linguistic landscapes. The identification of five additional constructs for measurement was based on empirical literature studying English-only policies. While these constructs were found to be associated with English-only policies, it is unknown if these constructs will be associated with support for a bilingual linguistic landscape. Not only is the outcome variable different, but the setting (i.e., continental U.S. verse Hawai'i) and respondents (i.e., Whites and Latinos verses

Whites, Native Hawaiians, Japanese, and Filipinos) are also very different. However, the purpose of the study presented in this chapter is to identify key constructs that might be related to support for a bilingual linguistic landscape; thus, the inclusion of new constructs is warranted. Additionally, the final version of the Attitudes Toward the Hawaiian Language survey retained all of the new constructs except for political efficacy. This increased confidence that the new measures are appropriate and accessible.

An additional constraint of this study is the limited number of cognitive interviews that were conducted. While there is no rubric for setting the sample size for cognitive interviews, larger sample sizes identify greater numbers of problematic items. To address this limitation, this study used expert review in conjunction with two rounds of cognitive interviews resulting in a total of four rounds of modifications. This iterative design ensures the identification and resolution of major problems and that the final survey is well understood, focused, and sufficiently adapted for the Hawai‘i context.

**Implications.** The Hawaiian cultural renaissance, which started in the 1970’s, is a testament to the importance of Hawaiian culture, including Hawaiian language, to Native Hawaiians. Since then, Hawaiian immersion pre-schools and K-12 programs, Hawaiian language programs at the University of Hawai‘i, and Hawaiian language classes in the public school system have increased the number of Hawaiian language speakers. State constitutional amendments supportive of Hawaiian culture and language were adopted during this time as well, including the Official Languages Amendments granting Hawaiian official status. Despite this official status and these language programs, the Hawaiian language is still classified as a heritage language and dwells mainly in homes and schools. True language revitalization will necessitate elevating the status of the Hawaiian language and moving it into mainstream society (i.e., businesses, government, community). Creating a bilingual linguistic landscape is one method of promoting Hawaiian language status and increasing its mainstream visibility. An important step in this process is to accurately gauge public sentiment toward the Hawaiian language and support of government intervention in language promotion efforts. This research provides a tool for facilitating this end. A tool that was informed by focus group data, a review of existing literature, cognitive interviews, and expert panel review, increasing the confidence placed in this modified tool. The creation of a tool for the Hawaiian context

allowed the research to progress to the study presented in Chapter Four; and allowed survey administration to collect data which describes the attitudes of Hawai'i residents toward the Hawaiian language and the creation of a bilingual linguistic landscape and determines which socio-demographic, attitudinal, and behavioral variables best explain support for a bilingual linguistic landscape.

## **CHAPTER 4. ATTITUDES TOWARD THE HAWAIIAN LANGUAGE AND SUPPORT FOR A BILINGUAL LINGUISTIC LANDSCAPE**

### **Abstract**

Chapter Four presents methods and findings from a study that examined attitudes toward the Hawaiian language and support for the creation of a bilingual linguistic landscape in Hawai‘i. For the purpose of this research, linguistic landscape was defined as the language of state government-produced road signs, billboards, street names, place names, instructional signs, and signs on/in government buildings. This is a quantitative descriptive study based on random digit dialing and computer-assisted telephone interviews to administer the adapted “Attitudes Toward the Hawaiian Language” survey to a random sample of 260 adult residents of Hawai‘i that included 65 Native Hawaiians, 65 Caucasians, 65 Filipinos, and 65 Japanese. Regression analysis was conducted to determine which variables are significantly associated with attitudes toward government support for the Hawaiian language. The results indicate that Hawai‘i residents have positive attitudes toward the Hawaiian language and support Hawaiian-English public signage. Native Hawaiians report higher levels of support for a bilingual linguistic landscape, more positive attitudes toward the Hawaiian language, and more frequent interest and participation in the Hawaiian language and culture compared to the other ethnic groups. Younger respondents report more support for a bilingual linguistic landscape. However, after accounting for the attitudinal/behavioral variables of ‘the impact of bilingual signs on Native Hawaiian health,’ ‘impact of bilingual signs on the Hawaiian language,’ and ‘importance of perpetuating the Hawaiian language,’ these ethnic and age differences become non-significant. The findings suggest that the promotion of the Hawaiian language via a bilingual linguistic landscape is a viable option and that increasing people’s beliefs that bilingual signs will have positive impacts on the Hawaiian language and Native Hawaiian health will result in increased support for bilingual signs.

## Introduction

Revitalizing the Hawaiian language will require continued efforts such as those seen in the past several decades through community programs and education initiatives. However, moving the language up the Expanded Graded Intergenerational Disruption Scale to full revitalization, the language will need to be promoted and used throughout the State. One applicable method of promotion is via a Hawaiian-English linguistic landscape. The linguistic landscape communicates the status of languages and linguistic groups in a certain area, such that languages and linguistic groups whose languages are prominently featured in that landscape tend to have higher status than those whose languages are not shown (Landry & Bourhis, 1997; Macalister, 2010). This is especially true in places like Hawai‘i where language is important to ethnic identity and culture (Macalister, 2010). In this case, the linguistic landscape of Hawai‘i communicates the power differential between the native population and the occupier population.

Currently, Hawaiian language in the linguistic landscape is limited to some street and place names, a limited number of business names, and familiar greetings. Honolulu, Kaua‘i, and Maui counties require new street names to be in Hawaiian but Hawai‘i county does not. However, street names are only a part of the linguistic landscape. Practically non-existent are informational or directional signs in Hawaiian. This communicates that English is the language of power and business and that being able to speak/read English is of higher value than being able to speak/read Hawaiian. The current low ascribed social status of Native Hawaiians may be perpetuated by the limited use of the Hawaiian language in the linguistic landscape. The Hawaiian language’s lower status may contribute to Native Hawaiians’ continued lower social status, which is associated with poor health (Crabbe, Kaholokula, Kenui, & Grandinetti, 1996; Kaholokula et al., 2011). Government support and production of a bilingual linguistic landscape, including road signs, billboards, informational signs, place names, and government building signage is influential in promoting the visibility and utility of the Hawaiian language and culture. Communicating that the Hawaiian language is an accepted form of communication and of equal status with the English language, the creation of a bilingual linguistic landscape may elevate the status of Native Hawaiians and could ultimately lead to better health outcomes.

Widespread revitalization efforts, such as the creation of a bilingual linguistic landscape, will only be possible with support from a majority of Hawai‘i residents, both Native Hawaiian and non-Native Hawaiian (Attitudes Towards the Māori Language, 2010). Romaine (2002) advocates for monitoring climates to measure the circumstances needed for legislation policies that will make a practical difference in language revitalization. Sloboda (2010) described a language management process which begins with understanding the communicative expectation of a society. Using the “Attitudes Towards the Māori Language” survey, Aotearoa New Zealand has determined that the use and presence of the Māori language is below public expectation. Hawai‘i, however, has not engaged in such an assessment, despite the fact that the Hawaiian language revitalization efforts were initially modeled after the efforts in Aotearoa New Zealand. This study attempts to describe people’s attitudes toward the Hawaiian language and support for a bilingual linguistic landscape in order to better understand the communicative expectations in Hawai‘i. Specifically, the study presented in this chapter attempts to answer the following research questions: 1) What are the attitudes of Caucasian, Japanese, Filipino, and Native Hawaiian residents of Hawai‘i toward the Hawaiian language and the creation of a bilingual linguistic landscape? 2) What socio-demographic, attitudinal, and behavioral variables are associated with support, if any, for the creation of a bilingual linguistic landscape? and 3) Do attitudinal/ behavioral variables account for variance in support for a bilingual linguistic landscape beyond that afforded by socio-demographic variables alone?

## **Methods**

### **Study Design**

A quantitative descriptive study was conducted to examine the attitudes toward the Hawaiian language and support for a public bilingual linguistic landscape across the major ethnic groups in Hawai‘i. The design of this study allowed for a random sample of 260 adult ( $\geq 18$  yrs) Hawai‘i residents to be surveyed using random digit dialing (RDD) to improve the generalizability of the survey results. While there were some limitations to this sampling method (e.g., not sampling people without telephones), it is a widely used method for many state and national surveys. There were also other limitations to this design. The data are cross-sectional, which prevents causal inferences from being made.

Additionally, the data were based on self-report, which introduced the possibility of self-report response biases, such as social desirability.

## **Measures**

A modified version of the “Attitudes Towards the Māori Language” survey was used. Modifications were guided from an extensive process (described in Chapter 3) that considered findings from a review of the relevant literature, focus groups with Native Hawaiians, cognitive testing of survey items, and expert review. The “Attitudes Toward the Hawaiian Language” survey used in this study is provided in Appendix I.

**Socio-demographic measures.** Several socio-demographic variables that are commonly examined in public health research were collected, including: ethnicity, gender, age, highest level of education completed, and employment status. Added to this list were variables that are presumed to be related to support for bilingual public signs, including Hawaiian language skills, type of Hawaiian education, proportion of life spent in Hawai‘i, and subjective social status. Ethnicity was based on self-identification. Respondents were asked, “Of all the ethnic groups to which you belong, which one do you most identify with?” Respondents were considered Native Hawaiian if they selected Native Hawaiian, Japanese if they selected Japanese, Filipino if they selected Filipino, and Caucasian if they selected Caucasian. Those of other ethnicities were not asked to continue with the survey.

Respondents’ ages were measured in years and assessed by asking respondents, “How old are you?” Gender was assessed by asking respondents, “What is your gender?” Respondents were asked to choose between female (1), male (2), and transgendered (3). Zip code was measured by asking respondents to provide the zip code of where they live. This data was entered as their numerical zip code and was then grouped as follows; North Shore/Windward (1), Hawai‘i Kai/Mānoa (2), Town (3), Central O‘ahu (4), and Westside (5). These grouping were based on those used for the Behavioral Risk Factor Surveillance Survey but condensed due to the smaller sample size of this study. Educational status was assessed by asking respondents, “What is the highest level of education that you have completed?” This item was scored as some high school (1), high school diploma or GED (2), some college, technical, or vocational training (3), and college graduate or higher (4). Employment status was assessed by asking respondents, “at present, are

you...” and then reading the list of options. The first option that a respondent selected was recorded. The options were: employed full time (1), employed part time (less than 30 hrs/week) 2), retired (3), student (4), and unemployed (5).

In order to assess the respondents’ fluency in the Hawaiian language, interviewers asked, “How would you describe your Hawaiian language skills?” The response options were: none (1), elementary (2), intermediate (3), fluent (4), and native speaker (5). Hawaiian language education was assessed by asking respondents where they learned the Hawaiian that they know, allowing for multiple responses: immersion education or other formal classes (1), participation or training in another Native Hawaiian tradition (2), family or friends (3), other (4), and none (5). This item was later grouped in analysis as formal education (1) comprised of immersion education or other formal classes, informal education (2) comprised of participation or training in another Native Hawaiian tradition and learning from friends and family, and none (3). Respondents who selected other were asked to specify and their answers were coded according to grouping described. The proportion of the respondents’ lives they have lived in Hawai‘i was measured by asking respondents “How long have you lived in Hawai‘i?” The answers were recorded in years as a continuous variable. If respondents lived in Hawai‘i for less than one year, they were then asked the number of months they have lived in Hawai‘i which was then converted to fraction of a year for analysis. The number of years the respondent lived in Hawai‘i was then divided by the respondent’s age to create the proportion of their lives spent living in Hawai‘i.

**Subjective social status.** The MacArthur Scale of Subjective Social Status (SSS) was used to measure subjective socioeconomic status. The following script was read to respondents: “Picture a ladder with rungs numbered 1 to 10. At 10, on the top of the ladder, are the people who are the best off, those who have the most money, most education, and best jobs. At 1, the bottom of the ladder, are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Where on the ladder do you think you stand from 1, at the bottom of the ladder, to 10, at the top?” The SSS was scored from one to 10, with one indicating the highest SSS and 10 indicating the lowest. It has been shown that the SSS is appropriate to deliver verbally via

the telephone, and has adequate test-retest reliability and criterion-related validity (Operario, Adler, & Williams, 2004; Goodman et al., 2001).

**Relative perceived group vitality.** All respondents were asked to rate how much control of three types of resources their ethnic group has in Hawai‘i: 1) economic and business control, 2) political control, and 3) wealth. Responses were scored on a five point rating scale ranging from all of the resource (5) to none of the resource (1). These items were summed to create a measure of ‘perceived own group vitality’ with scores ranging from three to 15, higher scores indicate greater vitality. Non-Native Hawaiian respondents were then asked those same questions but regarding Native Hawaiians; for instance, “How much wealth do Native Hawaiians have?” If respondents were Native Hawaiian, they were asked to identify the most dominant ethnic group in Hawai‘i and were then asked this second set of questions in regards to the identified group. These items were scored in the same way and were summed to create a measure of perceived Native Hawaiian or dominant group vitality with scores ranging from three to 15, higher scores indicate greater vitality. Relative perceived group vitality for non-Native Hawaiians was calculated by dividing a respondent’s perceived own ethnic group vitality by their perceived vitality of Native Hawaiians. Relative perceived vitality for Native Hawaiians was calculated by dividing their own group perceived vitality by their scores for the perceived dominant ethnic group vitality. Lower relative group vitality scores indicate that one’s ethnic group is perceived to have a lower vitality relative to the comparison group, either Native Hawaiians or the most dominant ethnic group.

**Ethno-linguistic group identity.** To measure language group identity among Native Hawaiians, a modified version of the collective self-esteem scale was used (Luhtanen & Crocker, 1992). This modified version was comprised of three items assessing group-belonging and commitment to language. Statements included: “The Hawaiian language is an important reflection of who I am,” “The Hawaiian language has very little to do with how I feel about myself,” and “I feel good about the Hawaiian language as a sign of my social group.” Respondents were asked to rate their agreement with each statement on a Likert scale from strongly disagree (1) to strongly agree (5), with one item reverse scored. Scores range from 3 to 15, with higher scores indicating greater linguistic group identity.

**American identity.** American identity was assessed for all respondents by asking them to rate how American they felt on a scale from one to five, with one being not American at all to five being completely American. Scores range from 1 to 5, with higher scores indicating a stronger American identity. A point of clarification was added to this item in case respondents were unclear of how to define “feeling American.” Respondents were told, “By American, I mean whatever “feeling American” means to you.”

**Hawaiian in the linguistic landscape.** To measure the amount of Hawaiian language they perceive in the linguistic landscape, respondents were read the following script, “Think about all the public signs you see when you are walking or driving around. These include all road work signs, warning signs, informational signs and all other government produced signs. For example, these would include stop signs, warning signs at beaches, and informational signs on hiking trails. These would not include commercial signs, like signs for restaurants. These would also not include street or place signs, like King Street or Waikīkī.” They were then asked, “What percent of signs are in Hawaiian?” Responses ranged from 0% to 100% were coded on a five point scale using 20% increments from 1 (0% to 19%) to 5 (80% to 100%), with higher scores indicating a perceived greater amount of Hawaiian language in the linguistic landscape.

**Bilingual linguistic landscape and health.** To measure the belief that creating a bilingual linguistic landscape would improve the health of Native Hawaiians, respondents were asked to rate their agreement with the statement, “Bilingual signs would improve Native Hawaiian well-being.” Responses range from strongly disagree (1) to strongly agree (5), with scores ranging from 1 to 5. Higher scores indicate greater endorsement of the statement.

**Impact of a bilingual linguistic landscape.** The following script was read to respondents, “There are two official languages of the State of Hawai‘i. These two languages are English and Hawaiian. The next several statements are about having bilingual signs in Hawai‘i. Bilingual means using two languages. The two languages would be English and Hawaiian. Both languages would appear together on all government produced signs, such as road signs, construction signs, warning signs, building signs, informational signs, and tourism signs. This would not include street or place names. Please tell me how much you agree or disagree with each statement, from

strongly agree to strongly disagree.” Respondents were then asked to rate their agreement with four statements about the potential impact of a bilingual linguistic landscape. These statements asked if they thought a bilingual linguistic landscape would increase the status of the Hawaiian language, the value of the Hawaiian language, and interest in the Hawaiian language, and if they thought it would improve the social status of Native Hawaiians. Responses range from strongly disagree (1) to strongly agree (5), with scores ranging from 4 to 20. Higher scores indicate a greater belief in the positive impacts of a bilingual linguistic landscape.

**Hawaiian language as a rejection of American values.** The belief that learning or speaking Hawaiian is a means of rejecting American cultural values was assessed by asking respondents to rate their agreement with the statement “Learning or speaking Hawaiian means rejecting American cultural values.” Responses range from strongly disagree (1) to strongly agree (5) with higher scores indicating greater endorsement of the statement.

**Importance of Hawaiian language perpetuation.** The belief that it is important to perpetuate the Hawaiian language because it is the native language of Hawai‘i was also assessed. Respondents were asked to rate their agreement with the statement, “The Hawaiian language is the native language of Hawai‘i and is therefore important to perpetuate.” Responses range from strongly disagree (1) to strongly agree (5).

**Attitudes toward the Hawaiian language.** Respondents were asked to rate their level of agreement with each of five statements. The statements were: 1) I have a lot of respect for people who can speak Hawaiian fluently, 2) It is a good thing that Native Hawaiian people speak Hawaiian at home, 3) It is a good thing that Native Hawaiian people speak Hawaiian in public places, such as the supermarket, 4) It is not right for Native Hawaiians to speak Hawaiian in public where the people around might not understand what they are saying, and 5) Spoken Hawaiian is a beautiful thing to hear. All items are scored on a 5-point Likert scale, which ranged from strongly disagree (1) to strongly agree (5). Item number four was reverse scored. Possible total score ranged from 5 to 25, with higher scores indicating a more positive attitude toward the Hawaiian language.

**Participation and interest in Hawaiian culture.** To measure participation and interest in select Hawaiian cultural activities, respondents were asked how frequently they do the following: 1) read books or articles about the Hawaiian culture or language,

Table 11. *Independent Variables and Response Options*

<b>Independent Variables</b>	<b>Response Options</b>
<i>Socio-demographic</i>	
Ethnicity	Hawaiian (1); Japanese (2); Filipino (3); Caucasian (4);
Gender	Female (1); Male (2)
Age	Continuous (yrs.)
Zip code	Numerical zip code
Highest Level of Education Completed	No high school diploma (1); High school diploma or GED or CBase (2); Some college, technical, or vocational training (3); College graduate (4)
Employment Status	Employed full time(1); Part time (2); Retired (3); Student (4); Unemployed (2);
MacArthur SSS Scale	1-10 (1 indicates highest status, 10 indicates lowest status)
Years of residency in Hawai‘i	Continuous (yrs.)
Hawaiian language skills	None (0) to Native speaker (6)
Hawaiian language instruction	Immersion education (1); formal instruction (2); participation training in another Native Hawaiian tradition (3); family/friends (4); other (5)
<i>Ethnic Group Measures</i>	
Relative ethno-linguistic group vitality	6 items, two sets of 3 items: None of the Resource (1) to All of the Resource (5); composite score for each set 3 to 15; relative score = own group vitality/Native Hawaiian Vitality or Native Hawaiian vitality/dominant group vitality
Collective esteem and language group identity	3 items: Strongly Disagree (1) to Strongly Agree (5); composite score 3 to 15, higher scores indicate greater linguistic group identity
American Identity	Not American at all (1) to completely American (5)
<i>Linguistic Landscape Measures</i>	
Perceived amount of Hawaiian in the linguistic landscape	0%-19% (1), 20%-39% (2), 40%-59% (3), 60%-79% (4), 80%-100% (5)

Table 11. (Continued)

Independent Variables	Response Options
Impact of BLL	4 items: Strongly Disagree (1) to Strongly Agree (5); composite score 4 to 20
Connection between BLL and health	Strongly Disagree (1) to Strongly Agree (5)
<i>Hawaiian Language and Culture Measures</i>	
Importance of Hawaiian language perpetuation	Strongly Disagree (1) to Strongly Agree (5)
Hawaiian language as a rejection of American Values	Strongly Disagree (1) to Strongly Agree (5)
Attitudes toward the Hawaiian language	5 items: Strongly disagree (1) to Strongly agree (5); composite score 5 to 25
Participation in Hawaiian culture	5 items: Strongly disagree (1) to Strongly agree (5); composite score 5 to 25

2) watch TV shows about Hawaiian language or culture, 3) listen to radio talk shows in the Hawaiian language or about the Hawaiian culture (in English), 4) visit Native Hawaiian art, culture or historical exhibits, and 5) participate in Hawaiian cultural activities. All items were scored on a 5-point Likert scale, with response options from never (1) to very often (5). Scores ranged from 5 to 25, with higher scores indicating a more frequent participation and interest in the Hawaiian language and culture.

**Support for a bilingual linguistic landscape.** Respondents were asked to rate their agreement with three statements regarding government establishment of a Hawaiian-English linguistic landscape. These statements include: the Hawaiian language should be more visible in the community; public signage should be bilingual, in Hawaiian and English; and the government should fund bilingual signs. All items are scored on a 5-point Likert scale, with response options from strongly disagree (1) to strongly agree (5). The possible score range is from 3 to 15, with higher scores indicating a more positive attitude toward government support of the Hawaiian language. The independent variables in this study and their response options are summarized in Table 11.

### Sample

A sample of 260 respondents was surveyed. Due to the lack of previous research in this area, an effect size was difficult to estimate. To be conservative, a medium effect size, 0.15, was used in the sample size estimation. Sample size estimation was done with a power of 0.80, an  $\alpha$  of 0.05, and a sample of 260 is more than adequate (Cohen, 1992).

Exempt status for human subjects research was granted by the University of Hawai‘i Human Studies Program. No names or other identifying information were collected from the respondents and no record of the numbers dialed was kept by either the PI or QMark Research.

In order to test for ethnic differences in attitudes toward government support for a bilingual linguistic landscape, a quota of 65 respondents from each of the four major ethnic groups in Hawai‘i--Native Hawaiian, White, Filipino and Japanese--was established. Eligibility criteria for participation in the survey included: 1) 18 years of age or older, 2) resident of Hawai‘i and 3) self-identify as Native Hawaiian, White, Filipino or Japanese.

### **Procedures**

The PI contracted QMark Research to conduct the survey using random digit dialing as a sampling scheme and the Computer-Assisted Telephone Interviewing (CATI) system to administer the survey. CATI has shown to be a valid, reliable, and cost effective method for survey administration compared to interviewer administered surveys (Cerrada et al., 2012) and computer assisted personal interviews (Li, Ford, Zhao, Tsai, & Balluz, 2012). This procedure is similar to that used in Aotearoa New Zealand to conduct the “Attitudes Towards Māori Language” Survey (2010).

The PI provided the final version of the modified survey to QMark Research, which programmed the survey using the Sawtooth CATI program. The programming was then tested for logic (e.g., skip patterns) and range checks. Once the survey was error free, QMark Research trained interviewers by practicing survey administration with a supervisor who role-played being the respondent. The interviewing began after the interviewers were trained and felt comfortable conducting the interviews with the respondents. In survey administration, 43 interviewers were trained by four supervisors. The interviews were completed in one week. For quality control purposes, the interviewers were monitored by a supervisor who listened in on the surveys without being detected by either the interviewer or respondent.

The PI required surveys to be 100% complete, meaning that each respondent provided an answer to every survey question. Due to this requirement, all of the items provided a “refuse to answer” and/or a “don’t know” response, neither of which were

read to the respondent. This allowed the interviewer to continue survey administration if a respondent did not wish to answer a specific question. After completion of the data collection, QMark Research created a data dictionary and sent the data file and dictionary to the PI as a final deliverable.

A sample of over 15,000 telephone numbers was used, which included both landlines and cell phones. The interviewers encountered no problems with the survey among the respondents. The majority of the calls, 12,159, were unsuccessful because the number was disconnected, there was no answer, there was a busy signal, or an answering machine received the call. An additional 1,643 phone calls ended due to the person's refusal to participate, which included refusal to participate prior to the initiation of the survey questions, refusal to continue with the interview after it had begun, and a refusal to participate at the time of the initial call but requested a call back. Sixty seven calls were ended because the ethnic quota had been filled. Finally, 1,039 calls were unsuccessful due to ineligibility, including: under 18 years old, non-included ethnicity, not a Hawai'i resident, unwilling to talk about survey topic, or a language barrier.

### **Data Analysis**

**Data Reduction.** Prior to analysis, variables were screened for accuracy of data entry, missing values, and univariate outliers. All data entered were in the expected range. The responses coded as "don't know" and "refused to answer" were recoded as missing. Measures with < 5% missing responses to their items were replaced with the series mean. The items assessing the amount of Hawaiian in the linguistic landscape, perceived amount of business and economic control held by the respondent's own ethnic group, and the perceived amount of business and economic control held by Native Hawaiians had  $\geq 5\%$  missing. These values were replaced using expectation maximization, a preferred method for estimating missing data (Tabachnick & Fidell, 2006). Univariate outliers were identified using boxplots and defined as values  $> 3.29$  SDs from the mean. Those values were corrected to the series mean  $\pm 3$  SDs to improve the integrity of the data. This was only done with the item measuring the amount of Hawaiian in the linguistic landscape. The normality assumption was examined by inspection of the histograms, kurtosis and skewness values, and significance of the Shapiro-Wilks test. According to the Shapiro-Wilks test, all of the variables appeared to

be non-normally distributed, except for age and interest in the Hawaiian language and culture. Log and square transformations were done but tests of normality remained significant. Therefore a Kruskal-Wallis test, a non-parametric analysis of variance which compares the medians of samples, was done, rather than an ANOVA. Regression analysis was done with non-transformed data. Multivariate outliers were identified using Mahalanobis, Cook's and leverage values. The critical value for Mahalanobis for 10 degrees of freedom (i.e., the number of independent variables in the regression model) was 29.588. Six cases with values greater than the critical value were removed, leaving 254 cases for regression analysis. The assumptions of homoscedasticity and linearity were checked and confirmed at each stage of the analysis. All statistical analysis was done using SPSS.

**Descriptive statistics.** Descriptive statistics were calculated first. Frequencies and percentages were calculated for the categorical variables of gender, highest level of education completed, Hawaiian language education, employment status, zip code, and income across ethnic groups and for the combined sample. Significant differences in categorical variable by ethnic group were determined using a chi-square ( $\chi^2$ ) analysis. Means and standard deviations for continuous variables, such as age, attitudes toward the Hawaiian language, perceived relative group vitality, SSS, and Hawaiian language ability were calculated. Kruskal-Wallis test and Tukey-Kramer HSD post-hoc analysis were done to detect statistically significant differences across ethnic groups.

**Internal consistency and intercorrelations.** The three scales that were modified from the original survey and all of the multi-item measures discussed in Chapter Three were analyzed for internal reliability. Cronbach's alpha of .70 or higher was considered to have sufficient inter-item reliability (Tavakol & Dennick, 2011). An intercorrelation analysis was done to examine the correlations between all variables using Pearson product moment correlations. To allow for bivariate and multivariate analysis, categorical variables were dummy coded as shown in Table 11. Only those variables whose bivariate correlation with the outcome variable is significant were entered into a multiple regression model to further examine their independent effects.

**Multiple regression analyses formulae.** The regression formulae used are shown below and follow Tabachnick and Fidell (2006). An alpha level of .05 was used to

determine statistical significance. The formula for the combination of predictors used to estimate the outcome variable was as follows:

$$z_y = \beta_{1z1} + \beta_{2z2} + \dots + \beta_{kzk}$$

where  $z_y$  = estimate of outcome score (support for a bilingual linguistic landscape),  $z_1, z_2, \dots, z_k$  = predictors (e.g., age, ethnic group, Hawaiian language skills), and  $\beta_1, \beta_2, \beta_k$  = beta weights for predictors.

The following formula was used to solve for the  $R^2$  the regression model:

$$\beta_1 = \frac{r_{y1} - r_{y2} \dots - r_{yk}(r_{1,2\dots k})}{1 - r_{1,2\dots k}^2}$$

$$\beta_2 = \frac{r_{y2} - r_{y1} \dots - r_{yk}(r_{1,2\dots k})}{1 - r_{1,2\dots k}^2}$$

$$R^2 = \frac{r_{y1}^2 + r_{y2}^2 \dots + r_{yk}^2 - 2 r_{y1} r_{y2} \dots r_{yk} r_{1,2\dots k}}{1 - r_{1,2\dots k}^2}$$

To test the significance of the  $R^2$  of the regression model, the following formula was used:

$$F = \frac{R^2/k}{(1 - R^2)/(N - k - 1)}$$

where  $k$  = number of predictors,  $R^2$  = squared multiple correlation, and  $N$  = total number of participants.

Finally, the following formula was used to test significant differences between  $R^2$ s of the regression models:

$$F = \frac{(R_b^2 - R_a^2)/(k_b - k_a)}{(1 - R_b^2)/(N - k_b - 1)}$$

where  $k_a$  = number of predictors in the smallest set,  $R_a^2$  = squared multiple correlation obtained from the smaller set of predictors,  $k_b$  = number of predictors in the larger set,  $R_b^2$  = squared multiple correlation obtained from the largest set of predictors, and  $N$  = total number of participants.

Regression analysis was conducted to determine which variables significantly contribute to the prediction of a person's support for a bilingual linguistic landscape. All of the variables with a significant bivariate correlation with the outcome variable were entered into the model. The standardized ( $\beta$ ) and unstandardized (B) regression coefficients and intercepts, the semipartial correlations ( $sr_i$ ), F value, degrees of freedom,

R,  $R^2$ , adjusted  $R^2$ , and Durbin Watson, to confirm the assumption of the independence of errors, were examined.

Hierarchical regression was done to determine if the attitudinal and behavioral variables (e.g., attitudes toward the Hawaiian language, participation in Hawaiian culture) improve our understanding of support for a public bilingual linguistic landscape beyond that afforded by socio-demographic variables (e.g., ethnicity, age, proportion of life spent in Hawai‘i). First, the socio-demographic variables with a significant bivariate correlation with the outcome variable (e.g., ethnicity and age) were entered into the regression model. In the second step, attitudinal and behavioral variables with a significant bivariate association with the outcome variable (e.g., attitudes toward the Hawaiian language and interest/participation in Hawaiian culture) were added to the model. The  $R^2$ , adjusted  $R^2$ ,  $R^2_{\text{change}}$ ,  $F_{\text{change}}$  were examined at each step to determine whether the addition of the variable(s) improved the model’s predictive capability. The standardized ( $\beta$ ) and unstandardized (B) regression coefficients and intercepts, the semipartial correlations ( $sr_i$ ) for the final model were examined to assess each variable’s contribution to the explanation of the variance in ‘support of a bilingual linguistic landscape’.

## Results

### Descriptive Statistics

The descriptive statistics are presented in Table 12. Kruskal-Wallis test and post-hoc analyses and  $\chi^2$  analyses showed significant ethnic differences ( $p < .05$ ) in a majority of the variables. For example, Native Hawaiian ( $43.4 \pm 13.9$ ) and Filipino ( $45.2 \pm 17.4$ ) respondents were significantly younger than White ( $57.0 \pm 14.7$ ) and Japanese ( $55.2 \pm 15.4$ ) respondents. Also compared to White (58.5%) and Japanese (56.9%) respondents, a smaller proportion of Native Hawaiian (33.8%) and Filipino (30.9%) respondents were college graduates. A significantly larger proportion of Whites (23.1%), Filipinos (41.5%), and Japanese (35.4%) reported no Hawaiian language education compared to Native Hawaiians (4.6%). Compared to Japanese ( $20.3 \pm 3.3$ ) and Filipino ( $20.1 \pm 3.1$ ) respondents, Native Hawaiians ( $22.4 \pm 2.5$ ) reported significantly more positive attitudes toward the Hawaiian language. Whites’ attitudes ( $21.3 \pm 2.9$ ) toward the Hawaiian language were not significantly different from the other three ethnic groups. Native

Table 12. Respondents Socio-Demographic, Attitudinal, and Behavioral Characteristics (N = 260)

Variable	Native Hawaiian N = 65	Whites N = 65	Japanese N = 65	Filipino N = 65	Total N = 260
Age (y)	43.4 ± 13.9 <sup>a</sup>	57.0 ± 14.7 <sup>b</sup>	55.2 ± 15.4 <sup>b</sup>	45.2 ± 17.4 <sup>a</sup>	50.3 ± 16.4
Proportion of Life in HI	96.5% ± 10.3 <sup>a</sup>	52.2% ± 25.0 <sup>c</sup>	93.7% ± 15 <sup>a</sup>	71.1% ± 31.8 <sup>b</sup>	78.2% ± 78.5
SSS	5.6 ± 2.0	6.3 ± 2.1	6.2 ± 1.7	5.5 ± 1.6	5.9 ± 1.9
Gender					
Male	29 (44.6%)	30 (46.2%)	26 (40.0%)	34 (52.3%)	119 (45.8%)
Female	36 (55.4%)	35 (53.8%)	39 (60.0%)	31 (47.7%)	141 (54.2%)
Education					
high school/GED	19 (29.2%) <sup>a</sup>	6 (9.2%) <sup>b</sup>	10 (15.4%) <sup>a,b</sup>	22 (33.9%) <sup>a</sup>	56 (21.9%)
some college	24 (36.9%)	21 (32.3%)	16 (24.6%)	22 (33.9%)	83 (31.9%)
college graduate	22 (33.9%) <sup>a</sup>	38 (58.5%) <sup>b</sup>	37 (56.9%) <sup>b</sup>	20 (30.8%) <sup>a</sup>	117 (45%)
Employment Status					
Full/Part time	49 (75.4%)	35 (53.8%)	40 (61.5%)	37 (56.9%)	161 (26.4%)
unemployed	8 (12.3%)	8 (12.3%)	3 (4.6%)	7 (11.1%)	26 (10.1%)
retired	6 (9.2%) <sup>a</sup>	19 (29.2%) <sup>b</sup>	20 (30.8%) <sup>b</sup>	13 (20.6%) <sup>a,b</sup>	59 (22.5%)
student	2 (3.1%)	2 (3.1%)	1 (1.5%)	5 (7.9%)	10 (3.9%)
Hawaiian Education					
Formal	21 (32.3%) <sup>a</sup>	8 (12.3%) <sup>b</sup>	13 (20.0%) <sup>a,b</sup>	14 (21.5%) <sup>a,b</sup>	56 (21.5%)
Informal	41 (63.1%) <sup>a</sup>	42 (64.6%) <sup>a</sup>	29 (44.6%) <sup>a,b</sup>	24 (36.9%) <sup>b</sup>	136 (52.3%)
None	3 (4.6%) <sup>a</sup>	15 (23.1%) <sup>b</sup>	23 (35.4%) <sup>b</sup>	27 (41.5%) <sup>b</sup>	68 (26.2%)
Hawaiian Language Skills					
None	3 (4.6%) <sup>a</sup>	15 (23.1%) <sup>b</sup>	23 (35.4%) <sup>b</sup>	27 (41.5%) <sup>b</sup>	68 (26.2%)
Elementary	47 (72.3%) <sup>a,b</sup>	50 (76.9%) <sup>b</sup>	39 (60.0%) <sup>a,b</sup>	35 (53.8%) <sup>a</sup>	171 (65.8%)
Intermediate	11 (16.9%) <sup>a</sup>	0 (0.0%) <sup>b</sup>	3 (4.6%) <sup>a,b</sup>	1 (1.5%) <sup>b</sup>	15 (5.8%)
Fluent/Native Speaker	4 (6.2%)	0 (0.0%)	0 (0.0%)	2 (3.1%)	6 (2.3%)

Table 12. (Continued)

Variable	Native Hawaiian N = 65	Whites N = 65	Japanese N = 65	Filipino N = 65	Total N = 260
Zip Code					
North Shore/Windward	11 (16.9%) <sup>a,b</sup>	21 (32.3%) <sup>b</sup>	7 (11.1%) <sup>a</sup>	4 (6.2%) <sup>a</sup>	43 (16.7%)
Hawai'i Kai/Mānoa	5 (7.7%) <sup>a</sup>	24 (36.9%) <sup>b</sup>	21 (33.3%) <sup>b</sup>	7 (10.8%) <sup>a</sup>	57 (22.1%)
Town	12 (18.5%) <sup>a,b</sup>	6 (9.2%) <sup>b</sup>	6 (9.5%) <sup>a,b</sup>	18 (27.7%) <sup>a</sup>	42 (16.3%)
Central	12 (18.5%) <sup>a,b</sup>	4 (6.2%) <sup>b</sup>	19 (30.2%) <sup>a</sup>	14 (21.5%) <sup>a,b</sup>	49 (19.0%)
Westside	25 (38.5%) <sup>a</sup>	10 (15.4%) <sup>b</sup>	10 (15.9%) <sup>b</sup>	22 (33.8%) <sup>a,b</sup>	67 (26.0%)
Attitudes toward the HL	22.4 ± 2.5 <sup>a</sup>	21.3 ± 2.9 <sup>a,b</sup>	20.3 ± 3.3 <sup>b</sup>	20.1 ± 3.1 <sup>b</sup>	21.03 ± 3.0
Interest in the HL	16.6 ± 4.7 <sup>a</sup>	13.5 ± 3.9 <sup>b</sup>	12.7 ± 3.6 <sup>b,c</sup>	11.5 ± 3.2 <sup>c</sup>	13.6 ± 4.3
Hawaiian in the LL	4.6 ± 0.9	4.7 ± 0.9	4.5 ± 0.9	4.3 ± 1.1	4.5 ± 0.9
Perpetuate	4.7 ± 0.6 <sup>a</sup>	4.4 ± 0.9 <sup>a,b</sup>	4.3 ± 0.7 <sup>b</sup>	4.2 ± 0.7 <sup>b</sup>	4.4 ± 0.7
Reject	2.0 ± 1.2	2.0 ± 0.9	2.2 ± 1.0	2.3 ± 1.1	2.1 ± 1.0
Relative Vitality	0.7 ± 0.3 <sup>a</sup>	1.4 ± 0.4 <sup>b</sup>	1.5 ± 0.5 <sup>b</sup>	1.2 ± 0.4 <sup>c</sup>	1.2 ± 0.5
American Identity	3.9 ± 1.1 <sup>a</sup>	4.3 ± 1.2 <sup>a,b</sup>	4.4 ± 0.8 <sup>b</sup>	4.0 ± 1.2 <sup>a,b</sup>	4.1 ± 1.1
Impact of a BLL	17.5 ± 2.8 <sup>a</sup>	15.5 ± 4.1 <sup>b</sup>	14.6 ± 3.2 <sup>b</sup>	15.5 ± 3.3 <sup>b</sup>	15.7 ± 3.5
Support for a BLL	13.0 ± 2.4 <sup>a</sup>	11.3 ± 3.3 <sup>b</sup>	10.5 ± 2.9 <sup>b</sup>	11.2 ± 2.5 <sup>b</sup>	11.5 ± 2.9
Health and BLL	4.1 ± 0.8 <sup>a</sup>	3.6 ± 1.2 <sup>b</sup>	3.4 ± 1.0 <sup>b</sup>	3.8 ± 1.0 <sup>a,b</sup>	3.7 ± 1.1

*Note:* Data shown as M ± SD or n (%). Data with different superscripts are significantly different  $p < .05$ . HI = Hawai'i, SSS = subjective social status, HL = Hawaiian language, LL = Hawaiian language, BLL = bilingual linguistic landscape, Health and BLL = belief that a bilingual linguistic landscape would improve Native Hawaiian Health. Chi-square analysis was used to evaluate the association between ethnic groups and categorical variables and Kruskal-Wallis analysis of variance to evaluate differences between ethnic group means of continuous variables.

<sup>a,b,c,d</sup> Levels not connected by same letter are significantly different based on Tukey HSD post-hoc analysis.

Hawaiian respondents also reported greater endorsement of the belief it is important to perpetuate the Hawaiian language. Their scores were significantly higher than either Japanese or Filipino respondents.

Filipino respondents reported the highest mean scores for American identity ( $4.4 \pm 0.8$ ). These scores were significantly higher than those reported by Native Hawaiian respondents ( $3.9 \pm 1.1$ ) but not by Whites ( $4.3 \pm 1.2$ ) or Japanese ( $4.0 \pm 1.2$ ). Mean relative perceived group vitality scores were also significantly different across ethnic groups with Japanese ( $1.5 \pm 0.5$ ) and White ( $1.4 \pm 0.4$ ) respondents reporting the highest, followed by Filipinos ( $1.2 \pm 0.4$ ), and then by Native Hawaiians ( $0.7 \pm 0.3$ ). Native Hawaiians reported significantly higher mean scores for support for a bilingual linguistic landscape ( $13.0 \pm 2.4$ ) and belief in the potential positive impact of a bilingual linguistic landscape ( $17.5 \pm 2.8$ ) compared to all other ethnic groups. There was no significant difference between the mean scores for support for a bilingual linguistic landscape or belief in the potential impact of a bilingual linguistic landscape reported by White ( $11.3 \pm 3.3$  and  $15.5 \pm 4.1$ ), Filipino ( $11.2 \pm 2.5$  and  $15.5 \pm 3.3$ ), and Japanese ( $10.5 \pm 2.9$  and  $14.6 \pm 3.2$ ) respondents, respectively.

### **Cronbach's alpha and Bivariate Analysis**

The majority of the multi-item scales had sufficient inter-item reliability with an alpha score of  $> .70$ . The alpha scores were as follows: attitudes toward the Hawaiian language scale  $\alpha = .769$ , participation/interest in the Hawaiian language scale  $\alpha = .822$ , potential impact of a bilingual linguistic landscape  $\alpha = .886$ , own group vitality  $\alpha = .782$ , other groups' perception of Native Hawaiian vitality  $\alpha = .819$ , Native Hawaiians' perception of the dominant group vitality  $\alpha = .827$ , and support for a bilingual linguistic landscape  $\alpha = .894$ . However, the linguistic group identity scale had a Cronbach's alpha of only  $.179$ . If one of the three items was deleted, the scale would have had an  $\alpha = .620$ , which was still insufficient. For reference, this scale is presented in the Native Hawaiian correlation matrix as shown in Table 14 showing a significant bivariate correlation with the outcome variable ( $r = .288$ ,  $p < .05$ ), but should be interpreted with caution.

The intercorrelation matrix for the entire sample, as well as matrices for each ethnic group separately, is presented in Tables 13 – 17. The categorical variables were

Table 13. *Intercorrelation Matrix of Attitudinal, Behavioral, and Socio-Demographic Variables for the Combined Sample (N = 260)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<i>Support</i>	1																			
<i>Sex</i>	-.048	1																		
<i>Age</i>	-.164 <sup>‡</sup>	.075	1																	
<i>% in HI</i>	-.005	-.010	-.077	1																
<i>Ethnicity</i>	-.243 <sup>‡</sup>	-.038	.029	-.146 <sup>*</sup>	1															
<i>Education</i>	-.047	.120	.081	-.096	-.017	1														
<i>Employ</i>	-.055	.002	.122 <sup>*</sup>	.062	.078	-.181 <sup>†</sup>	1													
<i>Zip Code</i>	-.057	.088	-.143 <sup>*</sup>	.130 <sup>*</sup>	.084	-.174 <sup>†</sup>	.101	1												
<i>SSS</i>	.060	.119	.039	-.067	-.035	.273 <sup>‡</sup>	-.143 <sup>*</sup>	-.131 <sup>*</sup>	1											
<i>HawnEdu</i>	-.226 <sup>‡</sup>	-.051	.203 <sup>†</sup>	-.246 <sup>‡</sup>	.240 <sup>‡</sup>	-.135 <sup>*</sup>	.010	.059	-.015	1										
<i>HawSkill</i>	.199 <sup>‡</sup>	.040	-.120	.208 <sup>†</sup>	-.329 <sup>‡</sup>	.028	-.038	.022	-.014	-.683 <sup>‡</sup>	1									
<i>HawinLL</i>	-.032	.006	.078	.075	-.103	.007	-.051	-.149 <sup>*</sup>	-.140 <sup>*</sup>	-.005	-.086	1								
<i>BLL&amp;Hlt</i>	.677 <sup>‡</sup>	-.020	-.233 <sup>‡</sup>	-.010	-.147 <sup>*</sup>	-.025	-.019	-.003	-.021	-.186 <sup>†</sup>	.135 <sup>*</sup>	-.105	1							
<i>Reject</i>	-.089	-.102	-.093	.001	.102	-.213 <sup>†</sup>	.194 <sup>†</sup>	.115	-.090	.117	-.170 <sup>†</sup>	-.049	.007	1						
<i>Perpetuat</i>	.510 <sup>‡</sup>	-.087	-.119	.018	-.231 <sup>‡</sup>	.085	-.143 <sup>*</sup>	-.218 <sup>‡</sup>	.118	-.224 <sup>‡</sup>	.213 <sup>†</sup>	-.011	.384 <sup>‡</sup>	-.219 <sup>‡</sup>	1					
<i>American</i>	-.159 <sup>*</sup>	.040	.089	.076	.086	.181 <sup>†</sup>	-.016	-.049	.101	-.021	-.029	.032	-.132 <sup>*</sup>	-.127 <sup>*</sup>	-.035	1				
<i>Rel Vital</i>	-.067	-.090	.131 <sup>*</sup>	-.167 <sup>†</sup>	.321 <sup>‡</sup>	.131 <sup>*</sup>	.107	-.125 <sup>*</sup>	.221 <sup>‡</sup>	.173 <sup>†</sup>	-.198 <sup>†</sup>	.029	-.042	-.080	.004	.085	1			
<i>Attitude</i>	.585 <sup>‡</sup>	-.001	-.177 <sup>†</sup>	.034	-.285 <sup>‡</sup>	.068	-.064	-.092	.086	-.260 <sup>‡</sup>	.238 <sup>‡</sup>	.009	.464 <sup>‡</sup>	-.191 <sup>‡</sup>	.538 <sup>‡</sup>	-.023	.001	1		
<i>Interest</i>	.390 <sup>‡</sup>	.001	.004	.188 <sup>†</sup>	-.427 <sup>‡</sup>	.079	-.087	-.126 <sup>*</sup>	.146 <sup>*</sup>	-.272 <sup>‡</sup>	.425 <sup>‡</sup>	-.079	.240 <sup>‡</sup>	-.093	.383 <sup>‡</sup>	-.016	-.139 <sup>*</sup>	.421 <sup>‡</sup>	1	
<i>Impact</i>	.778 <sup>‡</sup>	-.043	-.221 <sup>‡</sup>	-.009	-.227 <sup>‡</sup>	.038	-.064	-.072	.078	-.221 <sup>‡</sup>	.277 <sup>‡</sup>	-.090	.775 <sup>‡</sup>	-.071	.476 <sup>‡</sup>	-.117	-.059	.570 <sup>‡</sup>	.374 <sup>‡</sup>	1

Note: Categorical variables were dummy coded for intercorrelation analysis. Support = support of a bilingual linguistic landscape, % in HI = proportion of life spent in Hawai‘i, Employ = employment, SSS = subjective social status, HawnEdu = Hawaiian education, HawSkill =Hawaiian language skills, BLL&Hlt = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Reject = learning the Hawaiian language as a rejection of American culture, Perpetuat = importance of perpetuating the Hawaiian language as the Native language of Hawai‘i, American = American identity, RelVital = perceived relative group vitality, Attitude = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape. \*p < .05, †p < .01, ‡p < .001

Table 14. *Intercorrelation Matrix of Attitudinal, Behavioral, and Socio-Demographic Variables for Native Hawaiians (N = 65)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<i>Support</i>	1																			
<i>Sex</i>	.046	1																		
<i>Age</i>	.079	-.099	1																	
<i>% in HI</i>	.037	.171	-.242	1																
<i>Education</i>	.043	.104	-.089	-.083	1															
<i>Employ</i>	-.235	.000	.021	-.044	-.405 <sup>†</sup>	1														
<i>Zip code</i>	-.230	-.029	-.077	.210	-.212	.266 <sup>*</sup>	1													
<i>SSS</i>	.011	.368 <sup>†</sup>	-.070	-.015	.393 <sup>†</sup>	-.281 <sup>*</sup>	-.102	1												
<i>HawnEdu</i>	-.180	-.116	.103	.044	-.201	.091	.283 <sup>*</sup>	-.020	1											
<i>HawSkill</i>	.050	.153	-.059	-.009	.091	-.100	.006	.045	-.340 <sup>†</sup>	1										
<i>HawinLL</i>	.238	-.094	.005	.061	-.149	-.091	-.071	-.242	.007	-.241	1									
<i>BLL&amp;Hlt</i>	.632 <sup>‡</sup>	.033	.039	.064	-.119	-.124	-.198	-.026	-.020	-.166	.098	1								
<i>Reject</i>	-.234	-.122	-.117	.229	-.286 <sup>*</sup>	.324 <sup>†</sup>	.157	-.238	.081	-.257 <sup>*</sup>	.024	.018	1							
<i>Perpetuat</i>	.707 <sup>‡</sup>	.032	.068	.083	.227	-.250 <sup>*</sup>	-.250 <sup>*</sup>	.058	-.178	.126	.018	.534 <sup>‡</sup>	-.276 <sup>*</sup>	1						
<i>American</i>	-.040	.071	-.099	-.198	.152	-.119	.031	.178	-.152	.211	.024	-.209	-.101	-.018	1					
<i>Rel Vital</i>	-.234	-.055	-.080	.041	-.155	.084	.166	.033	.021	.092	-.048	-.209	-.133	-.216	-.003	1				
<i>Attitudes</i>	.541 <sup>‡</sup>	.046	.077	.057	.142	-.155	-.196	.140	-.021	.156	.160	.388 <sup>†</sup>	-.270 <sup>*</sup>	.573 <sup>‡</sup>	-.096	-.118	1			
<i>Interest</i>	.244	.208	.224	.101	.198	-.161	-.182	.200	-.080	.301 <sup>*</sup>	-.183	.086	-.065	.179	-.006	-.030	.188	1		
<i>Impact</i>	.779 <sup>‡</sup>	.202	-.004	.048	.014	-.177	-.214	.081	-.114	.186	.097	.692 <sup>‡</sup>	-.173	.672 <sup>‡</sup>	-.048	-.270 <sup>*</sup>	.549 <sup>‡</sup>	.141	1	
<i>Coll Esteem</i>	.288 <sup>*</sup>	-.143	-.001	-.119	-.064	-.065	-.321 <sup>†</sup>	.043	-.068	-.025	-.029	.574 <sup>‡</sup>	.016	.214	-.138	.035	.324 <sup>†</sup>	.129	.434 <sup>‡</sup>	1

*Note:* Categorical variables were dummy coded for intercorrelation analysis. Support = support of a bilingual linguistic landscape, % in HI = proportion of life spent in Hawai‘i, Employ = employment, SSS = subjective social status, HawnEdu = Hawaiian education, HawSkill =Hawaiian language skills, BLL&Hlt = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Reject = learning the Hawaiian language as a rejection of American culture, Perpetuat = importance of perpetuating the Hawaiian language as the Native language of Hawai‘i, American = American identity, RelVital = perceived relative group vitality, Attitude = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape, CollEsteem = Language group identity. \*p < .05, †p < .01, ‡p < .001

Table 15. Intercorrelation Matrix of Attitudinal, Behavioral, and Socio-Demographic Variables for Whites (N = 65)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Support</i>	1																		
<i>Sex</i>	.039	1																	
<i>Age</i>	-.097	-.038	1																
<i>% in HI</i>	-.200	-.186	.010	1															
<i>Education</i>	-.174	.054	.153	-.183	1														
<i>Employ</i>	.019	.065	-.039	.334 <sup>†</sup>	-.259 <sup>*</sup>	1													
<i>SSS</i>	.068	.063	.247 <sup>*</sup>	-.161	.251 <sup>*</sup>	-.200	1												
<i>Zip code</i>	.039	.103	-.032	.088	-.301 <sup>*</sup>	.164	-.081	1											
<i>Haw Edu</i>	-.078	-.041	.164	-.284 <sup>*</sup>	-.071	-.217	.101	-.123	1										
<i>Haw Skills</i>	.062	-.068	.076	.218	.125	-.047	.020	.034	-.835 <sup>‡</sup>	1									
<i>HawinLL</i>	-.252 <sup>*</sup>	-.107	-.092	.008	.183	-.099	-.239	-.224	-.002	-.042	1								
<i>BLL&amp;Hlt</i>	.753 <sup>‡</sup>	-.154	-.177	-.089	-.001	.056	-.077	-.018	-.114	.083	-.129	1							
<i>Reject</i>	-.166	.054	-.274 <sup>*</sup>	.077	-.228	.175	-.143	.104	.207	-.372 <sup>†</sup>	.165	-.132	1						
<i>Perpetuate</i>	.360 <sup>†</sup>	.034	.012	-.128	.222	-.152	.193	-.223	.000	.063	.079	.405 <sup>†</sup>	-.357 <sup>†</sup>	1					
<i>American</i>	-.146	.090	.150	.076	.221	.038	.068	-.092	-.181	.258 <sup>*</sup>	-.210	-.103	-.336 <sup>†</sup>	-.027	1				
<i>Rel Vital</i>	.334 <sup>†</sup>	-.245 <sup>*</sup>	-.135	-.117	.263 <sup>*</sup>	-.159	.308 <sup>*</sup>	-.016	-.041	.035	.204	.327 <sup>†</sup>	-.296 <sup>*</sup>	.367 <sup>†</sup>	-.057	1			
<i>Attitudes</i>	.739 <sup>‡</sup>	.028	-.261 <sup>*</sup>	-.176	-.023	-.185	.018	-.055	-.233	.212	-.178	.652 <sup>‡</sup>	-.241	.411 <sup>†</sup>	-.159	.259 <sup>*</sup>	1		
<i>Interest</i>	.399 <sup>†</sup>	-.076	.116	-.056	.128	-.169	.165	-.211	-.219	.355 <sup>†</sup>	-.087	.283 <sup>*</sup>	-.323 <sup>†</sup>	.412 <sup>†</sup>	.036	.385 <sup>†</sup>	.476 <sup>‡</sup>	1	
<i>Impact</i>	.836 <sup>‡</sup>	-.102	-.073	-.089	.033	-.071	.064	-.134	-.128	.186	-.204	.810 <sup>‡</sup>	-.155	.371 <sup>†</sup>	-.115	.309 <sup>*</sup>	.714 <sup>‡</sup>	.423 <sup>‡</sup>	1

Note: Categorical variables were dummy coded for intercorrelation analysis. Support = support of a bilingual linguistic landscape, % in HI = proportion of life spent in Hawai'i, Employ = employment, SSS = subjective social status, HawnEdu = Hawaiian education, HawSkill =Hawaiian language skills, BLL & Health = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Reject = learning the Hawaiian language as a rejection of American culture, Perpetuat = importance of perpetuating the Hawaiian language as the Native language of Hawai'i, American = American identity, RelVital = perceived relative group vitality, Attitude = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape. \*p < .05, †p < .01, ‡p < .001

Table 16. *Intercorrelation Matrix of Attitudinal, Behavioral, and Socio-Demographic Variables for Japanese (N = 65)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Support</i>	1																		
<i>sex</i>	-.183	1																	
<i>Age</i>	-.216	.285*	1																
<i>% in HI</i>	-.019	.029	.138	1															
<i>Education</i>	-.029	-.076	-.069	-.058	1														
<i>Employment</i>	.024	.116	.249*	-.080	.023	1													
<i>SSS</i>	.172	-.127	-.101	.016	.087	.107	1												
<i>Zip code</i>	-.252*	.263*	-.001	.005	.059	.098	.078	1											
<i>HawnEdu</i>	-.234	-.086	.177	-.043	-.281*	.060	-.153	.091	1										
<i>Hawn Skills</i>	.229	.057	-.200	-.033	.181	.035	.213	-.105	-.800‡	1									
<i>HawinLL</i>	-.059	-.077	.114	-.110	.099	-.043	-.185	-.046	.136	-.154	1								
<i>BLL &amp; Health</i>	.610‡	.181	-.139	-.116	.005	.166	.009	.036	-.180	.183	-.147	1							
<i>Reject</i>	-.049	-.071	.221	.002	-.246*	.167	.157	.066	.069	.050	-.194	.007	1						
<i>Perpetuate</i>	.568‡	-.116	-.355†	-.141	.022	-.044	.288*	-.227	-.307*	.295*	-.089	.251*	-.203	1					
<i>American</i>	-.060	-.019	-.092	-.103	.195	-.032	.008	.240	.078	-.141	.016	.116	.045	.004	1				
<i>RelVital</i>	.228	-.139	-.190	.052	.016	-.016	.342†	.068	.078	-.135	-.066	.217	-.106	.196	-.133	1			
<i>Attitudes</i>	.590‡	.110	-.183	-.091	.155	-.020	.177	-.139	-.254*	.128	-.023	.450‡	-.343†	.597‡	.073	.194	1		
<i>Interest</i>	.357†	-.102	-.204	.059	.053	-.044	.344†	-.032	-.137	.222	-.250*	.242	.109	.335†	.181	-.027	.376†	1	
<i>Impact</i>	.714‡	-.155	-.268*	-.167	.091	.029	.176	-.112	-.270*	.283*	-.055	.667‡	-.091	.577‡	.029	.231	.549‡	.347†	1

Note: Categorical variables were dummy coded for intercorrelation analysis. Support = support of a bilingual linguistic landscape, % in HI = proportion of life spent in Hawai'i, Employ = employment, SSS = subjective social status, HawnEdu = Hawaiian education, HawnSkill =Hawaiian language skills, BLL & Health = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Reject = learning the Hawaiian language as a rejection of American culture, Perpetuate = importance of perpetuating the Hawaiian language as the Native language of Hawai'i, American = American identity, RelVital = perceived relative group vitality, Attitude = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape. \*p < .05, †p < .01, ‡p < .001

Table 17. Intercorrelation Matrix of Attitudinal, Behavioral, and Socio-Demographic Variables for Filipinos (N = 65)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Support</i>	1																		
<i>Sex</i>	-.087	1																	
<i>Age</i>	-.100	.085	1																
<i>% in HI</i>	-.050	-.067	.051	1															
<i>Education</i>	.181	.307*	-.029	-.071	1														
<i>Employ</i>	.009	-.133	.199	.263*	-.165	1													
<i>SSS</i>	.156	.096	-.225	.058	.232	-.174	1												
<i>Zip Code</i>	-.025	.114	-.019	-.239	.007	-.026	-.214	1											
<i>Hawn Edu</i>	-.154	.032	.198	-.312*	-.134	-.008	-.057	.138	1										
<i>Haw Skill</i>	.056	-.042	.014	.211	-.061	.129	-.216	.016	-.629‡	1									
<i>Haw in LL</i>	-.037	.222	.158	.279*	-.114	.021	.023	-.171	-.077	-.077	1								
<i>BLL&amp;Hlt</i>	.563‡	-.074	-.339†	-.136	.190	-.126	.197	-.077	-.188	.110	-.207	1							
<i>Reject</i>	.157	-.233	-.193	-.162	-.128	.101	-.030	.056	.086	-.069	-.104	.183	1						
<i>Perpetuate</i>	.408†	-.360†	-.127	.013	-.023	-.059	-.092	-.267*	-.213	.091	-.130	.286*	.002	1					
<i>American</i>	-.183	-.011	.114	.407†	.064	-.009	.022	-.127	-.031	-.202	.229	-.135	-.133	.011	1				
<i>Rel Vital</i>	.037	-.042	.076	.202	-.125	.414†	-.061	-.091	.059	.131	.055	.021	.004	-.042	.067	1			
<i>Attitudes</i>	.306*	-.203	-.205	.145	.083	.151	.067	-.013	-.226	.143	-.005	.235	.125	.481‡	.216	.221	1		
<i>Interest</i>	.257*	-.169	.142	.307*	.092	.248	-.067	-.218	-.308*	.414†	-.003	.083	.030	.388†	.012	.038	.374†	1	
<i>Impact</i>	.653‡	-.064	-.261*	-.099	.232	.029	.173	-.055	-.113	.155	-.192	.818‡	.175	.274*	-.100	.111	.338†	.300*	1

Note: Categorical variables were dummy coded for intercorrelation analysis. Support = support of a bilingual linguistic landscape, % in HI = proportion of life spent in Hawai'i, Employ = employment, SSS = subjective social status, HawnEdu = Hawaiian education, HawSkill =Hawaiian language skills, BLL & Health = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Reject = learning the Hawaiian language as a rejection of American culture, Perpetuat = importance of perpetuating the Hawaiian language as the Native language of Hawai'i, American = American identity, RelVital = perceived relative group vitality, Attitude = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape. \*p < .05, †p < .01, ‡p < .001

dummy coded as described to allow for this analysis. This coding resulted in correlations indicating a direction opposite from the actual direction, such as that between Hawaiian language education and support for a bilingual linguistic landscape. Support for a bilingual linguistic landscape was significantly correlated with ten of the independent variables: 1) age ( $r = -.164, p < .001$ ), 2) ethnicity ( $r = -.243, p < .001$ ), 3) Hawaiian language education ( $r = -.226, p < .001$ ), 4) Hawaiian language skills ( $r = .199, p < .001$ ), 5) impact of a bilingual linguistic landscape on Native Hawaiian health ( $r = .677, p < .001$ ), 6) importance of perpetuating the Hawaiian language ( $r = .510, p < .001$ ), 7) American identity ( $r = -.159, p < .05$ ), 8) attitudes toward the Hawaiian language ( $r = .585, p < .001$ ), 9) interest in the Hawaiian language and culture ( $r = .390, p < .001$ ), and 10) impact of a bilingual linguistic landscape ( $r = .778, p < .001$ ).

A significant, bivariate correlations between the outcome variable and the amount of Hawaiian perceived in the linguistic landscape ( $r = -.252, p < .05$ ) and relative group vitality ( $r = .334, p < .01$ ) was found in the White sample. These correlations were not significant when examined in the combined sample. Also not significant in the combined sample was a correlation between the outcome variable and zip code, which was significant in the Japanese sample ( $r = .252, p < .05$ ).

### **Regression Analysis**

Multiple regression analysis was used to determine which variables were significantly, independently associated with a person's support for a bilingual linguistic landscape. The results for the regression model are displayed in Table 18. Table 18 presents the standardized ( $\beta$ ) and unstandardized (B) regression coefficients, standard error,  $t$  values, semipartial correlations ( $sr_i$ ) and with notes showing the F value, degrees of freedom, R,  $R^2$ , and adjusted  $R^2$ . The independent variables entered into the regression model were age, ethnicity, Hawaiian language education, Hawaiian language skills, impact of a bilingual linguistic landscape on Native Hawaiian health, importance of perpetuating Hawaiian language as the native language of Hawai'i, American identity, attitudes toward the Hawaiian language, interest in the Hawaiian language and culture, and impact of a bilingual linguistic landscape. Durbin-Waston was 1.860 which was within the appropriate range. Homoscedasticity was checked by examining the scatter plot of the residuals which indicated that residuals were constant for all values of the

independent variables. The categorical variables were dummy coded as described to allow for this analysis. This coding resulted in the  $\beta$  and B values for Hawaiian language skills and education indicating a relationship in the direction opposite the actual direction.

Checks were made for multicollinearity among the independent variables using collinearity diagnostics in SPSS. While several of the independent variables are highly correlated, none are over the threshold of .90 that is identified by Tabachnick and Fidell (2007) as the level at which statistical problems can occur. The tolerance and variance inflation factor values were examined for evidence of multicollinearity and were found to be within the normal range. The condition index was over 40 but no dimension had more than one variance proportion greater than .50, suggesting that no multicollinearity is evident according to standards developed by Belsley, Kuh, and Welsch (1980).

Table 18. *Regression Analysis of Support for a Bilingual Linguistic Landscape on Variables Associated with Support for a Bilingual Linguistic Landscape (N = 254)*

	B	Std. Error	$\beta$	t	p	sr <sub>i</sub>
Ethnicity	-.032	.106	-.012	-.299	.765	-.011
Hawn Skills	-.551	.276	-.114	-1.996	.047	-.071
Age	.003	.007	.020	.525	.600	.019
BLL & Health	.587	.162	.212	3.624	.000	.129
Perpetuate	.776	.198	.183	3.912	.000	.139
American Id	-.207	.093	-.081	-2.216	.028	-.079
Attitudes	.092	.047	.096	1.943	.053	.069
Interest	.058	.030	.088	1.934	.054	.069
Impact	.370	.054	.442	6.906	.000	.246
Hawn Edu	-.304	.220	-.073	-1.383	.168	-.049

Note:  $R = .832$ ,  $R^2 = .692$ , Adjusted  $R^2 = .679$ ,  $F(10, 243) = 54.60$ . Hawn Skills =Hawaiian language skills, BLL & Health = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Perpetuate = importance of perpetuating the Hawaiian language as the Native language of Hawai'i, American Id = American identity, Attitudes = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape, Hawn Edu = Hawaiian education.

The results of the regression indicated that five variables explained 69.2% of the variance ( $R^2 = .692$ ,  $F(10,243) = 54.6$ ,  $p < .001$ ). The following variables had significant standardized beta weights: Hawaiian language skills ( $\beta = -.114$ ,  $t(243) = -1.996$ ,  $p = .047$ ), American identity ( $\beta = -.081$ ,  $t(243) = -2.216$ ,  $p = .058$ ), belief that a bilingual

linguistic landscape will improve Native Hawaiian health ( $\beta = .212$ ,  $t(243) = 3.624$ ,  $p < .001$ ), belief that a bilingual linguistic landscape will positively impact the Hawaiian language ( $\beta = .442$ ,  $t(243) = 6.906$ ,  $p < .001$ ), and belief that it is important to perpetuate the Hawaiian language ( $\beta = .183$ ,  $t(243) = 3.912$ ,  $p < .001$ ). Both attitudes toward the Hawaiian language and interest in the Hawaiian language and culture had beta weights that were approaching significance,  $\beta = .096$ ,  $t(243) = 1.943$ ,  $p = .053$  and  $\beta = .088$ ,  $t(243) = 1.934$ ,  $p = .054$ , respectively.

The independent variables with the largest standardized beta weights were the beliefs that a bilingual linguistic landscape will improve Native Hawaiian health, that a bilingual linguistic landscape will positively impact the Hawaiian language, and that, as the native language of Hawai‘i, the Hawaiian language is important to perpetuate. This suggests that a change in one of these variables, controlling for all other variables in the model, will result in the largest change in support for a bilingual linguistic landscape. For instance, the belief that a bilingual linguistic landscape will positively impact the Hawaiian language has  $\beta = .442$ . This means that for every one standard deviation increase in a belief of the positive impacts of a bilingual linguistic landscape, support for a bilingual linguistic landscape will increase by .442 standard deviations. Likewise for a variable with a smaller, negative  $\beta$ , such as American identity ( $\beta = -.081$ ) for every one standard deviation increase in a person’s American identity, their support for a bilingual linguistic landscape will decrease by .081 standard deviations.

The square of the semipartial correlation coefficient ( $sr_i^2$ ) is the unique contribution of a variable to explaining the variance in the outcome variable. The belief that a bilingual linguistic landscape will impact the Hawaiian language had a  $sr_i^2 = .061$ , indicating that it explains 6.1% of the variance in support of a bilingual linguistic landscape. The belief that a bilingual linguistic landscape will improve Native Hawaiian health ( $sr_i^2 = .019$ ) and the belief it is important to perpetuate the Hawaiian language ( $sr_i^2 = .016$ ) explains 1.93% and 1.66% of the variance in the outcome variable, respectively.

### **Hierarchical Regression Analysis**

Hierarchical regression was used to determine if attitudinal and behavioral variables improved the explanation of variance in support for a bilingual linguistic landscape beyond that afforded by the socio-demographic variables alone. The results for

the hierarchical regression analyses are presented in Table 19, which displays the standardized ( $\beta$ ) and unstandardized (B) regression coefficients, standard error,  $p$  values, F values,  $R^2$ ,  $R^2$  change, and F change. R was significantly different from zero in both models. The first model, with the independent variables of ethnicity, age, Hawaiian language skills, and Hawaiian education, had an  $R^2 = .105$  ( $F(4, 243) = 7.288$ ,  $p < .001$ ) and adjusted  $R^2 = .09$  indicating that 9% of the variance in support for a bilingual linguistic landscape is explained by the socio-demographic variables of age, ethnicity, and Hawaiian language skills and education. Ethnicity ( $\beta = -.217$ ,  $t(243) = -3.324$ ,  $p = .001$ ) and age ( $\beta = -.133$ ,  $t(243) = -2.176$ ,  $p = .030$ ) had significant standardized beta weights.

Table 19. *Hierarchical Regression Analysis for of Support for a Bilingual Linguistic Landscape on Variables Associated with Support for a Bilingual Linguistic Landscape (N = 254)*

	Model 1					Model 2				
	B	Std. Error	$\beta$	t	p	B	Std. Error	$\beta$	t	p
Ethnicity	-.555	.167	-.217	-3.324	.001	-.032	.106	-.012	-.299	.765
Age	-.023	.011	-.133	-2.176	.030	.003	.007	.020	.525	.600
Hawn Skills	-.042	.436	-.009	-.096	.924	-.551	.276	-.114	-1.996	.047
Hawn Edu	-.594	.360	-.142	-1.647	.101	-.304	.220	-.073	-1.383	.168
BLL & Health						.587	.162	.212	3.624	.000
Perpetuate						.776	.198	.183	3.912	.000
American Id						-.207	.093	-.081	-2.216	.028
Attitudes						.092	.047	.096	1.943	.053
Interest						.058	.030	.088	1.934	.054
Impact						.370	.054	.442	6.906	.000
$R^2$		.105 <sup>‡</sup>					.692 <sup>‡</sup>			
F		7.288 <sup>‡</sup>					54.60 <sup>‡</sup>			
$R^2$ change							.587 <sup>‡</sup>			
$F$ change							77.218 <sup>‡</sup>			

Note: Hawn Skills =Hawaiian language skills, BLL & Health = belief that a bilingual linguistic landscape will improve Native Hawaiian health, Perpetuate = importance of perpetuating the Hawaiian language as the Native language of Hawai'i, American Id = American identity, Attitudes = attitudes toward the Hawaiian language, Interest = interest/participation in the Hawaiian language, Impact = belief in the impact of a bilingual linguistic landscape, Hawn Edu = Hawaiian education.

‡  $p < .001$

The addition of behavioral and attitudinal variables, impact of a bilingual linguistic landscape on Native Hawaiian health, belief that it is important to perpetuate the Hawaiian language, American identity, attitudes toward the Hawaiian language, interest in the Hawaiian language and culture, and impact of a bilingual linguistic

landscape on the Hawaiian language and people, improved the model's predictive capacity. The  $R^2$  improved by .587 ( $F_{\text{change}}(6,243) = 77.218, p < .001$ ) for a total  $R^2 = .692$  and adjusted  $R^2 = .679$ , indicating that the addition of the attitudinal and behavioral variables improved the model's ability to account for variance in support for a bilingual linguistic landscape by 58.7%. The Durbin-Waston value for the final model, 1.860, was within the appropriate range.

In the final model, the following attitudinal and behavioral variables had significant standardized beta weights: belief that bilingual signs would impact Native Hawaiian health ( $\beta = .212, t(243) = 3.624, p < .001$ ), American identity ( $\beta = -.081, t(243) = -2.216, p = .028$ ), impact of a bilingual linguistic landscape on the Hawaiian language and people ( $\beta = .442, t(243) = 6.906, p < .001$ ), and belief that it is important to perpetuate the Hawaiian language ( $\beta = -.183, t(243) = 3.912, p < .001$ ). In the final model, the standardized beta weights for both ethnicity ( $p = .765$ ) and age ( $p = .600$ ) became non-significant while Hawaiian language skills ( $\beta = -.114, t(243) = -1.996, p = .047$ ) became significant.

## Discussion

The purpose of the study presented in this chapter was threefold: 1) to examine the attitudes of White, Japanese, Filipino, and Native Hawaiian residents of Hawai'i toward the Hawaiian language and bilingual public signs, 2) to examine the influence of certain independent variables on support for bilingual public signs, and 3) to determine if attitudinal and behavioral variables improve the explanation of variance in support for a bilingual linguistic landscape beyond that afforded by socio-demographic variables. Findings suggest that all ethnic groups have positive attitudes toward the Hawaiian language. Compared to other ethnic groups, Native Hawaiians were more supportive of a bilingual linguistic landscape, but no group had a mean score below "neutral," suggesting that all ethnic groups are, on average, supportive of a Hawaiian-English bilingual landscape. These positive attitudes toward the Hawaiian language are not surprising given the results of the Aotearoa New Zealand study, which also showed that Māori and non-Māori had positive attitudes toward the Māori language.

Findings also show that Native Hawaiians had a greater participation in the Hawaiian language or cultural activities, as expected, compared to other ethnic groups.

Essentially, Native Hawaiians can be seen as active supporters of the Hawaiian language having positive attitudes and actively participating in their Hawaiian language and/or culture. Non-Native Hawaiians, in turn, can be seen as passive supporters, possessing positive attitudes toward the language but not as actively involved in the Hawaiian language or the culture.

The relationships between independent variables and support for a bilingual linguistic landscape are as supported by the focus group data and literature review. This convergence of results across studies increases our confidence in the validity of the survey items and suggests areas for further examination. For instance, a stronger American identity resulted in less support for a bilingual linguistic landscape, which was supported by research on English-only policies. However, this was only evident in the combined sample. American identity may be less salient of a construct in Hawai'i compared to 'local identity,' which may have a stronger association with support for Hawaiian language promotion. Relative group vitality was predicted to be positively correlated with support for a bilingual linguistic landscape based on the literature and this relationship held true for Whites. This suggests that Whites who perceived Native Hawaiians to have a high degree of control in the political, economic, and business arenas, relative to the degree of control they perceive Whites to have, are less supportive of a bilingual linguistic landscape. These perceptions may also influence support among Whites for social, educational, and health programs that benefit Native Hawaiians.

Hawaiian language skills, American identity, belief that a bilingual linguistic landscape will improve Native Hawaiian health, belief that a bilingual linguistic landscape will positively impact the Hawaiian language, and belief that it is important to perpetuate the Hawaiian language are significantly associated with support for a bilingual linguistic landscape, and together they explain almost 70% of the variance in support for a bilingual linguistic landscape. These attitudinal and behavioral variables improve the explanation of variance in support for a bilingual linguistic landscape above that afforded by socio-demographic variables alone.

This suggests that the relationship between these attitudinal and behavioral variable and support for a bilingual linguistic landscape is constant across ethnic groups. Beliefs explain the support for a bilingual linguistic landscape better than age, ethnicity,

and Hawaiian language education. The overwhelming impact of attitudinal and behavioral variables in explaining support for a bilingual linguistic landscape suggests that it is dynamic and modifiable. This has important implications for proponents of Hawaiian language revitalization in general and of a bilingual linguistic landscape specifically.

**Limitations.** The generalizability of the conclusions drawn from this study may be limited due to the non-normality of the data. If the actual distribution of these variables in the population is normal, the sample collected would not be representative as the distribution of the scores of the measures from this sample is non-normal. Thus, while the models fit these data well, they may not apply to the general population. However, this is a new area of research, so we do not know the actual population distribution of these variables. They may, in fact, be non-normally distributed in the population. Respondents for this study were from the island of O‘ahu. This island restriction of the sample also limits the generalizability of these findings. Future research on the promotion of the Hawaiian language should include neighbor islands, such as Maui and Moloka‘i. Trends education and age present in the general population were also observed in this study, such as Native Hawaiians and Filipinos were younger and had less formal education than Whites and Japanese. However, compared to samples from other studies, the respondents were slightly older and had more education (Kaholokula, Braun, Kana‘iaupuni, Grandinetti, & Chang, 2006). Notwithstanding, these results can be applied to the general population with some reservation.

Our confidence in these results is also limited by the novelty of our research instrument. This is the first study to utilize the survey, thus its reliability is unknown. The bivariate correlations and Cronbach’s alpha lend support to the validity and reliability of the survey items. All of the bivariate correlations are in the direction that was anticipated. For instance, subjective social support and education were significantly positively correlated, and Hawaiian language education and skill were also highly correlated. Additionally, the multi-item measures had Cronbach’s alphas greater than .70, except for language group identity, which was dropped from the analysis.

**Implications.** These positive attitudes toward the Hawaiian language, a bilingual linguistic landscape, and the potential impact of a bilingual linguistic landscape on the

Hawaiian language and well-being of Native Hawaiians are encouraging for language revitalization efforts in Hawai‘i. In order to advance the Hawaiian language along the spectrum of revitalization from where it stands now to a language that is spoken across generations and in the wider community, efforts must be made to promote the language publicly as a viable means for communication. In order to do that, support must be found both from within and beyond the Native Hawaiian community.

This research suggests that positive attitudes toward the Hawaiian language and support for a bilingual linguistic landscape may be already present in the wider community. The positive attitudes toward the Hawaiian language and creating a bilingual linguistic landscape indicate that Hawai‘i residents’ communicative expectations concerning the Hawaiian language vary by beliefs more strongly than they vary by ethnic group. Additionally the results suggest that many of Hawai‘i’s residents have the communicative expectation of the government supporting the Hawaiian language via a Hawaiian-English linguistic landscape. Future research could focus on the examining the source of support for creating a bilingual linguistic landscape. For instance, it would be important to learn whether Hawai‘i residents believe that a bilingual linguistic landscape could yield economic benefits for the State through tourism or if their support is socially based.

Furthermore, the most influential factors in determining support for bilingual signs are attitudes, which are more easily modifiable than socio-demographic factors. This has promising implications for language advocates. Measures promoting positive attitudes can be used in advocacy campaigns for bilingual signs. Based on this research, Hawaiian language promotion campaigns should focus on attitudes and beliefs. These campaigns could promote the positive impact of the bilingual signs on Native Hawaiian health and on the Hawaiian language and promote the importance of the perpetuating the Hawaiian language. Influencing these attitudes and belief may change support for a bilingual linguistic landscape.

Native Hawaiians suffer from poor mental and physical health due to numerous factors, including cultural trauma, defined as a state where “cultural knowledge and practices have been weakened to the extent that they fail in their capacity to imbue individual existence with meaning and value” (Salzman & Halloran, 2004). An aspect of

cultural trauma for Native Hawaiians is the loss of the Hawaiian language experienced by several generations. A bilingual linguistic landscape will likely improve the visibility and status of the Hawaiian language which will in turn encourage Native Hawaiians to reconnect with their language and increase their social status, both of which are suspected to be associated with improved health and well-being. Language experts advocate for monitoring climates to measure the circumstances needed for legislation policies that will make a practical difference in language revitalization (Romaine, 2002). This research begins to establish a benchmark in public attitudes, values, and beliefs toward the Hawaiian language and determine the current communicative expectations for Hawai'i.

## CHAPTER 5. CONCLUSIONS

“Everyone agrees that there is one critical social determinant of health, the effect of colonization”  
-(Mowbray, 2007)

### **Summary of Findings**

The focus of this dissertation research was on the impact that Hawaiian language decline has had on Native Hawaiians and on Hawai‘i residents’ attitudes toward a Hawaiian-English bilingual linguistic landscape. Chapter Two presented a focus group study with Native Hawaiians on their experiences of Hawaiian language loss, their thoughts on the current and ideal status of the Hawaiian language, and their views on the potential impact of a Hawaiian-English linguistic landscape on the Hawaiian language and their communities, families, and selves. In Chapter Three, the process by which a survey was modified to measure peoples’ attitudes toward the Hawaiian language, interest and participation in the Hawaiian language and culture, and support for a public bilingual linguistic landscape was reported. In Chapter Four, a quantitative study and its results from the administration of the modified survey to a random sample of adult residents of the State of Hawai‘i were presented. These results describe the attitudes of White, Japanese, Filipino, and Native Hawaiian residents of Hawai‘i toward the Hawaiian language and a bilingual linguistic landscape, and identify variables that are associated with support for a bilingual linguistic landscape.

Many Native Hawaiians view the Hawaiian language as very important to them personally, culturally, and to their community as a whole. Having the Hawaiian language more visible and accessible provides them with an important connection to the past, a heightened sense of pride and self-worth, and a stronger cultural identity and communication. These findings are consistent with what has been theorized by Native Hawaiian and other indigenous scholars (Fowler, 1996; Silva, 2006). Despite the importance of the Hawaiian language to them, the Native Hawaiian participants did not believe that it was viewed as important by non-Native residents of Hawai‘i. They commented that it is often trivialized and devalued by others. Ideally, they want to see that Hawaiian language taught broadly in the public education system, spoken throughout the Hawaiian community, and used in the mainstream society of Hawai‘i. They believe that creating a bilingual linguistic landscape, while costly and time consuming, would be a step in the direction of achieving this ideal status for the Hawaiian language. In their

view, a bilingual linguistic landscape would improve the self-esteem of Native Hawaiians, increase their motivation to learn the language, and increase the value of the language. These positive opinions of a bilingual linguistic landscape were tempered by a concern for a loss of kaona (the subtleties of the language hidden in its figurative meanings). However, overall Native Hawaiian participants were supportive of continued research around support for a Hawaiian-English bilingual linguistic landscape and provided valuable insights to inform such research.

A survey from Aotearoa New Zealand that measures support for a Native language in the context of an English-dominated society was modified for the Hawai'i context. Ten novel items were generated based on the focus group data and a review of literature on English-only policies and on indigenous health and language. After review from a panel of experts, the modified survey was pretested using two convenience samples of eight cognitive interviews each. The survey was modified after the first round of interviews. This modified survey was then used in the second round and underwent more modifications. The final version of the survey was created by reviewing the changes recommended by the expert panel and the two rounds of cognitive interviews. The Attitudes Toward the Hawaiian Language survey retained nine of the 10 added items for a total of 21 variables and averaged 15 minutes in length.

Finally, the Attitudes Toward the Hawaiian Language survey was administered, via telephone, to a random sample of 260 adult residents of Hawai'i, which included 65 Native Hawaiians, 65 Whites, 65 Filipinos and 65 Japanese. Overall, respondents of all ethnicities held positive attitudes toward the Hawaiian language, believed that a bilingual linguistic landscape would positively impact the Hawaiian language and Native Hawaiian health, and supported the idea of creating a bilingual linguistic landscape. Comparing between ethnic groups, Native Hawaiians had the most positive attitudes toward the Hawaiian language, were more likely to have an interest or participate in Hawaiian cultural activities and language, and were most supportive of creating a bilingual linguistic landscape. Whites followed closely behind Native Hawaiians in their positive attitudes and support in these areas followed by Japanese and Filipinos.

Six of the ten constructs that were added to the Attitudes Toward the Hawaiian Language survey were significantly associated with support for a bilingual linguistic

landscape. Five of these relationships were in the expected direction. These variables included: 1) impact of a bilingual linguistic landscape, 2) importance of perpetuating the Hawaiian language, 3) impact of a bilingual linguistic landscape on Native Hawaiian health, 4) relative perceived ethno-linguistic group vitality, and 5) American identity. For instance, Whites who perceived Native Hawaiians as having greater control of societal resources relative to Whites were less supportive of a bilingual linguistic landscape. This finding is supported by that of Barker and Giles (2002) who found that Whites who perceived Whites as a group to have more control over resources compared to that of Latinos were less likely to support English-only policies. Whites may perceive Native Hawaiian control over resources as a threat and may therefore be less likely to support a bilingual linguistic landscape. Alternatively, this could be due to the belief that the Native Hawaiian community has sufficient access to resources and is therefore able to promote the language without the government establishing a bilingual linguistic landscape. This study also found that Whites with stronger American identities were less supportive of a bilingual linguistic landscape. This is supported by Frensdreis and Tatalovich (1997) who found that strength of American identity was positively associated with support for English only policies. Whites who strongly identify as American may find the promotion of a language other than English to be non-, or even anti-, American.

The stronger one's beliefs in the impact of a bilingual linguistic landscape, the importance of perpetuating the Hawaiian language, and the impact of a bilingual linguistic landscape on Native Hawaiian health, the more supportive one is of a bilingual linguistic landscape. These findings are supported by the literature review and focus group data presented in Chapter One. Native Hawaiian and other indigenous scholars have written about the connection between native language and health (Brown et al., 2012; Carlton et al., 2011; Trinidad, 2011). Additionally, focus group participants discussed the positive health impacts of Hawaiian language revitalization. Participants also mentioned that, as the native language of Hawai'i, the Hawaiian language should be perpetuated. Finally, focus group data agreed with Elderman (2010) idea that the presence of a minority language in the linguistic landscape can confer status and value on that language.

One of the constructs added to the survey was significantly associated with support for a bilingual linguistic landscape in the opposite direction from what was predicted. Barker, et al. (2001) found that the more Spanish one perceived in the linguistic landscape the less supportive English-only policies one would be. However, as presented in Chapter Four, the amount of Hawaiian in the linguistic landscape was negatively associated with support for a bilingual linguistic landscape. This may be due to a belief that the Hawaiian language is already visible in the linguistic landscape. It could also be a result of a concern over the rise of the Hawaiian language such that English is perceived and threatened and in need of defense

Having preexisting Hawaiian language skills, a belief that a bilingual linguistic landscape will improve Native Hawaiian health, a belief that a bilingual linguistic landscape will positively impact the Hawaiian language, and a belief that it is important to perpetuate the Hawaiian language were strongly and independently associated with having a more supportive attitude toward a bilingual linguistic landscape. These factors were more important than age or ethnicity in understanding a person's level of support for a linguistic landscape. It appears that a person's attitude toward the Hawaiian language and beliefs regarding the impact of the promotion on Native Hawaiians are the most influential factors in determining support for Hawaiian language promotion.

### **Implications**

Indigenous language loss has been identified as one of many important contributors to the poor health and social status experienced by indigenous peoples (Fowler, 1996; Silva, 2006). Through this lens, language revitalization efforts can be viewed as health promotion. However, the impact of the decline of the Hawaiian language on Native Hawaiians, prior to this investigation, had not been empirically examined. This dissertation research supports what indigenous scholars have been indicating for years; the decline of the Hawaiian language has contributed to a loss of cultural identity and connectedness and in turn has adversely affected Native Hawaiian health and wellbeing. Continued revitalization of the Hawaiian language and culture are important goals within the Hawaiian community. Developing culture and language promotion programs and campaigns may have effects reaching beyond just the language and culture to the very health and well-being of the community. These results lend

support to the inclusion of Hawaiian language and cultural components in health promotion programs and campaigns as a way of promoting the collective pride, worth, esteem of Native Hawaiians, which will surely empower them and have positive impacts on other areas of their lives.

A new tool to measure people's attitudes toward the Hawaiian language, support for a bilingual linguistic landscape, beliefs about the impact of a bilingual linguistic landscape, relative group vitality, interest and participation in the Hawaiian language and culture, and other related constructs has been developed. Although it needs more rigorous psychometric testing to confirm its reliability and validity, it can be used to monitor these attitudes and beliefs over time or to explore support for other Hawaiian language or cultural promotion efforts. For instance, the inclusion of additional items to measure support for another method of language promotion would improve our understanding of support for that method as well as possible predictors of that support. This information could then be used to develop targeted advocacy campaigns.

The Hawaiian language is one of the two official languages of the State of Hawai'i. There are several legislative acts that support its promotion and perpetuation throughout the state and in the educational system. It is highly valued by the Native Hawaiian community and well-respected by other Hawai'i residents, as suggested by the research here. Promotion of the Hawaiian language via the creation of a public Hawaiian-English linguistic landscape may be a viable option. Many residents believe that this could benefit not only the status of and interest in the Hawaiian language but the status and well-being of Native Hawaiian communities.

It is believed that best explains support for a bilingual linguistic landscape, rather than age, ethnicity, or location of residence. This has implications for advocacy campaigns for bilingual signs specifically, and Hawaiian language promotion more generally. Focus should be placed on educating the public and policy makers about the potential impacts of bilingual signs and the importance of perpetuating the Hawaiian language as the native language of Hawai'i. Hawaiian language advocates could incorporate this into their promotion efforts, such as lobbying for funding for Hawaiian language education. This research suggests that advocates should focus on the potential impacts of their language promotion efforts on the Native Hawaiian language, the Native

Hawaiian community, and the importance of perpetuating the Hawaiian language as the native language of Hawai‘i.

Currently, the Hawaiian language has limited means of transmission and largely remains in the home, language schools, and Native Hawaiian ceremonies and events. Movement toward the top of the language revitalization scale involves promoting the language in the wider community such that its daily and public use is encouraged. A public bilingual linguistic landscape will encourage this use. Additionally, it will indicate that the Hawaiian language is important, relevant, and remains a viable means for communication. The increased visibility of and interest in the Hawaiian language from bilingual signs would encourage commitment to other Hawaiian revitalization efforts, from within the Native Hawaiian community as well as from the broader community in Hawai‘i.

### **Future Research**

The Hawaiian language is important to the Native Hawaiian community in perpetuating the Hawaiian culture, promoting a positive and strong Hawaiian cultural identity, and improving self-worth and self-esteem. Given the results of this research, continued efforts should be directed at assessing the connection between language, cultural revitalization, and Native Hawaiian health. This dissertation research utilized cross-sectional data. Future research should be longitudinal in nature, including measuring health and participation in the Hawaiian language and Hawaiian language education over time. Based on the research presented in this dissertation, we would expect to see positive changes in the cultural identity, self-worth, and self-esteem of individuals as their participation in the Hawaiian language or culture increased. This would better enable us to make causal inferences regarding the effects of language promotion on Native Hawaiian well-being.

Native Hawaiians have the most positive attitudes toward the language and are most supportive of creating a bilingual linguistic landscape compared to other ethnic groups. However, attitudes in the broader society in Hawai‘i are also positive toward the Hawaiian language and generally supportive of a bilingual linguistic landscape. Future research should include an assessment of policies which govern public linguistic landscapes to determine who the decision makers are and to better understand the process

for linguistic landscape decision making. Key informant interviews with these decision makers would provide a better understanding of the barriers to and facilitators of the creation of a bilingual linguistic landscape.

Another important step in determining the feasibility of creating a Hawaiian-English linguistic landscape is to begin to determine who would be responsible for determining the Hawaiian translation on signs. Because of the potential for contention around this issue, it may be important to start these discussions between university and community/family learners of the Hawaiian language. Both groups can also provide guidance on how to best preserve the kaona of the language in a bilingual linguistic landscape.

Finally, the field of research in cultural trauma in Native Hawaiians is in its infancy. The decline of the Hawaiian language is just one aspect of cultural trauma that has been passed down through generations. Exploratory research on other aspects of initial cultural trauma in Native Hawaiians, such as alienation from their stewardship relationship with their ancestral lands, loss of the kapu system, and mass death from disease, is needed to better understand their transmission through time and impact on Native Hawaiians today. Confirmatory research based on Sotero's model of cultural trauma with a multi-generational sample of Native Hawaiians should be conducted to examine the relationship between knowledge and perceptions of these past traumatic experiences and health behaviors (e.g., substance abuse, domestic violence, poor diet) and health status indicators (e.g., depression, obesity, cardiovascular disease). Research regarding Native Hawaiians' experiences of cultural trauma today, such as racism, discrimination, and cultural co-option, is also warranted. Studies are needed to investigate the relationship between these modern forms of cultural trauma and health behaviors and status. Intervention studies to examine the potential impact of culture and language revitalization programs on these experiences of cultural trauma, health behaviors, and health status are also needed.

## **Conclusion**

This three-part dissertation study examined the importance of the Hawaiian language and attitudes toward creating a Hawaiian-English linguistic landscape. Recognizing the importance of the Hawaiian language to the Native Hawaiian

community and creating more opportunities to learn and speak the language may help promote cultural identity, connectedness, and improve self-esteem. This dissertation also created a multi-measure survey to describe support for a bilingual linguistic landscape and related constructs. The results from the administration of this survey suggest that the creation of a bilingual linguistic landscape is supported by Hawai‘i residents. Major correlates of this support are Hawaiian language skills, belief that bilingual signs will improve Native Hawaiian health and promote the Hawaiian language, and belief that it is important to perpetuate the Hawaiian language. Because of the mounting evidence supporting the importance of language promotion as a means of health promotion, future efforts should be made to revitalize the Hawaiian language both within the Native Hawaiian community and throughout the state of Hawai‘i.

## **APPENDIX A. BACKGROUND INFORMATION ON CULTURAL TRAUMA**

People of a distinct cultural group can be subjected to cultural trauma in a number of ways. Examples of culturally traumatizing events include, but are not limited to, forced migration or deportation (e.g., Hmong refugees), genocide (e.g., the Holocaust), collapse of an empire, or forced subjugation by another socio-political group leading to colonization or occupation (e.g., Indians of the Americas by Western-Europeans). Cultural trauma was first theorized in the 1960's to better understand the trauma experienced by Holocaust survivors and their offspring. Studies have found that the offspring of Holocaust survivors show evidence of social and psychological disturbances (e.g., separation anxiety, panic attacks) from the trauma experienced by their parents, despite the fact they did not directly experience the Holocaust (Abrams, 1999; Whitbeck, Adams, Hoyt, & Chen, 2004). This suggests that the social and psychological ramifications of cultural trauma may be transmitted inter-generationally and that first-hand experience of the original traumatic event is not necessary.

Sztompka (2000) lists four characteristics of traumatizing social change, all of which must be present for an event to be culturally traumatizing: 1) sudden and rapid, 2) comprehensive and deep in that it affects many aspects of a culture in a substantive way, 3) perceived as being imposed from outside the culture, and 4) interpreted by the cultural group experiencing the change as unforeseen, unwanted, shocking, and repulsive. As Sztompka (2000) describes, "People suddenly find themselves in a cultural world completely at odds with their indigenous cultures, and...serious collective trauma emerges."

Cultural trauma theory is essentially three social epidemiological theoretical frameworks; psychosocial, political/economic, and social/ecological systems (Krieger, 2001). Psychosocial theory suggests that stressors from the social environment increase susceptibility to disease. Political/economic theory suggests that health and disease are influenced by political, economic, and structural determinants, such as class inequality. Finally, social/ecological systems theory recognizes disease risk "evolves over a lifetime via cumulative and interactive processes" (McMichael, 1999, p. 893).

Indigenous people, such as Native Americans and Native Hawaiians, are theorized suffer from cultural trauma as a result of colonization. Colonization may occur

through migration of people alone or through the formal assumption of control over the territory by military or civil representatives (e.g., missionaries and business people) of the dominant power. The purposes of colonialism include economic exploitation, aggressive humanitarianism, creation of new markets, and extension of the colonizer's way of life beyond its borders. Regardless of the initial purpose of colonization, the previously independent territory experiences change in social structure, government, and economics.

Cultural trauma from colonization is exacerbated when the gap between the indigenous culture and the colonizers' or occupiers' culture is large (e.g., individualistic versus collectivistic; monotheistic versus polytheistic), such as the case between the culture of the indigenous people of Hawai'i and their occupier's culture. In this case, the difference between these two cultures was so broad as to encompass language (e.g., Hawaiian versus English; oral versus written), gender relations (e.g., open sexuality versus puritanical), relationship to land (e.g., shared versus privatized), religion (e.g., polytheism versus monotheism), social values (e.g., interdependence versus independence) and government (e.g., stable structured hierarchy versus capitalistic democracy).

### **Theory of Cultural Trauma: The Hawai'i Experience**

Many scholars (Hershel, 1986; Silva, 2006; Bushnell, 1993) describe colonization in the Hawaiian Kingdom during the 1800s. The European and American foreigners introduced venereal and epidemic diseases (e.g., cholera), thus weakening the native population (Silva, 2006). Native Hawaiians also suffered psychologically from degradation of their socio-religious beliefs and practices, art, and language; condemnation of their land management and political systems; and devaluation of their indigenous world view and aspirations (Hershel, 1986). The experience of Native Hawaiians and the illegal overthrow of the Hawaiian Kingdom illustrate Sotero's model, in which there was (1) disenfranchisement, (2) economic deprivation, (3) overwhelming physical and psychological violence, and (4) cultural dispossession.

The disenfranchisement and economic deprivation of Hawaiians are both linked to the privatization of land. Land in Hawai'i was privatized and made purchasable in 1848 through the Mahele, an act signed into effect by King Kamehameha III due to increased foreign pressure and the threat of economic instability (Hershel, 1986). This change of land tenure from stewardship/kinship to privatization can be seen as a "foreign

solution to the problem of managing lands increasingly emptied of people” due to low births rates and epidemics (Osorio, 2002, p. 49). Both the missionary families and American businessmen began taking ownership of land and establishing their own political and economic systems (McCubbin & Marsella, 2009). Because land privatization was a concept foreign to Hawaiians, many of them were less landless, which resulted in the loss of their means of self-sufficiency. Also around this time, the newly introduced idea of work for wages, which was another foreign concept to Hawaiians, began to spread across the islands. Hawaiians also were exploited under this new economic system. In the early 1900’s for example, blacksmiths of Scottish descent earned almost 30% more per day than Native Hawaiian blacksmiths (Hershel, 1986).

There are accounts of recurring violence between Westerners and Hawaiians dating back to Captain James Cook’s<sup>3</sup> first voyage to the Hawaiian Islands. On the ship’s first day in Hawaii, one of Captain Cook’s men shot and killed the warrior Kapupu’u for “stealing”<sup>4</sup> from the ship (Silva, 2006). Violence with Captain Cook eventually culminated in his death and several days of fighting (Kuykendall, 1938). Another prime example of physical violence and dispossession occurred during the 1893 overthrow of the sovereign of the Hawaiian Kingdom, Queen Lili’uokalani. During the days leading up to the overthrow, 162 US Marines landed in Honolulu with the professed purpose of protecting American nationals in Hawai’i. However, they were not stationed near American lives but outside ‘Iolani Palace, the residence of the Queen, to assist with the illegal overthrow by primarily American businessmen. In 1895, Hawaiians organized a counterrevolution led by Robert Wilcox, which resulted in 10 days of fighting, and eventually Wilcox was captured and the Queen imprisoned.

In addition to the physical violence, Native Hawaiians also were subject to psychological violence. Psychological violence is defined as any action or set of actions that directly impairs others’ psychological integrity (Service de police de la Ville de Montréal, 2012). Dating back to Captain Cook’s arrival, most Westerners interacted with Native Hawaiians with a sense of superiority. An illustration of such thinking can be

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<sup>3</sup> The arrival of Captain James Cook is widely considered to be the starting point of Western contact with the Hawaiian Islands. While there are records of other Westerners making contact prior to Captain Cook’s 1778 arrival, this date serves as the beginning of sustained contact with the West.

<sup>4</sup> Pre-contact Hawaiians had no concept of stealing.

found in questions on the 1846 census which assumed that Native Hawaiians were lazy and apathetic (e.g., “What are the best means of abolishing indolence and indifference...?”), ali’i were oppressive (e.g., “how far did the native chiefs oppress the native?”), and Native Hawaiian women benefited from marrying white men (e.g., “what moral improving effect upon native females...?”) (Silva, 2006, p. 49).

Fuchs (1961) states that, “colonizers supplanted Native Hawaiian culture whenever possible, degrading culture, language, art, and attacking religious, land, property, and political systems” (p. 12). A major example of cultural dispossession occurred in 1819 with the abolishment of ‘ai kapu or eating taboos. Prior to its abolishment, the ‘ai kapu was part of the very foundation of the Hawaiian culture designed to maintain political and spiritual harmony and balance throughout the Hawaiian Islands (Lind 1934, as cited by McCubbin & Marsella, 2009). Many reasons for the abolishment of ‘ai kapu have been advanced to include a power struggle among the ranks of Hawaiian ali’i. Often overlooked is the influence that the mass death of Hawaiians had at the time due to infectious diseases (Bushnell, 1993). The spread of infectious diseases (e.g., syphilis, gonorrhea, tuberculosis, typhoid, and small pox (Diamond, 1999), declining fertility, and high infant mortality decimated the Hawaiian population while it had no effect on the white foreigners, which may have led many Hawaiians to question their religious beliefs (Hershel, 1986). The ruling ali’i may have lost faith in the kapu system or thought that ‘ai noa, free eating, may have been protective (Silva, 2006).

American missionaries, who began arriving in the islands in 1820, hastened the cultural dispossession of Hawaiians. The missionaries spread Christianity and discouraged native cultural practices, such as hula and healing, calling them idolatrous and crude (McCubbin & Marsella, 2009). A major influence of the missionaries was the reduction of Hawaiian to written form (Silva, 2006). The benefits of a writing system are obvious, however, in this context, it “was meant to, and did, facilitate the process of conversion to Christianity” (Silva, 2006, p. 33). The introduction of writing brought government sponsored newspapers, many with missionaries at the helm. “While the main purpose of these papers was to communicate laws and government policies, the missionaries in charge of publication also used them to proselytize, to civilize, and to

promote ideas such as farming for profit rather than subsistence” (Silva, 2006, p. 35). Over the period from the 1820s to 1896, there was a decline in the number of schools using Hawaiian language as a medium of instruction. A major blow to Hawaiian-language was the passage of an 1896 law, which declared English as the medium of instruction in all public and private schools. By 1980, only about 2,000 native speakers of approximately 200,000 Native Hawaiians, mostly over the age of 20, remained (Language Materials Project: Hawaiian, 2010).

The aforementioned examples of disenfranchisement, economic deprivation, physical and psychological violence, and cultural dispossession experienced by Native Hawaiians are critical features of the insidious process of cultural trauma depicted in Sotero’s model. In her model, she further categorizes the trauma responses that are exhibited by the primary generation(s) into three areas: physical, social and psychological. Native Hawaiians alive during the initial period of US occupation of the Hawaiian Kingdom, i.e., the primary generations, are believed to have suffered from these physical, social, and psychological consequences. Exposure to foreign diseases, declining fertility, and high infant mortality rates, contributed to the decimation of the population (Hershel, 1986). In 1778, at the dawn of Western contact, upwards of 800,000 Native Hawaiians were estimated to be living in the Hawaiian Kingdom; but in half a century this number plummeted to only 135,000 and by 1893 it plummeted further to only 40,000 (Crosby, 1992).

Native Hawaiians also experienced tremendous discrimination and social stigmatization during the initial colonization period. The psychological health of Native Hawaiians also began to suffer. Westerners’ views of Native Hawaiians as inferior, lazy, and in need of salvation began to influence how Native Hawaiians viewed themselves (McCubbin & Marsella, 2009). Young (1980, p. 10) states that due to their “loss of identity, loss of prestige, and cultural confusion, the Hawaiians had no will to live and began to die at an alarming rate.” Bushnell (1993) describes the intertwining of the psychological and physiological stressors that contributed to the mass death of Hawaiians.

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 (p. 55-56).

### **Intergenerational Modes of Transmission**

Continuing along in Sotero's model, she further identifies how latter generations are also affected by the initial events leading to cultural trauma. She lists six pathways through which the long-term effects of trauma are maintained: physiological, genetic, psychosocial, environmental, social/economic/political systems, and legal and social discrimination. The colonization experience of Native Hawaiians provides examples of the intergenerational transmission of cultural trauma via these six pathways. The cumulative effects of colonization on the population led to an excess of social and physical ills and, ultimately, social and health inequities. From this perspective, the poor health status of indigenous populations is viewed as the result of the accumulation of political, economic, spiritual, and social disenfranchisement, resulting disadvantages, and associated stressors across generations.

**Physiological.** The first modes of intergenerational transmission of cultural trauma are physiological and genetic. Because of past physiological, genetic, and environmental insults on the ancestors of Native Hawaiians, subsequent generations are assumed to be predisposed to diseases, such as obesity, diabetes, and heart disease. The poor physical health profile of Native Hawaiians illustrates this phenomenon. Compared to other ethnic groups in Hawai'i, Native Hawaiians have a significantly higher prevalence of diabetes and associated risk factors and complications, such as end-stage renal disease (Furubayashi & Look, 2005). They also have a higher prevalence of asthma, and overweight/obesity, hypertension and poorer self-reported physical health (Hawai'i State Department of Health, 2008). Additionally, research findings suggest that type 2 diabetes in later life may be associated with metabolic adaptations of the fetus in response to maternal malnutrition, making later generations more susceptible to type 2 diabetes (Kanaka-Gantenbein, 2010). Compared to Whites (11.0%), Native Hawaiians are more likely to report fair to poor general health (24.6%) (Florentina, Salvail, & Nguyen, 2011). Compounding the seriousness of poor physical health is the established association between depression and type 2 diabetes (Mezuk, Eaton, Albrecht, & Golden, 2008) and cardiovascular disease (Van der Kooy et al., 2007; Goodwin, Davidson, & Keyes, 2009).

**Genetic.** Genetics is the second pathway that Sotero lists as a mode of transmission for cultural trauma. Despite the importance of socio-economic and environmental contributors, genetic factors have also been implicated as a cause of Native Hawaiian poor health. Many studies have found the health disparities experienced by Native Hawaiians persist after controlling for possible confounders (i.e., socio-demographic factors). For instance, the prevalence of overweight in infants born to Native-Hawaiian/Pacific-Islander mothers was four times that of infants born to Japanese, Chinese, and Caucasian mothers. This disparity remained after adjustment for maternal (e.g., weight, family history of diabetes) and fetal characteristics (e.g., gender) (Silva, Kaholokula, Ratner, & Mau, 2006). Taualii (2012) found that Pacific Islanders, including Native Hawaiians, were more likely to report poor health even after controlling for age, sex, education, income, employment status. In a 1997 study, Native Hawaiians, together with Filipinos, were found to have the highest risk of dying from breast cancer even after controlling for socio-demographic factors and stage at diagnosis (Meng, Maskarinec, & Wilkens, 1997). Grandinetti, Seifried, Mor, Chang, and Theriault (2005) found a significant association between ethnicity and a risk factor (prolonged QTc interval) for malignant arrhythmias. Native Hawaiians had an adjusted-prevalence odds ratio of prolonged QTc of 1.81 which remained significant even after controlling for possible confounders (e.g., age, gender) (Grandinetti et al., 2005).

**Psychosocial.** The third mode of intergenerational transmission in Sotero's model involves psychosocial factors. Consistent with Sotero's model, Native Hawaiian youth bear a higher burden of substance abuse, domestic violence, and other DSM-IV psychiatric diagnoses than other ethnic groups (Andrade et al., 2006). In 2006, Native Hawaiian adults reported the highest current prevalence of depression (12.7%) (Cho, Salvail, Gross, Crisanti, Gundaya, & Smith, 2008), binge drinking (28.3), heavy drinking (11.8%), and current smoking (26.8%) compared to other ethnic groups in Hawai'i (Salvail, Nguyen, & Liang, 2010). Native Hawaiians also have the highest prevalence of frequent mental distress (10.9%) (Reyes-Salvail, Liang, & Nguyen, 2008), having considered suicide (2.6%), and having made a plan for suicide (2.2%) (Baker et al., 2003).

**Environmental.** The fourth mode of intergenerational transmission of cultural trauma is environmental. The environments in which many Native Hawaiians live also perpetuate the effects of cultural trauma. Mau et al. (2008) compared physical activity resources and fast food outlets across three communities in Hawai‘i with varying percentages of Native Hawaiian residents. They found that communities with more Native Hawaiian residents had more fast food outlets and exercise resources that were in worse repair (Mau et al., 2008). In 1921, the Hawaiian Homes Commission Act set aside 200,000 acres of land for Native Hawaiians, i.e., those with at least 50% Hawaiian blood quantum, to support self-sufficiency and self-determination. Approximately 37,000 Native Hawaiian individuals live on Hawaiian Homelands (SMS Research & Marketing Services, 2009). However, many of these homesteads are in low income and rural areas, such as Nānākuli on O‘ahu and Ho‘olehua on Moloka‘i, and areas with limited or poorly maintained infrastructure. Another striking example of the environmental disparities is apparent in the Waianae coast. It is home to the largest number of Native Hawaiians on Oahu, with a poverty rate twice the island’s average, as well as home to eleven of the island’s eighteen sewage treatment plants, two oil refineries and the PVT Nānākuli Construction and Demolition Material Landfill. Area residents have reported medical waste on beaches and construction debris including asbestos dust contaminating their neighborhoods (Harvey & Koh, 2012).

**Social, economic, and political systems.** The fifth mode of intergenerational transmission of cultural trauma is through the social, economic, and political systems. Here again, the experience of Native Hawaiians serve as an example of the transmission of cultural trauma and its negative effects. Despite the resurgence of the Hawaiian culture and language that began in the 1970’s, known as the Hawaiian Renaissance, the prevailing social, political, and economic systems remain Euro-American centric. This includes the prominent religions, justice and electoral systems, local and state governments, and land management. Compared to the general US population, more Native Hawaiians live in poverty, fewer have a college or graduate degree (United States Census Bureau, 2010), and more are homeless (Yamane, Oeser, & Omori, 2010). Additionally, in 1990, the prevalence of overcrowding in homes that are rented (35%) or owned (21%) by Native Hawaiians was higher than others in the rest of the population in

Hawai‘i at 16% and 11%, respectively (Mikelsons & Eschbach, 1993). Private schools, many of which were started by the missionaries, have resulted in a “two class system of education.” These private schools have steered much needed resources away from the public school system, where many Native Hawaiians are educated (Hershel, 1986). Poorer educational opportunities have led to poor job prospects and, compared to other ethnic groups, more Native Hawaiians are making less than \$20,000 annually (13.4%) (Cho et al., 2008).

**Legal and social discrimination.** The final intergenerational mode of cultural trauma transmission in Sotero’s model is legal and social discrimination. Until 2000, Native Hawaiians were lumped in with all Asians and other Pacific Islanders making their health profile invisible to funders and limiting the effectiveness of their advocates and lobbyists (Srinivasan & Guillermo, 2000). Native Hawaiians have had to protect their rights from recent legal challenges. There have been several legal challenges to Native Hawaiian entitlement programs, alleging that they are discriminatory and violate the Equal Protection Clause of the 14<sup>th</sup> amendment to the US Constitution. Some of these Hawaiian institutions that have been under attack include the Office of Hawaiian Affairs (Ho‘omanawanui), the state Department of Native Hawaiian Homelands, and Kamehameha Schools (educational programs for Native Hawaiian children) (McCubbin & Marsella, 2009; Kauanui, 2005). For instance, a 2000 US Supreme Court decision gave non-Hawaiians the ability to vote for OHA trustees. Prior to this, only Native Hawaiians had been able to vote in such elections. A 2010 report by the Office of Hawaiian Affairs found that Native Hawaiians are more likely to be sentenced to prison and have pretrial detention and, for any given charge, receive longer prison sentences (Office of Hawaiian Affairs, 2010). Not surprising then is the Hawai‘i Department of Public Safety report stating that a disproportionately high percentage (41%) of the institutionalized population in Hawai‘i is Native Hawaiian who make up about 25% of the state’s overall population (Hawai‘i Advisory Committee, 2011). There is an established link between discrimination and poor health outcomes, such as diabetes and hypertension, in Hawai‘i. Kaholokula et al. (2011) examined the relationship between racism and health in Native Hawaiians. They found that participants who perceived more racism were more likely to

report having hypertension. This was true even after controlling for education, and degree of Hawaiian and American cultural affiliation.

Cultural trauma continues to negatively affect current generations of Native Hawaiians through the six pathways described above: physiological, genetic, psychosocial, environmental, social/economic/political systems, and legal and social discrimination. The results of colonization are borne out today in inequalities in psychological and physical health status, poor social wellbeing, and limited prospects for social mobility (Horton, 2006). Hershel describes the current impact of colonization on Native Hawaiians by saying, “The direct oppression has ended, but its secondary effects are still devastating on a population subordinated by unequal life chances – a devalued culture, low socioeconomic status, unemployment, poor services, lower life expectancy, poor health, and unequal education” (Hershel, 1986, p. 457). As defined by the World Health Organization (WHO), health is “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” The intergenerational transmission of cultural trauma hinders the ability of Native Hawaiians to live healthy lives.

## **APPENDIX B. INFORMED CONSENT FOR FOCUS GROUP PARTICIPANTS**

### **Impact of language loss and promotion: A focus group study**

Claire Townsend, MPH, Principal Investigator  
University of Hawai‘i at Mānoa, Department of Public Health Sciences  
1960 East West Road, D 104  
Honolulu, HI 96822  
Phone: 808-692-1042

#### **A. DESCRIPTION AND PURPOSE OF STUDY**

I understand that the *Impact of language loss and promotion: A focus group study* is a research project that seeks to better understand the impact of the decline in use of the Hawaiian language on Native Hawaiians and their views for future efforts at promoting and restoring the language. I am being asked to voluntarily take part in this study because I am Native Hawaiian and reside in the community of [community name]. This study aims to develop a survey to measure people’s attitudes and preferences toward the Hawaiian language. This study is being conducted as part of the Principle Investigator’s dissertation (school) research.

#### **B. PROCEDURES AND EXPECTED LENGTH OF INVOLVEMENT IN STUDY**

I will be asked to take part in a focus group to discuss my views and ideas about the Hawaiian language and the effect that language promotion could have on my community. A focus group is a type of group made up of people with similar concerns or characteristics. The focus group will consist of myself and 8 to 14 other Native Hawaiians.

I will be asked to provide my thoughts, concerns and experiences the Hawaiian Language. The focus group will take about 2 hours to complete.

I will be audio recorded during the entire focus group.

I will be asked to complete a short form about myself, such as my age, gender, marital status, and education background. It should take about 3 minutes to complete the survey.

#### **C. RISKS/DISCOMFORTS**

Some of the focus group discussions may make me feel uncomfortable or upset but I do not have to answer any questions I do not wish to answer. I can leave the group at any time.

#### **D. BENEFITS**

There will be no direct benefit to me from being in this study.

#### **E. COSTS**

There will be no costs to me as a result of taking part in this study.

#### **F. COMPENSATION**

I will be given a \$20 store gift certificate for taking part in the focus group discussion. Before leaving the group, I will be given the gift certificate.

#### **G. CONFIDENTIALITY**

Taking part in research may involve a loss of privacy; however, my information will be handled as confidential as possible. The researchers will remind all the focus group participants that the information shared during the session is confidential (or private) and is not to be repeated outside the group. We will only use first names during the session. However, the researchers cannot guarantee that everyone will keep the discussion private. Only the study investigators, research assistants, and the transcriber for the study will have access to the study audiotapes. After the group discussion has been written out from the tapes, the tapes will be destroyed. No individual identities will be used in any reports or publications that may result from this study.

#### **H. CONSENT**

I have read the above information. My questions about taking part in this study have been answered. My permission is freely given. Giving my consent does not take away any of my legal rights in case of negligence of anyone working on this project. A copy of this consent form has been given to me. If I have further questions about the study and my involvement, I may contact Ms. Claire Townsend at 692-1042 or [clairemt@hawaii.edu](mailto:clairemt@hawaii.edu) to ask questions about the study at any time.

(If you cannot obtain satisfactory answers to your questions or comments or complaints about your treatment in this study, contact: Human Studies Program, University of Hawai'i, 1960 East West Road, Biomed B104, Honolulu, HI 96822, Email: [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu), Phone: 808-956-8480)

**CONSENT FOR RESEARCH PARTICIPATION IN**

**Impact of language loss and promotion: A focus group study**

Claire Townsend, MPH, Principal Investigator  
University of Hawai'i at Mānoa, Department of Public Health Sciences  
1960 East West Road, D 104  
Honolulu, HI 96822  
Phone: 692-1042

\_\_\_\_\_  
Signature of Study Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

## APPENDIX C. PARTICIPANT INFORMATION FORM

### Impact of language loss and promotion: A focus group study

Please <b>check</b> the correct response or <b>fill in the blank</b> to the following questions:	
<p>What is your sex? 1) <input type="checkbox"/> Male    2) <input type="checkbox"/> Female    3) <input type="checkbox"/> Other</p> <p>What is your age? _____</p>	<p>What is the highest level of schooling you completed? 1) <input type="checkbox"/> No high school diploma 2) <input type="checkbox"/> High school diploma or GED or CBase 3) <input type="checkbox"/> Some college, technical, or vocational training 4) <input type="checkbox"/> College graduate</p>
<p>What is your relationship status? 1) <input type="checkbox"/> Never married 2) <input type="checkbox"/> Currently married 3) <input type="checkbox"/> Partnered 4) <input type="checkbox"/> Divorced or separated 5) <input type="checkbox"/> Widowed</p>	<p>How would you best describe your overall health? 1) <input type="checkbox"/> Poor 2) <input type="checkbox"/> Fair 3) <input type="checkbox"/> Good 4) <input type="checkbox"/> Excellent</p>
<p>What is your employment status? 1) <input type="checkbox"/> Employed full time 2) <input type="checkbox"/> Employed part time 3) <input type="checkbox"/> Unemployed 4) <input type="checkbox"/> Retired 5) <input type="checkbox"/> Student</p>	<p>How would you best describe your Hawaiian language skills? 1) <input type="checkbox"/> None 2) <input type="checkbox"/> Elementary 3) <input type="checkbox"/> Limited working 4) <input type="checkbox"/> Professional working 5) <input type="checkbox"/> Full professional 6) <input type="checkbox"/> Native or bilingual</p>
<p>Where did you learn the Hawaiian that you know? (check all that apply) 1) <input type="checkbox"/> Immersion education 2) <input type="checkbox"/> Formal classes/instruction Participation training in another Native Hawaiian tradition 4) <input type="checkbox"/> Family 5) <input type="checkbox"/> Other: _____</p>	<p>How would you describe your participation in Hawaiian cultural events? 1) <input type="checkbox"/> None 2) <input type="checkbox"/> Little 3) <input type="checkbox"/> Some 4) <input type="checkbox"/> A lot</p>
<p>Thinking about the current situation in Hawaii, with both the amount of Hawaiian Language spoken and the places you see and hear Hawaiian, do you personally think there is more than enough, enough or not enough Hawaiian being spoken? <input type="checkbox"/> More than enough <input type="checkbox"/> Enough <input type="checkbox"/> Not enough</p>	<p>How important is the Hawaiian language to your Hawaiian cultural identity? 1) <input type="checkbox"/> <u>Not</u> at all important 2) <input type="checkbox"/> Of <u>little</u> importance 3) <input type="checkbox"/> <u>Somewhat</u> important 4) <input type="checkbox"/> <u>Very</u> much important</p>

## APPENDIX D. FOCUS GROUP GUIDE

### Step 1: Opening and Introductions

- A. Once all the participants have checked-in and are seated, the facilitator begins the focus group.
  - a) Thank everyone for attending.
  - b) Introduce yourself and your staff and your affiliations to the project and community.
  - c) Ask each participant to introduce themselves.
  - d) Explain the reason for the focus group and their involvement. Read the following script verbatim for this part:

#### Script begins

*Thank you again for agreeing to meet with us tonight to discuss Hawaiian language in your community, such as its current and ideal use, factors affecting its use and views on future Hawaiian language promotion.*

*You were asked to participate in this group because you are Native Hawaiian and live in this community – [name of community]. This group consists of people of different walks of life, but you all have one thing in common – you all are Native Hawaiian and live in this community. Therefore, we view every one of you as experts of your family and the community in which you live. And for this, you were asked to participate in this group.*

*Due to occupation and resulting discriminatory language policies and practices, Hawaiian is not as prominent as it once was. However, starting in the 1970's Hawaiian language and culture have experienced a renaissance with Pūnana Leo, status as an official language in the state, Native Hawaiian gathering rights, and overall increase in pride in being Hawaiian.*

*Today, we are here to talk about the importance of Hawaiian language to Hawaiian culture and people, the perceived current status of spoken Hawaiian in Native Hawaiian communities and Hawai'i, the impact of current use of Hawaiian language, the ideal use of Hawaiian, and the impact of a bilingual linguistic landscape on Native Hawaiians and Hawai'i in general. The information you share will be used to design a questionnaire to assess support for the Hawaiian language as part of my research. Are there any questions at this time?*

**[Address any questions and concerns]**

*I would like to now go over the consent form, which will explain more about today's meeting.*

**[Review the focus group consent form with the group].**

*Do you have any questions regarding the consent form? [Address questions]. If you are willing to participate further, please sign the consent form and date it. We will collect the last page – the one with your signature for our records. You can keep the other pages for your record.*

*Before we get started with the discussion, could you please complete the Participant Information Form we gave you when you checked in? Let's take 5 minutes to complete this. If you have questions, please feel free to ask.*

*Now I would like to go over the ground rules for our group. First, I would like to ask that everyone provide, and be given the opportunity to share, their thoughts and ideas. Second, I ask that we each respect the thoughts and ideas of others by not questioning or doubting what others have to say. Third, please keep what we talk about here in the group private. Do not share what others have said with people outside of this group. Does anyone have a question about these rules?*

**Step 2: Group Discussion.**

**[Turn on the audio recorders at this point]**

*I am going to present some questions for everyone to discuss. Please keep in mind that the purpose is to learn from all of you the importance of the Hawaiian language to you and your community, the impact of its decline in use, its current status and ideal use in the Hawai'i and your perceptions of the impact of having bilingual Hawaiian-English linguistic landscape. This is regardless of whether or not you are fluent in Hawaiian.*

Table 1. Questions for Focus Groups

<b>Areas of Interest</b>	<b>Focus Group Questions</b>
<ul style="list-style-type: none"> <li>• Importance of Hawaiian language to Hawaiian culture and people</li> </ul>	<p>6) Describe the importance of Hawaiian language to Hawaiian culture and people.</p> <p><u>Probes</u></p> <ul style="list-style-type: none"> <li>a. What about for you and your family personally?</li> <li>b. What about for the Hawaiian community as a whole?</li> <li>c. How is it important to your health or well-being?</li> </ul>
<ul style="list-style-type: none"> <li>• Current status of Hawaiian in Native Hawaiian communities and Hawai'i.</li> </ul>	<p>7) Describe the current status of the Hawaiian language in your community?</p> <p><u>Probes</u></p> <ul style="list-style-type: none"> <li>a. Is it spoken regularly or only for cultural activities or ceremonies?</li> <li>b. Are there any native speakers or speakers in general?</li> <li>c. What are some reasons for how Hawaiian is currently used?</li> <li>d. How do you feel about how Hawaiian is currently used in your home and community?</li> </ul> <p>8) Describe the current status of the Hawaiian language in Hawai'i in general?</p> <p><u>Probes</u></p> <ul style="list-style-type: none"> <li>a. When is Hawaiian used?</li> <li>b. How do people react to its use?</li> <li>c. How do you feel about how Hawaiian is currently used in Hawai'i?</li> <li>d. What effect, if any, does this status and use have on your community?</li> </ul>
<ul style="list-style-type: none"> <li>• Impact of current use of Hawaiian language.</li> </ul>	<p>9) How does the current use or lack thereof affect Native Hawaiians?</p> <p><u>Probes</u></p> <ul style="list-style-type: none"> <li>a. What about for you and your family personally?</li> <li>b. What impact does it have on the community as a whole?</li> </ul>

	<p>c. How does it affect Native Hawaiians' health and well-being?</p> <p>d. How does it affect their social position or status?</p>
<ul style="list-style-type: none"> <li>• Ideal use of Hawaiian</li> </ul>	<p>5) How would you like to see Hawaiian used in your community?</p> <p><u>Probes</u></p> <p>d. How would you like to have it used in your home?</p> <p>e. If Hawaiian was used that way today, how do you think this would affect the Native Hawaiian community? What makes you think that?</p> <p>f. How could this be achieved?</p>
<ul style="list-style-type: none"> <li>• Impact of a bilingual linguistic landscape</li> </ul>	<p>6) Regardless of whether or not you speak Hawaiian, what effects would a Hawaiian-English linguistic landscape have on you and your community?</p> <p><u>Probes</u></p> <p>a. What would the effect be on Hawai'i in general?</p> <p>b. How would it affect Native Hawaiians' health/well-being?</p> <p>c. How would it affect their status?</p> <p>7) Changing all of the signs to bilingual ones would be costly; does the cost affect your opinion of having bilingual signs?</p> <p><u>Probes</u></p> <p>a. Would you support the city and county and/or state government spending tax money on establishing a bilingual linguistic landscape? Why or why not?</p> <p>b. What do you think would help/hurt an effort to establish a bilingual linguistic landscape?</p>

**Step 3: Closing.**

*This concludes today's meeting. On behalf of [community organization] we would like to thank you very much for sharing your thoughts, concerns, and ideas with us. What was discussed here today will help us to design a survey to assess people's attitudes and preferences toward the Hawaiian Language. We will remain around after this to answer any questions you may have or to talk story. Mahalo again.*

## APPENDIX E. ORIGINAL ITEMS FROM “ATTITUDES, BELIEFS AND VALUES TOWARDS MĀORI LANGUAGE” SURVEY

### Attitudes, Beliefs and Values Towards Māori Language

**DATE** 2009

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#### INTRODUCTION FOR RANDOM SAMPLE

Good morning/afternoon/evening, my name is **AI** from Research New Zealand.

Recently, Te Puni Kokiri, the Ministry of Māori Development, sent your household a letter about research we are conducting on their behalf about New Zealanders' attitudes to the Māori Language. Could I please speak with the person living in your home who has the next birthday and is 15 years of age or more?

#### INTRODUCTION FOR MAORI SAMPLE

Good morning/afternoon/evening/Tena koe, my name is **AI** from Research New Zealand.

Recently, Te Puni Kokiri, the Ministry of Māori Development, sent your household a letter about research we are conducting on their behalf about New Zealanders' attitudes to the Māori Language. Could I please speak with the person living in your home who has the next birthday and is 15 years of age or more?

#### If necessary:

This research takes about 20 minutes. When would suit, or is now a good time?

#### Make appointment

#### Reintroduce as necessary

Good morning/afternoon/evening, my name is **AI** from Research New Zealand. We are conducting research on behalf of Te Puni Kokiri, the Ministry of Māori Development, about New Zealanders' attitudes to the Māori Language. This research takes about 20 minutes. When would suit, or is now a good time?

#### Background information only if needed:

- ♦ This is genuine market research. I'm not selling anything.
- ♦ Information provided is confidential. We report summary results about groups; we do not identify which individuals have said what.
- ♦ The sample for this survey was randomly selected from the electoral rolls, and the phone numbers from the white pages.

#### Read

As part of our quality improvement process, my Supervisor may listen to this call.

Q1 Before we begin, can you please tell me which ethnic group you belong to? You may belong to more than one. **Code many Read**

- 1 .... Māori **Māori quota**
- 2 .... New Zealand European
- 3 .... Samoan
- 4 .... Cook Island Māori
- 5 .... Tongan
- 6 .... Niuean
- 7 .... Chinese
- 8 .... Indian
- 96 .. Other **Specify**
- 99 .. Refused **;E Terminate 1**

Q2 And which of the following age groups do you come into? **Read**

- 1 .... 15–24
- 2 .... 25–34
- 3 .... 35–44
- 4 .... 45–59
- 5 .... 60+
- 99 .. Refused **\*\*Do not read\*\***

**If from Māori sample but do not identify as Māori, -- Terminate 2**

**Terminate 1:** Thank you for your time, but for this particular survey we need to know your ethnicity.

**Terminate 2:** Thank you for your time, but we have already spoken to enough people in your particular group.

Q3 The rest of this interview is about your awareness and opinions on the use of the Māori Language in New Zealand. Your answers will feed into the Government's planning and policy development, so it is important that everyone has their say. Are you happy to continue?

- 1 .... Yes, continue
- 99 .. ....Refuse topic **Terminate 3**

**Terminate 3:** That's fine. Thank you for your time.

Q4 Could you tell me if you agree or disagree with each statement.

**Probe** Is that strongly agree/disagree or just agree/disagree? **RND Read**

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly disagree	Disagree	Neither	Agree	Strongly agree	Depends	Don't know	Refused
a. It is a good thing that Māori people speak Māori on the marae	1	2	3	4	5	6	98	99
b. It is a good thing that Māori people speak Māori at home	1	2	3	4	5	6	98	99
c. It is OK that people greet others in Māori, but they can take it too far <u>Clarify answer: Do you dis/agree it can be taken too far</u>	1	2	3	4	5	6	98	99
d. It is a good thing that Māori people speak Māori in public places, such as in the street or supermarket	1	2	3	4	5	6	98	99
e. It is <u>not</u> right that Māori speak Māori in front of people who might not understand what they are saying <u>Clarify answer: Do you dis/agree it is not right</u>	1	2	3	4	5	6	98	99
f. Well-spoken Māori is a beautiful thing to listen to	1	2	3	4	5	6	98	99
g. All Māori <u>should</u> make an effort to learn to speak Māori themselves	1	2	3	4	5	6	98	99
h. I have a lot of respect for people who can speak Māori fluently	1	2	3	4	5	6	98	99
i. <u>Some</u> Māori language education <u>should</u> be compulsory in school for <u>Māori</u> children	1	2	3	4	5	6	98	99
j. <u>Some</u> Māori language education <u>should</u> be compulsory in school for <u>all</u> children	1	2	3	4	5	6	98	99

Q5 Now I would like to read you a number of statements made about the Government's involvement with the Māori Language. Could you tell me if you agree or disagree with each statement.

**Probe** Is that strongly agree/disagree or just agree/disagree? **RND Read**

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly disagree	Disagree	Neither	Agree	Strongly agree	Depends	Don't know	Refused
a. The Government should encourage the use of Māori in <u>everyday situations</u> such as in the <u>home</u> or at the marae	1	2	3	4	5	6	98	99
b. The Government should encourage the use of Māori on <u>ceremonial occasions</u> such as public welcomes for dignitaries	1	2	3	4	5	6	98	99
c. It would be good if Government Departments could conduct business in Māori if requested	1	2	3	4	5	6	98	99
d. The Government's support of the Māori <u>TV service</u> is a good thing	1	2	3	4	5	6	98	99
e. The Government's support of Māori <u>radio stations</u> is a good thing	1	2	3	4	5	6	98	99
f. It is important that the Government takes a role in recording how well the Māori language is doing	1	2	3	4	5	6	98	99
g. It is only right that signage is in both Māori and English. <u>Clarify:</u> This is <u>public signage</u>	1	2	3	4	5	6	98	99
h. The Government should provide resources to help people learn the Māori language	1	2	3	4	5	6	98	99
i. Support Maori language <u>education</u> (in schools, communities and/or the workplace)	1	2	3	4	5	6	98	99

Q6 Can you tell me how often or rarely you do the following activities. **RND Read.**

**Probe** Is that very often/rarely or just often/rarely?

	Very often			Rarely	Never	Depends	Don't know	Refused
a. Read/browse Māori magazines (e.g., Tū Mai, Mana)	1	2	3	4	5	6	98	99
b. Listen to Iwi Radio (Māori Radio)	1	2	3	4	5	6	98	99
c. Watch or listen to the Māori Television station	1	2	3	4	5	6	98	99
d. Watch or listen to the Te Reo television channel	1	2	3	4	5	6	98	99
e. Access websites about Māori culture	1	2	3	4	5	6	98	99
f. Access websites that contain Māori language resources	1	2	3	4	5	6	98	99
g. Attend ceremonies or events with Māori welcomes and speeches	1	2	3	4	5	6	98	99
h. Visit Māori art, culture or historical exhibits	1	2	3	4	5	6	98	99
i. Go to Kapa haka or Māori culture group concerts	1	2	3	4	5	6	98	99
j. Go to a marae	1	2	3	4	5	6	98	99

Q7 What is your highest educational qualification?

**Read**

- 1 NCEA, School C or other secondary school qualifications
- 2 Polytechnic qualification or Trade Certificate, or
- 3 Bachelors degree or higher
- 96 Other **Specify \*\*Do not read\*\***
- 97 None/No qualifications **\*\*Do not read\*\***
- 98 Don't know **\*\*Do not read\*\***

Q8 At present, are you ...? **Read Code first option they say yes to**

- 1 .....Self-employed
- 2 .....Full time salary or wage earner
- 3 .....Part time salary or wage earner (less than 30 hrs/week)
- 4 .....Retired
- 5 .....Full time home-maker
- 6 .....Student

- 7.....Unemployed
- 8.....Other beneficiary
- 99....Refused **\*\*Do not read\*\***

Q9 What town or city do you live in?

**If necessary:** What is the nearest town to you?

- 1 .... Answer **Specify**
- 95 .. Not applicable
- 98 .. Don't know
- 99 .. Refused

Q10 **Code respondent's sex**

- 1 .... Male
- 2 .... Female

Q11 Those are all the questions I have. Do you have any other comments you'd like to make about the subject of this interview?

- 1 .... Answer **Specify**
- 97 .. Nothing
- 99 .. Refused

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## APPENDIX F. POST PHASE ONE REVISED SURVEY

### ATTITUDES TOWARD THE HAWAIIAN LANGUAGE

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#### INTRODUCTION FOR RANDOM SAMPLE

Good morning/afternoon/evening, my name is ^I from Ward Research. We are conducting research about attitudes toward the Hawaiian language.

#### INTRODUCTION FOR HAWAIIAN SAMPLE

Aloha, my name is ^I from Ward Research. We are conducting research about attitudes toward the Hawaiian language.

#### If necessary:

This research takes about 15 minutes. Is now a good time to talk?

#### Background information only if needed:

- ◆ This is genuine research. I'm not selling anything.
- ◆ Information provided is confidential. We report summary results about groups; we do not identify which individuals have said what.
- ◆ The phone numbers for this survey were randomly selected from the white pages.

**Q1** Before we begin, can you please tell me, of all the ethnic groups you belong to, which one do you most identify with? **Code one Read**

- 1 .... Native Hawaiian **Hawaiian quota**
- 2 .... Caucasian **Causasian quota**
- 3 .... Japanese **Japanese quota**
- 4 .... Filipino **Filipino quota**
- 5 .... Other Pacific Islander ;E **Terminate 1**
- 6 .... Chinese ;E **Terminate 1**
- 96 .. Other ;E **Terminate 1**
- 99 .. Refused ;E **Terminate 2**

**Terminate 1:** Thank you for your time, but for this particular survey we are collecting information from the four predominant ethnic groups in Hawai'i.

**Terminate 2:** Thank you for your time, but for this particular survey we need to know your ethnicity.

**Once ethnic quotas are met, Terminate 3:** Thank you for your time, but we have already spoken to enough people in your particular group.

**Q2** What zip code do you live in? **Read code numerical zip code**

**Q3** The rest of this interview is about your opinions on the use of the Hawaiian language in Hawai'i and related ideas. Are you happy to continue?

- 1 .... Yes, continue
- 99 .. ....Refuse topic **Terminate 4**

Terminate 4: That's fine. Thank you for your time.

**Q4** Now I would like to read you a number of statements made about the Hawaiian Language in general. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **\*\*Do not read "Don't know or Refused\*\*"**

**Probe:** Is that strongly agree/disagree or just agree/disagree? **READ**

**If Necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Depends	Don't know	Refused
a. I have a lot of respect for people who can speak Hawaiian fluently	1	2	3	4	5	6	98	99
b. It is a good thing that Native Hawaiian people speak Hawaiian at home or in cultural settings	1	2	3	4	5	6	98	99
c. It is OK that people greet others in Hawaiian, but they can take it too far <u>Clarify answer: Do you dis/agree it can be taken too far</u>	1	2	3	4	5	6	98	99
d. It is a good thing that Native Hawaiian people speak Hawaiian in public places, such as in the street or supermarket	1	2	3	4	5	6	98	99
e. It is <u>not</u> right that Native Hawaiians speak Hawaiian in front of people who might not understand what they are saying <u>Clarify answer: Do you dis/agree it is not right</u>	1	2	3	4	5	6	98	99
f. Well-spoken Hawaiian is a beautiful thing to listen to	1	2	3	4	5	6	98	99

**Q5** Tell me how often or rarely do you do the following activities, from never to very often. **Read.**

**\*\*Do not read "Don't know or Refused\*\*"**

**Probe** Is that very often/rarely or just often/rarely?

	Never	Very Rarely	Sometimes	Often	Very Often	Don't know	Refused
a. Read/browse Hawaiian Cultural magazines	1	2	3	4	5	98	99
b. Watch 'Oiwi or 'Olelo TV	1	2	3	4	5	98	99
c. Access websites about Native Hawaiian culture or language	1	2	3	4	5	98	99
d. Attend ceremonies or events with Hawaiian welcomes and speeches	1	2	3	4	5	98	99
e. Visit Native Hawaiian art, culture or historical exhibits	1	2	3	4	5	98	99
f. Participate in Hawaiian cultural activities, i.e., hula	1	2	3	4	5	98	99
g. Practice Hawaiian traditions, i.e., make lei, throw net, pound poi	1	2	3	4	5	98	99

**Q6** Think about all the public signs that you see driving and walking around. This includes road signs, construction signs, warning signs, building signs, informational signs and all other government produced signs. This does not include commercial signs, like signs for restaurants. Thinking about these government produced signs: **\*\*Do not read "Don't know or Refused\*\*"**

	0% of the signs	25% of the signs	50% of the signs	75% of the signs	100% of the Signs	Don't know	Refused
What percent are in Hawaiian?	1	2	3	4	5	98	99

**Q7** The next several statements are about having both English and Hawaiian on all signs in Hawaii, everything from road and building signs to business and tourism signs. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree.

**\*\*Do not read "Don't know or Refused\*\*"**

**Probe** Is that strongly agree/disagree or just agree/disagree? **Read**

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. Bilingual signs would improve the status of the Hawaiian language	1	2	3	4	5	98	99
b. Bilingual signs would improve the status of Native Hawaiians	1	2	3	4	5	98	99
c. Bilingual signs would increase the value of the Hawaiian language	1	2	3	4	5	98	99
d. Bilingual signs would	1	2	3	4	5	98	99

increase the value of Native Hawaiians							
--	--	--	--	--	--	--	--

**Q8** Now I would like to read you a number of statements made about the state government's involvement with the Hawaiian Language. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **\*\*Do not read "Don't know or Refused\*\*"**

**Probe** Is that strongly agree/disagree or just agree/disagree? **Read**  
**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. It is important that the Government takes a role in recording how well the Hawaiian language is doing	1	2	3	4	5	98	99
b. It is only right that public signage is in both Hawaiian and English.	1	2	3	4	5	98	99
c. The Government should support the Hawaiian language by making it more visible in the community.	1	2	3	4	5	98	99
d. The government should use tax dollars to make all the signs in both Hawaiian and English.	1	2	3	4	5	98	99

**Q9** Please tell me how much you agree or disagree with the following statements, from strongly disagree to strongly agree. **\*\*Do not read "Don't know or Refused\*\*"**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
Being able to speak more than one language is a positive trait	1	2	3	4	5	98	99
Revitalizing the Hawaiian language will improve Native Hawaiian health and well-being	1	2	3	4	5	98	99
The Hawaiian language is the indigenous language of Hawai'i and is therefore more important to promote than other languages spoken in the state	1	2	3	4	5	98	99
People learn or speak Hawaiian in order to perpetuate the Hawaiian culture	1	2	3	4	5	98	99

People learn or speak Hawaiian as a way of rejecting the American culture	1	2	3	4	5	98	99
The Hawai'i State government does a good job of protecting the interests of people like me.	1	2	3	4	5	98	99
The Hawai'i State government does a good job of protecting the interests of other people	1	2	3	4	5	98	99

**Q10** How American do you feel, from completely American to not American at all? **\*\*Do not read "Don't know or Refused\*\*"**

	Not American at all	Somewhat not American	Equally American and not	Somewhat American	Completely American	Don't know	Refused
How American do you feel?	1	2	3	4	5	98	99

**Q11** Now I'm going to ask several questions about your ethnic group. Please tell me how much of each resource your ethnic group has in Hawai'i from none to all. **\*\*Do not read "Don't know or Refused\*\*"**

	None	Some	Average	Most	All	Don't know	Refused
How much economic and business control does your ethnic group have?	1	2	3	4	5	98	99
How much political control does your ethnic group have?	1	2	3	4	5	98	99
How much power does your ethnic group have?	1	2	3	4	5	98	99
How much wealth does your ethnic group have?	1	2	3	4	5	98	99

**Q12** Now I'm going to ask you those same questions but about Native Hawaiians. Please tell me how much of each resource Native Hawaiians have from none to all. **\*\*Do not read "Don't know or Refused\*\*"**

**\*\*If the respondent is Native Hawaiian ask these questions about Whites\*\***

	None	Some	Average	Most	All	Don't know	Refused
How much economic and business control do Native Hawaiians have?	1	2	3	4	5	98	99
How much political control do Native Hawaiians have?	1	2	3	4	5	98	99
How much power do Native Hawaiians have?	1	2	3	4	5	98	99
How much wealth do Native Hawaiians have?	1	2	3	4	5	98	99

**Q13** Picture a ladder with rungs numbered 1 to 10. At 1, on the top of the ladder, are the people who are the best off, those who have the most money, most education, and best jobs. At 10, the bottom of the ladder, are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Where on the ladder do you think you stand on the ladder from 1 to 10? **Read** Code response from 1 to 10

96 .... Depends/Don't know  
99 .... Refused

**Q14** The next several statements are about your feelings toward your native language. Please tell me how much you agree or disagree with each statement from strongly agree to strongly disagree. **\*\*Do not read "Don't know or Refused\*\*"**

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
I feel good about my native language as a sign of my social group.	1	2	3	4	5	98	99
My native language has very little to do with how I feel about myself.	1	2	3	4	5	98	99
My native language is an important reflection of who I am.	1	2	3	4	5	98	99
I often regret that I belong to a group that speaks my native language	1	2	3	4	5	98	99
Knowing one's native language benefits one's health	1	2	3	4	5	98	99

**Q15** Code respondent's sex

1 .... Female  
2 .... Male

**Q16** Where were you born? **Read**

1 .... Hawaii  
2 .... USA  
3 .... Foreign  
99... Refused **\*\*Do not read\*\***

**Q17** What is the highest level of education that you have completed? **Read**

1 Some high school  
2 High school diploma or GED  
3 Some college, technical, or vocational training  
4 College graduate or higher  
96 Other **Specify** **\*\*Do not read\*\***  
97 None/No qualifications **\*\*Do not read\*\***  
98 Don't know **\*\*Do not read\*\***

**Q18** How would you describe your Hawaiian language skills? **READ**

1....None **\*\* if none skip to Q20.**  
2....Elementary

- 3....Intermediate
- 4....Fluent
- 5....Native speaker
- 99... Refused

**Q19** Where did you learn the Hawaiian that you know? **READ Select all that apply**

- 1....Immersion education or formal classes
- 2....Participation in Native Hawaiian traditions or activities
- 3....Family and Friends
- 4....Other: \_\_\_\_\_
- 97...None
- 99... Refused

**Q19** At present, are you ...? **Read Code first option they say yes to**

- 1 .....Full time
- 2 .....Part time (less than 30 hrs/week)
- 3.....Retired
- 4.....Student
- 5.....Unemployed
- 96.....Other **Specify** **\*\*Do not read\*\***
- 99....Refused **\*\*Do not read\*\***

**Q20** Those are all the questions I have. Do you have any other comments you'd like to make about the subject of this interview? **Read**

- 1 .... Answer **Specify**
- 97 .. Nothing **\*\*Do not read\*\***
- 99 .. Refused **\*\*Do not read\*\***

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Thank you very much for your help, my name is "Interviewer" from Ward Research. If you have enquiries about this survey, please call the Principle Investigator, Claire Townsend: 808-692-1042.

DURATION: \_\_\_\_\_minutes

DATE: \_\_/ \_\_/ 2000

## APPENDIX G. ROUND ONE COGNITIVE INTERVIEW NOTES

### Attitudes Toward the Hawaiian Language

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#### INTRODUCTION FOR RANDOM SAMPLE

Good morning/afternoon/evening, my name is ^I from Ward Research. We are conducting research about attitudes toward the Hawaiian language or olelo Hawaii. This is genuine research. I'm not selling anything.

#### INTRODUCTION FOR HAWAIIAN SAMPLE

Aloha, my name is ^I from Ward Research. We are conducting research about attitudes toward the Hawaiian language.

#### If necessary:

This research takes about 20 minutes. Is now a good time to talk?

#### Background information only if needed:

◆ Information provided is confidential. We report summary results about groups; we do not identify which individuals have said what.

◆ The phone numbers for this survey were randomly selected from the white pages.

**Q1** Before we begin, can you please tell me, of all the ethnic groups you belong to, which one do you most identify with? **Code one Read**

- 1 .... Native Hawaiian Hawaiian quota
- 2 .... Caucasian Causasian quota
- 3 .... Japanese Japanese quota
- 4 .... Filipino Filipino quota
- 5 .... Other Pacific Islander ;E **Terminate 1**
- 6 .... Chinese ;E **Terminate 1**
- 96 .. Other ;E **Terminate 1**
- 99 .. Refused ;E **Terminate 2**

Reword instructions  
No problems

**Terminate 1:** Thank you for your time, but for this particular survey we are collecting information from the four predominant ethnic groups in Hawai'i.

**Terminate 2:** Thank you for your time, but for this particular survey we need to know your ethnicity.

**Once ethnic quotas are met, Terminate 3:** Thank you, but we are trying to get equal numbers for each group in Hawaii.

**Q2** Are you a resident of the state of Hawaii? **READ**

- 1... Yes
- 2... No **Terminate 4**

Lived in HI for a year, defined by  
state, ID  
Okay, no other problems

**Terminate 4:** Thank you for your time, but for this particular survey we are collecting information from Hawai'i state residents.

**Q3** How old are you? **READ** Code numerical age, if <18 **Terminate 5**

Okay

**Terminate 5:** Thank you for your time, but for this particular survey we are collecting information from adults in Hawaii. Is there someone there who is 18 years old or older?

**Q4** What zip code do you live in? **READ** Code numerical zip code

Okay
------

**Q5** The rest of this interview is about your opinions on the use of the Hawaiian language in Hawai'i and related ideas. Are you okay to continue?

1 .... Yes, continue  
99 .....Refuse topic **Terminate 6**

No problems
-------------

**Terminate 6:** That's fine. Thank you for your time.

**Q6** Now I would like to read you a number of statements made about the Hawaiian Language in general. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe:** Is that strongly agree/disagree or just agree/disagree?

**If Necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Depends	Don't know	Refused
a. I have a lot of respect for people who can speak Hawaiian fluently	Okay -understood							
	Okay - understood							
	Okay – shows interest in culture but not too the definition of a respectable trait							
	Okay							
	Okay, they have taken the time to learn							
	Okay – agree because it is rare							
	Okay – respect comes from more than the languages you can speak. Difference between everyday use and cultural							
	Okay							
b. It is a good thing that Native Hawaiian people speak Hawaiian at home and in cultural settings	Okay- thought mostly about home and family settings							
	Thought mostly about home							
	Okay, thought about any gathering with mostly NH							
	Okay, thought about halau's, in paddling							
	Okay, thought of general settings like baby luau and weddings rather than cultural settings. Maybe cultural gatherings?							
	Okay – cultural settings = ceremonies and gatherings.							
	Okay							
	It's a personal choice, not good or bad. May need to reword as it sounds like a judgment							
c. People should limit the Hawaiian they speak in public to greetings	Okay - understood							
	Confusing, people should only greet each other in Hawaiian							
	Sees some people as doing it just to get attention rather than communicate. Understood original "take it too far" question better.							
	Okay							
	Okay							

<u>Clarify answer:</u> <u>Do you dis/agree it should be limited to greetings</u>	Okay
	Confusing. Thought that it was saying that only Hawaiian should be used for greetings.
	Rephrase. Think of greeting people too much or using only Hawaiian for greetings
	What people? Depends on the background. Has seen people (non-Hawaiians) get carried away with it.
d. It is a good thing that Native Hawaiian people speak Hawaiian in public places, such as the supermarket	Okay
	Okay
	Again, some seem to be doing to get attention rather than as a cultural or personal practice.
	Okay, others who speak other languages do it all the time
	Supermarket seemed like a random example.
	Okay
	Okay
e. It is <u>not</u> right that Native Hawaiians speak Hawaiian in front of people who might not understand what they are saying <u>Clarify answer: Do you dis/agree it is not right</u>	Okay
	Okay – she related this to her experience as a non-native English speaker
	Hard to say something is not right. Felt judgmental. May change to “I don’t think...”
	Okay
	Answer depends on context, i.e., in public is okay but with others in the group might not be okay.
	Depends on the setting, it could rude.
	Depends on the context. Might want to add the context
f. Hawaiian is a beautiful thing to hear	Okay
	Confused, thought I meant the word “Hawaiian”, need to clarify
	Okay -understood
	Thought of music, need to add spoken Hawaiian
	Okay
	Might need to say spoken Hawaiian
	Okay
	Okay
okay	

**Q7** Tell me how often or rarely you do the following activities, from never to very often. **READ.**

**\*\*Do not read “Don’t know or Refused\*\***

**Probe:** Is that very often/rarely or just often/rarely?

	Never	Rarely	Sometimes	Often	Very Often	Don’t know	Refused
a. Read/browse Hawaiian cultural magazines or newsletters							

	Included websites
	Can't think of any - never
b. Watch Hawaiian TV or listen to Hawaiian radio	105.1
	Hawaiian bible and religious programs
	105.1
	105.1
	105.1
	Broad, didn't know what to include
	Broad. Need to include more specifics
	105.1
c. Access websites about Native Hawaiian culture or language	OHA, Punana Leo
	Never –doesn't use the internet
	Rarely 1 x year
	Okay
	Okay – sometimes = 1 x month, very often = daily
	Okay
	Okay
	Padding and surfing websites included?
d. Participate ceremonies or events with Hawaiian welcomes and speeches	Did not list any formal events, just social and business gatherings that included oli. No traditional Hawaiian activities
	Singing in Hawaiian, events associated with work/conferences
	Sometimes 3xyear, considered parties, funerals
	Okay
	Participate = attend, thought of any gathering where Hawaiian speeches/welcomes were used so included baby luaus.
	Sometimes = 5 x a year
	Participate = attend
	Okay. Participate = attend
	Okay
e. Visit Native Hawaiian art, culture or historical exhibits	Bishop museum
	Thought of statues
	Okay, bishop museum, makahiki events
	Okay
	Okay, included heiau's
	Thought of museums. Historical = cultural exhibits. Did not think in included heiaus
	Okay
	Included heiaus and other cultural places, not just museums or other venues that are set up
f. Participate in Hawaiian cultural activities, such as dance hula, make lei, lay net, pound poi	Padding and surfing are cultural activities
	Used to make lei
	Paddling, playing Hawaiian music
	Surfing counts, definition of frequencies might vary by question. 1 x year = sometimes, 1 x month = very often.
	Wasn't sure if paddling should be included, answer would vary depending on if it is included or not
	Okay, hula. Often = 2 x month, very often = 4 x month
	Surfing is a cultural activity
	paddling

**Q8** Think about all the public signs that you see driving and walking around. This includes all road signs, construction signs, warning signs, building signs, informational signs and all other

government produced signs. This does not include commercial signs, like signs for restaurants. Thinking about these government produced signs: **READ \*\*Do not read "Don't know or Refused\*\***

	0% of the signs	25% of the signs	50% of the signs	75% of the signs	100% of the Signs	Don't know	Refused
What percent are in Hawaiian?	Mostly thought of street and place names						
	Mostly thought of street and place names, was able to think of other signs when asked to exclude street names, about 20% w/o those						
	Maybe should say "have Hawaiian"? thought of place names, state seal. When asked to exclude street and place signs the estimated percentage dropped from 35% to about 0%						
	25%, thought of road signs and street names						
	Thought of street and place names. May need to rephrase so that people think of all the signs in the linguistic landscape.						
	75%, thought of street and place names						
	Okay. Good descriptions of the signs that are to be included						
	Just street names and traffic signs come to mind. Might need to include a examples of other signs						

**Q9** Bilingual means using two languages. The next several statements are about having bilingual signs in Hawaii. The two languages would be English and Hawaiian. Both languages would appear on all government produced signs, such as road signs, construction signs, warning signs, building signs, informational signs, and tourism signs. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

**If necessary:** This would not include street or place names.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. Bilingual signs would improve the status of the Hawaiian language	Increase the number of learners, knowledge - agree						
	Needed to remind them of the range for the answers started to think it was just a yes/no, Hawai'i is Hawaiian						
	It would increase awareness						
	Increase knowledge and appreciation, it would be vindication for those who already speak Hawaiian						
	Agree – increase the understanding of the language and number of learners						
	Okay – increase the visibility						
	Okay – status is the public's view of the language.						
	Okay – it would increase exposure						
b. Bilingual signs would improve the status of Native Hawaiians	Increase interest in culture, increase awareness – agree						
	It will help them (Hawaiians) with so many things						
	Disagree, it wouldn't change where they are in life but understood the question as asking about SES						
	Difficult, broad. What status is the question asking about?						
	Thought of economic status, maybe health status. Didn't mention social status.						
	Okay						
	Okay						

c. Bilingual signs would increase the value of the Hawaiian language	It would be needed and wanted more – agree
	Okay but not too different from status
	Okay, increase visibility and use, value = usefulness, appreciation
	Okay, value = appreciation
	Agree because it would be used more
	Okay – it would not be taboo any more
	Okay – value is the importance to everyone in Hawaii
	Okay – it would provide a reason to use/learn Hawaiian. It could also be seen as a teaching tool
d. Bilingual signs would increase the value of Native Hawaiians	Kind of a strange question but agree
	Neutral because they don't speak Hawaiian but it will increase the value for those who want to learn the language. Thought of the value of learning the language rather than the value of Hawaiians
	Value was related to pride as what people would get out of seeing the signs and the language
	Kind of offensive. Is the question trying to ask about increased acknowledgement of Hawaiians?
	Difficult question because it is so broad. Not sure what is meant by the word value in this statement. It would increase the understanding of the language and maybe bring value to NHs that way
	Was a difficult question. Value to who? Did believe that it would increase NH self-worth
	Found this question offensive as it could imply that Native Hawaiians are lacking in value. Was thinking self-value rather than appreciated by others
	Difficult question

**Q10** Now I would like to read you a number of statements made about the state government's involvement with the Hawaiian Language. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. It is important that the Government takes a role in recording how well the Hawaiian language is doing	Measure use in schools, education, college, use in business						
	Didn't understand						
	Okay, follow people through school						
	Okay, aptitude tests. Was focused on the cost and practicality of this rather than whether it was important for it to be done.						
	Okay, done through a survey or test						
	Okay, would survey people and schools to measure use						
	Thinks it should be done but not by the government. There should be separate record keeping procedures.						
	Add 'state government' to the statements. Interpreted this more as active promotion						
b. It is only right that public signage is in both Hawaiian and English.	Agree – i.e. signs at the beach						
	Okay						
	Hard to say it is "right", most don't speak Hawaiian. Understood the question though						
	Agreed, it would be vindication for those who speak or are learning the language, it would improve understanding						
	Okay						

	Tourism might suffer if the readability of the signs is goes down
	Okay
	Okay
c. The Government should support the Hawaiian language by making it more visible in the community.	Okay
	Okay
	Okay – doesn't think the government should be responsible, the money should come from cultural groups
	Okay
	Okay, airport as an example
	Agreed but not sure how, mentioned print media.
	Okay
	Okay - agreed
d. The government should use tax dollars to make all the signs in both Hawaiian and English.	Neutral – shouldn't only be government's burden but also cultural groups
	Didn't understand
	Okay
	Doesn't think tax money should be used, instead "the state should pay". Thought question was asking about new or higher taxes
	Okay. Shouldn't be all government's responsibility though, OHA, etc should also do it. Government has a lot of other priorities. Maybe not all signs
	Okay
	Need to reiterate that we are talking about the state (vs. federal) government.
	Concentrated on the work "all" so disagreed. All is a lot. Okay with increasing visibility but not all the signs

**Q11** Please tell me how much you agree or disagree with the following statements, from strongly disagree to strongly agree. **READ \*\*Do not read "Don't know or Refused\*\***

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
Being able to speak more than one language is a positive trait							
People learn or speak their native language in order to perpetuate their native culture							

People learn or speak their native language as a way of rejecting the American culture	Okay
	Okay
	Okay, thought of radical Hawaiians
	Okay
	Okay
	Agreed, it may be people trying not to assimilate
	Okay
	Okay
Revitalizing the Hawaiian language will improve Native Hawaiian health and well-being	Agree – would improve pride and self-esteem
	If they only speak Hawaiian then it would be hard for them. Didn't quite understand
	Broad question, does it mean health, pride, diet? Health is controlled by individual choices but if we mean pride then agree.
	Wouldn't effect health because choices determine health, other factors influence health to a greater degree
	Health = physical health = well-being
	Health = well-being but a holistic idea of well-being
	Okay
	It would help the culture but not sure about the health and well-being of the people
Hawaiian language is the indigenous language of Hawai'i and is therefore more important to promote than other languages spoken in the state	Okay
	Okay
	Okay
	Okay
	What does promote mean? Like teach in schools?
	Okay, but not practical to emphasis in school over other languages due to its lack of utility.
	Okay – it is no more or less important than other languages in HI
	Okay
The Hawai'i State government does a good job of protecting the interests of people in my ethnic group	Disagree – promotes the interests of tourists over locals
	Okay
	Protecting the interests is a difficult. May need to change the wording to representing
	Okay
	What does it mean to protect white people? How?
	Not sure what Japanese people get from the government. May need to rephrase.
	Okay
	Okay
The Hawai'i State government does a good job of protecting the interests of other people	Neutral – government is inconsistent, out for money.
	Okay – had faith in government's ability to get thing done, thought the government was equally good for everyone
	Agree – cited all the Pacific Islanders that are able to come here for help
	Okay, thinks that the laws are applied fairly. Didn't seem to consider lobbying groups or business interests effecting politics
	Okay after explanation - Negative view of government in general. Seen as one sided, corrupt but they do protect the unions.
	Again, may need to rephrase... possibly 'representing the interests'
	Okay
	Broad. Who are the other people? Homeless? Low SES? Criminals?

**Q12** How American do you feel, from completely American to not American at all? **READ \*\*Do not read "Don't know or Refused\*\***

	<b>Not American at all</b>	<b>Somewhat not American</b>	<b>Equally American and not</b>	<b>Somewhat American</b>	<b>Completely American</b>	<b>Don't know</b>	<b>Refused</b>
How American do you feel?	American means not Native Hawaiian. Certain rights were taken and not returned						
	Okay, earned "American identity" through husband in army, lived in HI for a long time						
	Okay, American = love the government and willing to fight for the country. He doesn't support some of the policies.						
	Completely American, choices, freedom, okay						
	Defined as a citizen appreciating what the US has to offer but she also sees a negative stereotype of Americans and does not identify with it completely						
	American means having only that one cultural identity.						
	It is a measure of patriotism and endorsement of American values. He is American as he pays taxes, but doesn't endorse all the values						
	American values define feeling American						

**Q13** Now I'm going to ask several questions about your ethnic group. Please tell me how much of each resource your ethnic group has in Hawai'i from none to all. **READ \*\*Do not read "Don't know or Refused\*\***

	None	Some	Average	Most	All	Don't know	Refused
How much economic and business control does your ethnic group have?	Business owners						
	Need to read the scale at the beginning. Kept providing percentages despite reading the scale. Business people, average						
	Okay, business people						
	Some – sugar industry, laborers, Pacific Islanders business owners						
	Average – business leadership, CEOs						
	Okay – business owners, CEOs and high paying jobs						
	Okay – few NH businesses. As a group we have land but not economic control						
	Businesses like the airlines						
How much political control does your ethnic group have?	Politicians						
	Okay						
	Okay, elected officials						
	Legislature, governor						
	Legislature						
	Legislature and donations						
	Okay						
How much power does your ethnic group have?	Government, legislature						
	Power means self-determination, social power means programs that promote the culture						
	Social power means social activities						
	Social power means head of community organizations and non-profits, orgs that benefit the people						
	Same as other questions						
	Power = ability to influence, okay						
	Influential positions, such as doctors. Social power = social standing among other ethnic groups						
	Difficult. Social power? Physical?						
How much wealth does your ethnic group	Difficult but social power means something different from just power						
	Wealth was taken and not returned, personal wealth						
	Okay						

have?	Okay, household and personal wealth
	Monetary wealth
	Personal/household wealth
	Jobs, family money and property
	Thought of the trusts that “belong” to the community as a whole as a measure of wealth.
	Thought of individual wealth

**Q14** Now I’m going to ask you those same questions but about Native Hawaiians. Please tell me how much of each resource Native Hawaiians have from none to all. **READ \*\*Do not read “Don’t know or Refused”\*\***

**\*\*If the respondent is Native Hawaiian, rephrase this question as follows:** Now I’m going to ask you those same questions but about the most dominant ethnic group in Hawai’i. Please tell me how much of each resource that group has from none to all. **\*\***

**If necessary:** Some people in Hawai’i would say that Whites or Japanese are the most dominant groups.

	None	Some	Average	Most	All	Don’t know	Refused
How much economic and business control do Native Hawaiians have? <b>**does the most dominant ethnic group have?*</b>							
				Most – chose whites			
				Not many Hawaiian businesses			
				Okay – thought of same qualifications as the above four categories			
				Okay			
				Okay			
				Okay, thought of trusts.			
				Okay – chose whites			
				Okay			
How much political control do Native Hawaiians have? <b>**does the most dominant ethnic group have?*</b>							
				Okay			
				Okay			
				Okay			
				Okay			
				Okay			
				Okay			
				Okay. Political control in mainstream society then no, but they do have political control over Hawaiian issues.			
How much power do Native Hawaiians have? <b>**does the most dominant ethnic group have?*</b>							
				Most, less if asking about social power			
				Social power mean social activities, music. Social standing has gotten lower and lower while White, Chinese, Korean has gone up			
				Okay			
				Social power = numbers, pride, unity and ability to come together around an issue, claiming Hawaiian ethnicity for pride			
				Okay			
				Social power is average and determined by wealth and political influence			
				Difficult. Answers would be different if question asked about social power. Whites have less social power because people don’t like them.			
				Social power is the power to change things, accomplish things and access services			
How much wealth do Native Hawaiians have?				Most			
				Supposed to be plenty but not much. Okay			

<b>**does the most dominant ethnic group have?*</b>	Okay
	Okay
	Okay
	Might need to differentiate between individual wealth and trusts.
	Okay
	Okay
	Okay thought about individual wealth

**Q15** Picture a ladder with rungs numbered 1 to 10. At 10, on the top of the ladder, are the people who are the best off, those who have the most money, most education, and best jobs. At 1, the bottom of the ladder, are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Where on the ladder do you think you stand from 1 to 10?

**READ** Code response from 1 to 10

96 .... Depends/Don't know

99 .... Refused

Easy question, thought also about where she is in life now.
Make transition to a personal question more obvious. Again sees progress for other groups but not Hawaiians
Okay, easy to understand, easy to remember orientation of the ladder
Okay, easy to understand. Thought about education and job to rank self on ladder
Okay, easy to understand
Compared herself to the US rather than just HI
Okay
Okay

**Q16** The next several statements are about your feelings toward your native language, however you define it. Please tell me how much you agree or disagree with each statement from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
I feel good about my native language as a sign of my social group.							
	Hawaiian was her native language - agree						
	Okay						
	English as his native language (Japanese ethnicity) , understood question						
	Chose English (Filipino) okay						
	Chose English as native language (first language Spanish, but identifies as white) okay						
	Chose English (Japanese ethnicity), okay – it differentiates the groups of Japanese by native English or Japanese speakers						
	Chose Hawaiian. okay						
	Is social group the same as ethnic group. Rephrase to ethnic group?						
My native language has very little to do with how I feel about myself.							
	Disagree, statement was hard to understand – may need to add a clarify statement						
	Proud of being Filipino						
	Ability to function						
	Okay						
	Okay						
	Okay						
	Okay – likes Hawaiian but it doesn't inform his self-esteem						
	Okay						
My native language is an important							
	Feels the need to perpetuate the culture and be a role model, language is an example of doing this						

reflection of who I am.	<p>Okay</p> <p>Identity isn't the language but can't function without it</p> <p>Okay, identity isn't defined by language</p> <p>Okay - Asset to know English but not a negative character trait if you don't</p> <p>Okay – accent verses no accent, again separates her from native Japanese</p> <p>Okay – feels like his identity is bigger than the Hawaiian language</p> <p>Okay.</p>
I often regret that belonging to the group that speaks my native language	<p>Okay</p> <p>Okay</p> <p>Okay</p> <p>Perceived as an odd question. Is this one necessary?</p> <p>Okay – English speakers</p> <p>Okay</p> <p>okay</p> <p>Okay. Defined America as the group that speaks his native language.</p>
Knowing one's native language benefits one's health	<p>Health = well-being</p> <p>Well being = personality, feeling. Ilocano is she first and native language so thought of ease of communication in this section</p> <p>Okay, if he had selected Japanese the answers would be different but it wouldn't be a sign of his social group, that would be a sign of Japanese nationals or recent immigrants who speak Japanese</p> <p>Disagree, health results from one's choices. Health = well-being so answer wouldn't have changed if wording changed</p> <p>Health is determined by choices</p> <p>Okay, it helps to form identity and improve connectedness. Health = well-being but holistic</p> <p>Health is different from well-being. Health is more physical while well-being is more holistic.</p> <p>Well-being is different than health. It wouldn't benefit one's health but would benefit one's well-being.</p>

**Q17** What is your sex? **READ**

- 1 .... Female
- 2 .... Male

**Q16** Where were you born? **READ**

- 1 .... Hawaii
- 2 .... USA, other than Hawaii
- 3 .... Foreign
- 99... Refused **\*\*Do not read\*\***

**Q17** What is the highest level of education that you have completed? **READ**

- 5 Some high school
- 6 High school diploma or GED
- 7 Some college, technical, or vocational training
- 8 College graduate or higher
- 96 Other Specify **\*\*Do not read\*\***
- 97 None/No qualifications **\*\*Do not read\*\***

98 Don't know **\*\*Do not read\*\***

**Q18** At present, are you ...? **READ** Code first option they say yes to

- 1 ..... Full time
- 2 ..... Part time (less than 30 hrs/week)
- 3 ..... Retired
- 4 ..... Student
- 5 ..... Unemployed
- 96 ..... Other Specify **\*\*Do not read\*\***
- 99 ..... Refused **\*\*Do not read\*\***

Maybe add "employed" after the first two choices
--

**Q19** Those are all the questions I have. Do you have any other comments you'd like to make about the subject of this interview? **READ**

- 1 .... Answer Specify
- 97 .. Nothing **\*\*Do not read\*\***
- 99 .. Refused **\*\*Do not read\*\***

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Thank you very much for your help, my name is "Interviewer" from Ward Research. If you have enquiries about this survey, please call the Principle Investigator, Claire Townsend: 808-692-1042.

DURATION: \_\_\_\_\_ minutes

DATE: \_\_/ \_\_/ 2000

## APPENDIX H. ROUND TWO COGNITIVE INTERVIEW NOTES

### Attitudes Toward the Hawaiian Language

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#### INTRODUCTION

Aloha, my name is AI from Ward Research. We are conducting research about attitudes toward the Hawaiian language or Olelo Hawaii. This is genuine research. I'm not selling anything and this survey is not being paid for by a for-profit company.

#### If necessary:

This research takes about 20 minutes.

#### Background information only if needed:

◆ Information provided is confidential. We report summary results about groups; we do not identify which individuals have said what.

◆ The phone numbers for this survey were randomly selected from the white pages.

**Q1** Before we begin, of all the ethnic groups you belong to, which one do you most identify with?

Code one **READ**

- 1 .... Native Hawaiian Hawaiian quota
- 2 .... Caucasian Causasian quota
- 3 .... Japanese Japanese quota
- 4 .... Filipino Filipino quota
- 5 .... Other Pacific Islander ;E **Terminate 1**
- 6 .... Chinese ;E **Terminate 1**
- 96 .. Other ;E **Terminate 1**
- 99 .. Refused ;E **Terminate 2**

Okay  
How much she has or hasn't identified as Hawaiian has changed over her life.  
Okay  
Okay  
Okay  
Okay  
Wanted to list Euro groups

**Terminate 1:** Thank you for your time, but for this particular survey we are collecting information from the four predominant ethnic groups in Hawai'i.

**Terminate 2:** Thank you for your time, but for this particular survey we need to know your ethnicity.

**Once ethnic quotas are met, Terminate 3:** Thank you, but we are trying to get equal numbers for each group in Hawaii.

**Q2** Are you a resident of the state of Hawaii? **READ**

- 1... Yes
- 2... No **Terminate 4**

Pay taxes, permanent residence  
Vote in HI  
Live in HI full time  
Own or rent a home in HI, Live here, pay taxes here  
Live here for a certain number of years  
Okay , Okay, Okay

**Terminate 4:** Thank you for your time, but for this particular survey we are collecting information from Hawai'i state residents.

**Q3** The rest of this interview is about your opinions on the use of the Hawaiian language in Hawai'i and related ideas. Are you okay to continue?

1 .... Yes, continue

99 .....Refuse topic **Terminate 6**

**Terminate 6:** That's fine. Thank you for your time.

**Q4** I am going to read a series of questions and answer choices. Please feel free to take notes if it will help you remember the answer choices. The first set of statements is about the Hawaiian language in general. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. The answer choices are; strongly agree, agree, neutral, disagree, strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe:** Is that strongly agree/disagree or just agree/disagree?

**If Necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Depends	Don't know	Refused
a. I have a lot of respect for people who can speak Hawaiian fluently	Need to change instructions. Maybe add answer choices before the first statement. Okay. Takes courage to learn when not coming by the language naturally							
	List answer choices. Okay. Read, write and speak Hawaiian. Shows that they are dedicated to their culture, have invested the time to learn							
	Okay. Takes effort because it is a second language. Shows interest and that you are trying to educate yourself. Fluency would be being able to speak and understand a native speaker							
	Okay. Respect because of the effort that it takes							
	Okay. Fluent would mean to converse freely. And she would respect them because it is important to perpetuate culture							
	Okay. Hawaiian is the native tongue of Hawaii. Respects those who are fluent because it is dying. Fluency would be to be able to speak Hawaiian without using English.							
	Instructions: "take notes" made it seem test like. Might need to soften or explain that it isn't a test. Okay. Agree because it is another language they can speak fluently. It is part of their ethnicity							
	Okay. Disagreed. Doesn't think it is that important. English is the most important. Likes learning about the culture but English is the future.							
b. It is a good thing that Native Hawaiian people speak Hawaiian at home and in cultural settings	Mostly thought of in the home rather than different cultural settings. When asked she said blessings would be what she would think of for cultural settings							
	May want to rephrase the "it's a good thing". It is subjective. They don't think of it as a good or bad thing. It may be beneficial for learning the language but implies that if they don't speak Hawaiian at home that it is a bad thing.							
	Okay. It reinforces the language so that they can use it better in cultural settings. May need to only include home. Doesn't interpret it as bad if they speak English at home							
	Okay. Thought of on TV, public access, Hokuleia, and Hanohano on news							
	Okay but thought only of the home and not of cultural settings. Couldn't really name a cultural setting, suggested paddling.							
	Okay but thought primarily of at home rather than cultural settings. When asked for examples, said cultural setting = family setting where they would all speak it at home and in the community.							
	Okay. Same as above. Cultural setting = event or Hawaiian activities							
Okay. At home is okay.								

d. It is a good thing that Native Hawaiian people speak Hawaiian in public places, such as the supermarket	Okay
	Okay. The “it’s a good thing” statement is okay in this statement because it is more about promoting the language
	Okay. They would be making it an important aspect of their lives.
	“good thing” makes him wonder good for who. Good to communicate/natural. Some is benefiting?
	Okay. Thought that it was an odd statement to limit where people can speak Hawaiian.
	Okay. He admires those that do.
	Confused. Thought that the NH would be talking to others who might not speak Hawaiian, e.g. the cashier
	Okay. Disagree because others are around. One should speak English because that is the language that everyone speaks
e. It is <u>not</u> right for Native Hawaiians to speak Hawaiian in public where the people around might not understand what they are saying <u>Clarify answer: Do you dis/agree it is not right</u>	Okay. It makes since to her.
	Okay but maybe just say “wrong” rather than ‘not right’
	Okay
	Depends. May need to further clarify the situation.
	Okay
	Okay. Disagrees because speakers of other languages do it.
	Should change not right to wrong. Native Hawaiians can speak how they like, she wouldn’t feel offended
Okay. Disagree, see above.	
f. Spoken Hawaiian is a beautiful thing to hear	Okay
	Okay
	Okay
	Okay. It is aesthetically pleasing and preserves the culture
	Okay
	Okay
	Okay
	Okay. Like to hear the language and songs, sounds like a lullaby.

**Q5** The next six questions are about your interest and participation in some aspects of Hawaiian culture and language. Tell me how often or rarely you do the following activities, from never to very often. **READ. \*\*Do not read “Don’t know or Refused\*\***

**Probe:** Is that very often/rarely or just often/rarely?

	Never	Rarely	Sometimes	Often	Very Often	Don’t know	Refused
a. Read/browse Hawaiian cultural magazines or newsletters, such as Ka Wai Ola or Mana magazine	Okay. She would read stuff from Kamehameha schools as cultural newsletters. May want to add Hawaiiana books.						
	Okay						
	Okay. Thought of ka wai ola and kanaiolowalu. Rarely = 1 every 3 months						
	Okay						
	Okay. Rarely = 1 x 3 months						
	Okay. Rarely = 1 x month						
	Asked it this included “local magazines”. Should be more explicit that the magazine’s focus should be on Hawaiian culture						
Okay, but doesn’t do it intentionally. Included books.							
b. Watch Oiwi or Olelo TV	Okay						

or listen to Hawaiian language radio shows	Okay, included when they would happen to see it and stop to watch a little. Answer would be different if the question had be specifically about how often they seeking the TV or radio show. A couple times a month = rarely
	Okay, 1 x year = rarely
	Okay, 1 x month = rarely
	Okay, 2 x year = rarely
	Okay
	Okay. never
	Okay. Depends on the topic of the show. Maybe I should be explicit about the topic of the show?
	Okay. Depends on the topic of the show. Maybe I should be explicit about the topic of the show?
c. Access websites about Native Hawaiian culture or language	Okay, but first thought we were still talking about TV. Maybe be related to her age (86)
	Okay. Included work
	Okay
	Depends. Does this include only websites that are devoted to Hawaiian culture and language or does this also include stories about language or culture that are on websites with a broader focus.
	Okay, usually with a none cultural education purpose. Instead it was to check out causes that are fundraising such as immersion schools. Also said rarely but = 4 x year
	Okay. Included DHHL and OHA as websites rarely = 1 x month
	Okay. Never
	Okay.
d. Participate in ceremonies and events with Hawaiian welcomes and speeches	Okay. Sometimes = 20 times a year
	Okay.
	Okay. Thought of funerals, opening ceremony for paddling
	Okay. Thought of paddling ceremonies
	Thought that church would qualify. Also mentioned canoe blessings. 2 x month = rarely
	Okay. Thought of sailing races. Rarely = 6 x a year
	Okay. Rarely = 2 x year. Hearing speeches in Hawaiian but doesn't seek it out, is attending something for another purpose but the event has Hawaiian
	Okay. Thought of Kahoolawe. Mentioned sovereignty movement
e. Visit Native Hawaiian art, culture or historical exhibits	Okay, bishop museum
	Okay, bishop museum and statues
	Okay, museums and art shows
	Okay, museums. Rarely = 2 or 3 times a year
	Okay, thought of lo'i and bishop museum
	Okay. Rarely = 6 x year
	Okay. Bishop museum, Kawaihao
	Okay. Bishop museum
f. Participate in Hawaiian cultural activities	Okay, makahiki celebrations, paddle events
	Okay, often = 1 x per week
	Okay, ho'omau. Paddling?
	Okay, didn't include paddling until probed. Did include working on the OC-6 and in the lo'i
	Okay, but again not intentional on her part. She will go on field trips with her kids and church.
	Okay. Again was thinking of sailing. Included paddling only when prompted. Often during the season so said often but it was only 8

	x a year.
	Should make it more explicit that the person should seek out the participation. She participates but because she is chaperoning a trip rather than for her personal interest.
	Okay. Mentioned watching merrie monarch but not participating.

**Q6** I am now going to ask you about different signs that you see. Think about all the public signs that you see driving and walking around. These includes all street signs, road work signs, warning signs, informational signs and all other government produced signs. For instance, these would include stop sings, street names, warning signs as beaches, and informational signs on hiking trails to name a few examples. These do not include commercial signs, like signs for restaurants. Thinking about these government produced signs: **READ**

**\*\*Do not read "Don't know or Refused\*\***

	0% of the signs	25% of the signs	50% of the signs	75% of the signs	100% of the Signs	Don't know	Refused
What percent are in Hawaiian?	Varies greatly depending on if the question includes street names and place names but easy to understand						
	Need to reword the instructions. Again, depends on the inclusion of place/street names. Need to decide if we want to include all signs or not.						
	Maybe add the word, approximately. Not much except for names. Okay, thought of hiking trails, bridges, parking						
	Depends on if you include place and street names. Thought of traffic signs and hiking signs without the street names						
	Okay. She said 50% with street and place names and 20% without.						
	Okay. Thought of government signs like at polling stations. Remembers there used to be more signs in Hawaiian such as "kapu" signs that he recalls from the Big Island from the department of parks and recreation.						
	Okay. 30% with street/place names. 10% without street/place names.						
	Okay. All in English because that is the language that visitors speak						

**Q7** Bilingual means using two languages. The next several statements are about having bilingual signs in Hawaii. The two languages would be English and Hawaiian. Both languages would appear on all government produced signs, such as road signs, construction signs, warning signs, building signs, informational signs, and tourism signs. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

**If necessary:** This would not include street or place names.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. Bilingual signs would improve the status of the Hawaiian language	Okay. Signs would make it effortless to learn						
	Okay. Increase visibility and familiarity						
	Okay. Self education through the signs. It would increase the understanding, interest in taking care of the land and culture and increase awareness.						
	Okay. Likes the signs at the airport. This would put Hawaiian on equal footing with english						
	Okay. Show that they language isn't taken away from them, they can stay true to their culture						

	Okay. It would increase exposure and use of Hawaiian. Native Hawaiians would embrace the language more.
	Okay. It would increase visibility, government signs would confer respect and recognize it as a vital part of Hawaii
	Okay. But think s that it would mostly help if you speak Hawaiian. It would increase the languages status for those who speak the language.
b. Bilingual signs would improve the social status of Native Hawaiians	Okay, Social status would improve with pride in being Hawaiian. But would be mostly for those who already speak Hawaiian rather than for the group as a whole
	Okay. Not impactful. Social status is how people view their culture or race, how respected they are.
	Social status = respect. Okay. "a lot of prisoners are Hawaiian"?
	Not sure how to define social status. It would have more of an impression on those who speak Hawaiian. It would validate their education and skill.
	Didn't really understand what was mean by social status. They would be made to feel at home, in their own environment, not rejected.
	Okay. Social status = your place in the community, how you are recognized.
	Okay. Social status = respecting Hawaiians. Doesn't know if signs would matter. neutral
	Social status = standing. Hawaiians are in the process of extinction. They are vanishing because of intermarriage
c. Bilingual signs would increase the value of the Hawaiian language	Okay, similar interpretation as status statement
	Okay, increase visibility. May be similar to the status question above
	Okay. They would learn the language and it would bring value to the culture
	Okay. It would increase acceptance, validity and credibility of the language
	Okay. It would increase the awareness of the language. Similar interpretation as the status question
	Okay. And increase in seeing the language would lead to and increase in the awareness of Native Hawaiian. The language would become more important to the state as a whole.
	Hard time with value. Maybe had a clarify as importance or usefulness of the language.
	Okay. It would be good education for kids so they remember their own language and culture and past.

**Q8** Now I would like to read you a number of statements made about having bilingual, Hawaiian and English, signs. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
a. Public signage should be bilingual, with Hawaiian and English.							
	Awkward wording but understood.						
	Okay. Disagree because of the cost of the signs considering the limited amount of funds and other priorities of the state/society.						
	Okay						
	Okay. It would be a hindrance in some cases. Would be okay for						

	<p>informational (i.e., explanatory) signs but not for road signs.</p> <p>Okay. Agreed rather than strongly agreed because it depends on the type of sign. Construction and safety signs should only be in English</p> <p>Okay. They would increase the recognition and should be in Hawaiian and English.</p> <p>Okay. Clarified that it was all the signs might want to add that it is all the signs but not street/place names. Hawai'i is diverse with a lot of different languages, need to respect all the languages</p> <p>Okay. Disagree because people don't speak Hawaiian so why spend the money.</p>
b. The Hawaiian language should be more visible in the community.	<p>Hard to think of other ways to increase visibility. Redundant? Should it go first?</p> <p>Okay. Thought of tv shows, radio programs, and advertisements in the media and commercial sector.</p> <p>Thought of signs so may be redundant</p> <p>Okay. Thought of it being spoken more. See it perpetuated</p> <p>Okay. Thinks of signs at places that she frequents such as hiking trails, and places where tourist go like landmarks.</p> <p>Okay but only thought of signage</p> <p>Okay. Disagree because it is already visible. The names of streets and people use them. We see it in commercial signs.</p> <p>Okay. If people can't understand then why</p>
c. The government should fund bilingual signs.	<p>Add the word state. Concerned about sovereignty movement, which she termed "Hawaiian Kingdom", issues and making waves. Okay</p> <p>Okay</p> <p>Okay. This one is better because if you ask about make and install issues with who will write the signs and the government's ability to do things will come into consideration</p> <p>Okay. Thought of the limited funds and various priorities</p> <p>Okay, she agrees but thinks of safety issues and economy</p> <p>Okay. Thought of state and county governments, the tax base.</p> <p>Understood question but might need to add a skip pattern</p> <p>Need skip pattern</p>
d. The government should help to make and install bilingual signs.	<p>Redundant but okay</p> <p>Okay. Redundant with the one above. This one is less important compared to the previous one.</p> <p>Okay. See above comment</p> <p>Okay. Answered the same but was less about money</p> <p>Okay but redundant</p> <p>Didn't ask</p> <p>okay but might need to add a skip pattern</p> <p>Need skip pattern</p>
e. Hawaiian organizations should help to make and install bilingual signs.	<p>Maybe include examples? She was specific to mention that it shouldn't be the sovereignty guys</p> <p>Okay. Thought of OHA but not the trusts. Should change to be in line with above.</p> <p>Should change to fund. Okay. Thought of OHA.</p> <p>Should was problematic. Don't think they should. It is the government's responsibility. Should seems like a mandate.</p> <p>Okay but same economic issues as above. Wasn't able to name a specific organization. Asked about including an item regarding official status which was okay</p> <p>Okay. Thought of OHA and DHHL.</p>

Asked if should fund. Okay but might need to add a skip pattern.
Need skip pattern

**Q9** The next seven items are general statements about language and the state government. Please tell me how much you agree or disagree with the following statements, from strongly disagree to strongly agree. **READ \*\*Do not read "Don't know or Refused\*\***

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
Being able to speak more than one language is a positive trait	Okay						
	Okay						
	Okay. Improved ability to communicate, better brains						
	Okay. Opens you to more of the population, more education and expands thinking.						
	Okay. Would make someone well rounded						
	Assumed it was one's native language. Thought it would increase one's ability to communicate and connection to one's culture.						
	Okay. Benefit to speak native language. Honors your culture. Added plus, speak to elders and visit the homeland. Thought of native language rather than learning in school.						
	Okay. You can act as an interpreter so that is a benefit at work etc.						
People learn to speak Hawaiian language in order to perpetuate their Hawaiian culture	Fix wording. Okay						
	Okay						
	Okay						
	Okay						
	Okay. People learn Hawaiian to be able to speak their native tongue to connect with their culture.						
	Okay. Disagree because you can still perpetuate the culture without the language. Learning the language doesn't necessarily mean learning the culture.						
	Okay. agree						
People learn or speak Hawaiian language as a way of rejecting the American culture	Fix wording, okay						
	Was neutral because he believed that some people do while some people don't.						
	Okay. Choose disagree because it isn't her motivation and there are many like that but my be some						
	Okay. It is a possibility						
	Okay. Don't see people being that way.						
	Okay						
	Okay. Some may but doesn't think that most will but the protest can be anti-american						
	Okay. Neutral. Some do and some don't						
Revitalizing the Hawaiian language will improve Native Hawaiian well-being	Wasn't clear on what "revitalize" meant so hard to answer. What would be the end point? Should this just say BLL improving Native Hawaiian well-being.						
	Okay. Support for the Hawaiian language and culture helps people to cope in bad times						
	Okay. Well-being = self-esteem						
	Okay. It is not a direct relationship. Speaking leads to pride						
	Okay. Well-being = comfortable with self, fee good						
	Okay. Well-being = pleasantness, revitalization would improve Native Hawaiians' understanding of themselves and surroundings						
	Hard because she doesn't think that Hawaiian is struggling so why						

	revitalize? Well-being = health, livelihood, and daily living. Should I add a question about the perceived status of the Hawaiian language?
	Not sure if he understood. Thought that Hawaiians would only speak Hawaiian and then they would be isolated from society. It would be a step backward.
Hawaiian language is the native language of Hawai'i and is therefore more important to perpetuate than other languages spoken in the state, such as Japanese or Korean	Okay
	Okay. Add "Japanese or Korean" to the end of the statement
	Okay. Thinks we should had Hawaiian schools similar to the Japanese afterschool programs
	Okay. He can see the value of having Hawaiian signs but not signs in other languages
	Okay
	Okay
	Okay. Strongly disagree
	Okay. Disagree because Hawai'i is a visitor industry. Hawaiian isn't spoken by a the visitors
The Hawai'i State government does a good job of representing the interests of people in my ethnic group	Still thinking about languages
	Okay. It is a westernized system so it works for whites
	Okay. Which is the reason for OHA
	Not quite right. Thinks of current bills.
	Okay but didn't know the answer
	Okay. Believes that the government doesn't do enough, they don't support or have an interest in really helping. They are forced to do what they do now and are counter productive.
	Okay. Don't know enough to answer. Thinks if she has ever felt hindered by the government based on her ethnicity. No problems based on her culture.
	Okay. Believes that the government isn't giving them enough opportunity. Many go to the US mainland.
The Hawai'i State government does a good job of representing the interests of other people	Still thinking about languages
	Okay but didn't know
	Hard to say but understood. The govt supports tourism for the Japanese but she doesn't think that the represent the interests for white people well either
	Not quite right. Thinks of current bills. Should say "other ethnic groups"
	Okay but didn't know the answer
	Okay.
	Okay. But doesn't know.
	Depends on the group. Chinese and Japanese have good representation

**Q10** How American do you feel, from completely American to not American at all? **READ \*\*Do not read "Don't know or Refused\*\***

If necessary: By American, I mean whatever "feeling American" means to you.

	Not American at all	Somewhat not American	Equally American and not	Somewhat American	Completely American	Don't know	Refused
How American	"somewhat not American" and "somewhat American" are switch. The wording is cumbersome, may just want to do a rating scale 1-5. The idea of feeling more or						

do you feel?	less American is clear though.
	Okay. American is having no ties to other nationalities or cultures aside from American.
	Hard because Hawai'i is different from America. American is someone born and raised on the US mainland, i.e. Minnesota.
	Okay. Not anything else so completely American
	Confusing scale. 1-5 scale was okay. American is being accepted by mainstream culture.
	1-5 scale was okay. He scored a 2 = somewhat American. Completely American = white
	1-5 rating scale is okay. Said 4. She still acknowledges her Japanese culture and its influence on her life. Hard to define what is completely American.
	1-5 rating scale is okay. The US has short comings even though living here a long time. Has reservations about saying he's fully American because of a lack of opportunity. American = raised in the US, has access to all the opportunities.

**Q11** The next four questions are about the amount control your ethnic group has over different resources. Please tell me how much control of each resource your ethnic group has in Hawai'i from none to all. **READ \*\*Do not read "Don't know or Refused\*\***

	None	Some	Average	Most	All	Don't know	Refused
How much economic and business control does your ethnic group have?	May need to be more explicit in the instructions. Hard, because she doesn't think in these terms.						
	Okay. Thought of politicians and business leaders such as CEOs. Was confused by the ranking. Didn't think there was a difference between most and all.						
	Okay, thought of land						
	Okay. Thought of people with economic and business power, CEOs						
	Okay. Thought of business owners, Dr. and other influential occupations. Might have been hard because Filipino, but not born and raised here. Doesn't think that Filipinos stand out more than other groups						
	Okay. Measured economic and business control by financial clout, funding, loans and finance for businesses.						
	Confused. Thought of setting up businesses and if Japanese encounter problems. Seemed to be thinking of a mafia type arrangement.						
	Okay. Thought of construction industry, menial jobs, hotel industry.						
How much political control does your ethnic group have?	Hard, thought of cash back up						
	Okay. Thought of the legislature						
	Okay, thought of elected officials						
	Okay, thought of % in congress						
	Okay. Again on par with others. Thought of lobbyists and other organizations that in						
	Didn't mention politics in his answer. Defined it as the swing a group has in the private business sector. Did mention watching the government over the years.						
	Confused. Political control = politics.						
	Okay. Average amount because Filipinos participate in elections						
How much social power does your ethnic group have?	Hard, social power equals wealth						
	Okay. Interpreted social power as respect.						
	Okay. Thought of social influence as the ability to make changes						
	Confusing and couldn't define social power						

	Hard. Couldn't really define. Could understand social influence better if used but still hard.
	Okay. Able to influence others. People understand Native Hawaiian history and issues so they are able to sway those who care.
	Social influence was confusing. Thought of Japanese influence of Japanese on life in Hawaii, such as diet.
	Okay. Lots of Filipinos so can influence a lot, they have participated in the community
How much wealth does your ethnic group have?	Hard. Believes that Whites don't have as much power, political control, wealth, etc as they used to. Maybe related to her age.
	Okay. Thought of personal assets versus dept.
	Okay. Thought of income compared to average
	Okay. Compared to mean income
	Okay. Thought of the different classes and SESs.
	Okay. Thought of money and income brackets and amount of disposal income.
	Okay. Thought of middle class
	Okay. Most are immigrants so still have to climb the ladder, unlike his son.

**Q12** Now I'm going to ask you those same questions but about Native Hawaiians. Please tell me how much control of each resource Native Hawaiians have from none to all. **READ \*\*Do not read "Don't know or Refused"\*\*\***

**\*\*If the respondent is Native Hawaiian, rephrase this question as follows:** Now I'm going to ask you those same questions but about the most dominant ethnic group in Hawai'i. Please tell me how much of each resource that group has from none to all. **\*\***

**If necessary:** Some people in Hawai'i would say that Whites or Japanese are the most dominant groups.

	None	Some	Average	Most	All	Don't know	Refused
How much economic and business control do Native Hawaiians have? <b>**does the most dominant ethnic group have?***</b>							
							Hard. Tradition and respect they have but can't be measured. Did not answer the question regarding what economic or business control would look like
							okay
							Thought of politics. Maybe should ask about politics first and then ask about business, etc. okay. Thought of Japanese as number 1 group
							okay
							Okay. Said most of the power because that is what she sees in the media. Not much conversation on other ethnic groups.
							Okay. Picked whites as the most dominant group
							Thought of the heightened awareness and push that there should be more so they have more opportunity.
							Okay. Some because of OHA and bishop estates
How much political control do Native Hawaiians have? <b>**does the most dominant ethnic group have?***</b>							This one was easier than the others.
							Okay
							Okay
							Okay thought of OHA, no other group has a similar organization
							Okay. Said most again as she hears more about them than other ethnic groups
							Okay.
							Same as above. Native Hawaiian organizations and in the

	media have lead to more voices in politics. There is a core that are politically unhappy.
	Okay. Not in control any more. Thought of Hanohano being scolded for advocating for Hawaiians. Used to have more power but have lost it.
How much social power do Native Hawaiians have? <b>**does the most dominant ethnic group have?*</b>	Political influence was defined as social power.
	Okay, thought of respect
	Okay
	Hard to define but compared to other social groups
	Now that she had a definition in mind from our conversation this was okay. She thought of the amount of Hawaiian traditions that are present in non-hawaiian specific activities.
	Whites have social power because they have the most economic resources
	Thinks of social norms again, aloha attire, lei, greetings are all Hawaiian.
	Hard. Said average because they are good performers – hula.
How much wealth do Native Hawaiians have? <b>**does the most dominant ethnic group have?*</b>	Okay. She answered some for all the questions for both ethnic groups.
	Okay
	Okay
	Okay. At first considered trusts but then thought more of personal wealth
	Okay. Understood the question but didn't know.
	Okay
	okay
	Okay. Thought of income and welfare recipient

**Q13** Picture a ladder with rungs numbered 1 to 10. At 10, on the top of the ladder, are the people who are the best off, those who have the most money, most education, and best jobs. At 1, the bottom of the ladder, are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Where on the ladder do you think you stand from 1, at the bottom of the ladder, to 10, at the top? **READ** Code response from 1 to 10

96 .... Depends/Don't know  
99 .... Refused

Okay  
Okay, but may need to add a transition to this from above so that they know we are asking about them personally. Could move to above other demographics and introduce as a section  
Okay but thought of a really wide range with Oprah as a 10.  
Okay but feels like he is guessing  
Hard because she feels like the amount of money people have isn't obvious here.  
Range was from homeless to those who are secure, have retirement, own their homes, are educated, have good careers, and have funding for kids education.  
Okay. Easy to answer, 1=indigent, unemployed, near homeless; 10=disposable income, edu, homeowner  
Clarify individual. Homeless to wealthy, no need to budget.  
Clarify individual. Welfare to rich for Hawaii. Need more that on the continent. Median income is already toward the bottom.

**Q14 \*\*\* Only ask this set of questions to Native Hawaiians. For other ethnic groups, skip to Q17.** The next several statements are about your feelings toward the Hawaiian language as your native language. Please tell me how much you agree or disagree with each statement from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Don't know	Refused
I feel good about my native language as a sign of my social group.	n/a						
	n/a						
My native language has very little to do with how I feel about myself.	n/a						
	n/a						
My native language is an important reflection of who I am.	n/a						
	n/a						
I often regret belonging to the group that speaks my native language	n/a						
	n/a						
Knowing one's native language benefits one's well-being	n/a						
	n/a						

n/a
Okay. Takes you to your roots. Makes you grounded and settles. Establishes a path or direction for you.
n/a
Okay. Makes him happy to remember where he comes from.

**Q15** How old are you? **READ** Code numerical age, if <18 **Terminate 5**

**Terminate 5:** Thank you for your time, but for this particular survey we are collecting information from adults in Hawaii. Is there someone there who is 18 years old or older?

**Q16** What zip code do you live in? **READ** Code numerical zip code

**Q17** What is your gender? **READ**

- 1 .... Female
- 2 .... Male

**Q18** Where were you born? **READ**

- 1 .... Hawaii
- 2 .... USA other than Hawaii
- 3 .... Foreign
- 99... Refused **\*\*Do not read\*\***

**Q19** What is the highest level of education that you have completed? **READ**

- 9 Some high school
- 10 High school diploma or GED
- 11 Some college, technical, or vocational training
- 12 College graduate or higher
- 96 Other Specify **\*\*Do not read\*\***
- 97 None/No qualifications **\*\*Do not read\*\***
- 98 Don't know **\*\*Do not read\*\***

**Q20** At present, are you ...? **READ** Code first option they say yes to

- 1 .....Employed full time
- 2 .....Employed part time (less than 30 hrs/week)
- 3 .....Retired
- 4 .....Student
- 5 .....Unemployed
- 96 .....Other Specify **\*\*Do not read\*\***
- 99 .....Refused **\*\*Do not read\*\***

Demographic questions are okay – added the word employment to the working status questions

**Q21** Those are all the questions I have. Do you have any other comments you'd like to make about the subject of this interview? **READ**

- 1 .... Answer Specify
- 97 .. Nothing **\*\*Do not read\*\***
- 99 .. Refused **\*\*Do not read\*\***

Take out

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Thank you very much for your help, my name is "Interviewer" from Ward Research. If you have enquiries about this survey, please call the Principle Investigator, Claire Townsend: 808-692-1042.

DURATION: \_\_\_\_\_ minutes

DATE: \_\_/ \_\_/ 2000

# APPENDIX I. FINAL VERSION OF “ATTITUDES TOWARD THE HAWAIIAN LANGUAGE” SURVEY

## Attitudes Toward the Hawaiian Language

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### INTRODUCTION

Aloha, my name is <sup>AI</sup> from QMark Research. We are conducting research about attitudes toward the Hawaiian language or ‘Olelo Hawai‘i. This is genuine research. I’m not selling anything and this survey is not being paid for by a for-profit company.

#### If necessary:

This research takes about 20 minutes.

#### Background information only if needed:

- ◆ Information provided is confidential. We report summary results about groups; we do not identify which individuals have said what.
- ◆ The phone numbers for this survey were randomly selected from the white pages.

**Q1** Before we begin, of all the ethnic groups you belong to, which one do you most identify with?

Code one **READ**

- 1 ... Native Hawaiian Hawaiian quota
- 2 ... Caucasian Causasian quota
- 3 ... Japanese Japanese quota
- 4 ... Filipino Filipino quota
- 5 ... Other Pacific Islander ;E **Terminate 1**
- 6 ... Chinese ;E **Terminate 1**
- 96 .. Other ;E **Terminate 1**
- 99 .. Refused ;E **Terminate 2**

**Terminate 1:** Thank you for your time, but for this particular survey we are collecting information from the four predominant ethnic groups in Hawai‘i.

**Terminate 2:** Thank you for your time, but for this particular survey we need to know your ethnicity.

**Once ethnic quotas are met, Terminate 3:** Thank you, but we are trying to get equal numbers for each group in Hawai‘i.

**Q2** Are you a resident of the state of Hawai‘i? **READ**

- 1... Yes
- 2... No **Terminate 4**

**Terminate 4:** Thank you for your time, but for this particular survey we are collecting information from Hawai‘i state residents.

**Q3** How old are you? **READ** Code numerical age, if <18 **Terminate 5**

**Terminate 5:** Thank you for your time, but for this particular survey we are collecting information from adults in Hawai‘i. Is there someone there who is 18 years old or older?

**Q4** The rest of this interview is about your opinions on the use of the Hawaiian language in Hawai'i and related ideas. Are you okay to continue?

- 1 .... Yes, continue
- 99 .....Refuse topic **Terminate 6**

**Terminate 6:** That's fine. Thank you for your time.

**Q5** I am going to read a series of questions and answer choices. Please feel free to take notes if it will help. Are you ready to continue? The first set of statements is about the Hawaiian language in general. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. The answer choices are; strongly agree, agree, neutral, disagree, strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe:** Is that strongly agree/disagree or just agree/disagree?

**If Necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know	Refused
a. I have a lot of respect for people who can speak Hawaiian fluently	5	4	3	2	1	98	99
b. It is a good thing that Native Hawaiian people speak Hawaiian at home	5	4	3	2	1	98	99
c. It is a good thing that Native Hawaiian people speak Hawaiian in public places, such as the supermarket	5	4	3	2	1	98	99
d. It is <u>not</u> right for Native Hawaiians to speak Hawaiian in public where the people around might not understand what they are saying <b>Clarify answer: Do you dis/agree it is not right</b>	5	4	3	2	1	98	99
e. Spoken Hawaiian is a beautiful thing to hear	5	4	3	2	1	98	99

**Q6** The next six questions are about your interest and participation in some aspects of Hawaiian culture and language. Please tell me how often you do the following activities, from very often to never. **READ. \*\*Do not read "Don't know or Refused\*\***

**Probe:** Is that very often/rarely or just often/rarely?

	Very Often	Often	Sometimes	Rarely	Never	Don't know	Refused
a. How often do you read books or articles about the Hawaiian culture or language? <b>Clarify: This can include online articles.</b>	5	4	3	2	1	98	99
b. How often do you watch TV shows about Hawaiian	5	4	3	2	1	98	99

language or culture							
c. How often do you listen to radio talk shows in the Hawaiian language or about the Hawaiian culture	5	4	3	2	1	98	99
d. How often do you visit Native Hawaiian art, culture or historical exhibits	5	4	3	2	1	98	99
e. How often do you participate in Hawaiian cultural activities	5	4	3	2	1	98	99

**Q7** I am now going to ask you about different signs. Think about all the public signs you see when you are walking or driving around. These include all road work signs, warning signs, informational signs and all other government produced signs. For example, these would include stop signs, warning signs at beaches, and informational signs on hiking trails. These would not include commercial signs, like signs for restaurants. These would also not include street or place signs, like King St. or Waikiki. Thinking about other government produced signs: **READ \*\*Do not read "Don't know or Refused\*\***

	0% - 19%	20% - 39%	40% - 59%	60% - 79%	80% - 100%	Don't know	Refused
What percent are in Hawaiian?	5	4	3	2	1	98	99

**Q8** There are two official languages of State of Hawai'i. These two languages are English and Hawaiian. The next several statements are about having bilingual signs in Hawai'i. Bilingual means using two languages. The two languages would be English and Hawaiian. Both languages would appear together on all government produced signs, such as road signs, construction signs, warning signs, building signs, informational signs, and tourism signs. This would not include street or place names. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

**If necessary:** This would not include street or place names.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know	Refused
a. Bilingual signs would improve the status of the Hawaiian language	5	4	3	2	1	98	99
b. Bilingual signs would improve the social status of Native Hawaiians	5	4	3	2	1	98	99
c. Bilingual signs would increase the value of the Hawaiian language	5	4	3	2	1	98	99
d. Bilingual signs would increase interest in the Hawaiian	5	4	3	2	1	98	99

language							
e. Bilingual signs would improve Native Hawaiian well-being	5	4	3	2	1	98	99

**Q9** Now I would like to read you a number of statements made about having bilingual, Hawaiian and English, signs. Please tell me how much you agree or disagree with each statement, from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused\*\***

**Probe** Is that strongly agree/disagree or just agree/disagree?

**If necessary:** I understand that you have that opinion, it is really important that we hear from people with all types of opinions.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know	Refused
a. The Hawaiian language should be more visible in the community.	5	4	3	2	1	98	99
b. Public signage should be bilingual, in Hawaiian and English.	5	4	3	2	1	98	99
c. The government should fund bilingual signs.	5	4	3	2	1	98	99

**Q10** The next two items are general statements about perpetuating the Hawaiian language. Please tell me how much you agree or disagree with the following statements, from strongly disagree to strongly agree. **READ \*\*Do not read "Don't know or Refused\*\***

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know	Refused
People learn to speak the Hawaiian language as a way of rejecting the American culture	5	4	3	2	1	98	99
Hawaiian language is the native language of Hawai'i and is therefore important to perpetuate	5	4	3	2	1	98	99

**Q11** How American do you feel on a scale of 1 to 5, with 1 being not American at all to 5 being completely America? **READ \*\*Do not read "Don't know or Refused\*\***

**If necessary:** By American, I mean whatever "feeling American" means to you.

	5	4	3	2	1	Don't know	Refused
How American do you feel?	5	4	3	2	1	98	99

**Q12** The next three questions are about the amount control your ethnic group has over different resources in Hawai'i. Please tell me how much control of each resource your ethnic group has in Hawai'i from none to all. **READ \*\*Do not read "Don't know or Refused\*\***

	All	Most	Average	Some	None	Don't know	Refused
How much economic and business control does your ethnic group have?	5	4	3	2	1	98	99
How much political control does your ethnic group have?	5	4	3	2	1	98	99
How much wealth does your ethnic group have?	5	4	3	2	1	98	99

**ASK ONLY OF NATIVE HAWAIIANS]**

**Q13** What is the most dominant ethnic group in Hawai'i? \_\_\_\_\_ Record the answer for use in Q14.

**If necessary:** Some people in Hawai'i would say that Whites or Japanese are the most dominant groups.

**Q14 [ASK ALL EXCEPT FOR NATIVE HAWAIIANS]** Now I'm going to ask you those same questions but about Native Hawaiians. Please tell me how much control of each resource Native Hawaiians have from all to none. **READ \*\*Do not read "Don't know or Refused"\*\*\***

**[ASK ONLY OF NATIVE HAWAIIANS]**

**\*\*If the respondent is Native Hawaiian, rephrase this question as follows:** Now I'm going to ask you those same questions but about the most dominant ethnic group in Hawai'i\*\*  
Please tell me how much of each resource [insert answer from Q13] has from none to all.

	All	Most	Average	Some	None	Don't know	Refused
How much economic and business control do Native Hawaiians have? <b>**do [insert answer from Q13] have?***</b>	5	4	3	2	1	98	99
How much political control do Native Hawaiians have? <b>**do [insert answer from Q13] have?***</b>	5	4	3	2	1	98	99
How much wealth do Native Hawaiians have? <b>**do [insert answer from Q13] have?***</b>	5	4	3	2	1	98	99

**Q15** Picture a ladder with rungs numbered 1 to 10. At 10, on the top of the ladder, are the people who are the best off, those who have the most money, most education, and best jobs. At 1, the bottom of the ladder, are the people who are the worst off, those who have the least money, least education, and worst jobs or no job. Where on the ladder do you think you stand from 1, at the bottom of the ladder, to 10, at the top? **READ** Code response from 1 to 10

**If necessary:** This question is asking about you personally, rather than your ethnic group as a whole.

96 .... Depends/Don't know

99 .... Refused

**ASK ONLY OF NATIVE HAWAIIANS]**

**Q16 \*\*\* Only ask this set of questions to Native Hawaiians. For other ethnic groups, skip to Q17.** The next several statements are about your feelings as a Native Hawaiian toward the Hawaiian language. Please tell me how much you agree or disagree with each statement from strongly agree to strongly disagree. **READ \*\*Do not read "Don't know or Refused"\*\*\***

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Don't know	Refused
I feel good about the Hawaiian language as a sign of my social group.	5	4	3	2	1	98	99
The Hawaiian language has very little to do with how I feel about myself.	5	4	3	2	1	98	99
The Hawaiian language is an important reflection of who I am.	5	4	3	2	1	98	99

**Q17** What zip code do you live in? **READ** Code numerical zip code

**Q18** How would you describe your Hawaiian language skills? **READ**

- 1....None **\*\* if none skip to Q20.**
- 2....Elementary
- 3....Intermediate
- 4....Fluent
- 5....Native speaker
- 99... Refused

**Q19** Where did you learn the Hawaiian that you know? **READ Select all that apply**

- 1....Immersion education or formal classes
- 2....Participation in Native Hawaiian traditions or activities
- 3....Family and Friends
- 4....Other: \_\_\_\_\_
- 97...None
- 99... Refused

**Q20** What is your gender? **READ**

- 1 .... Female
- 2 .... Male
- 3.... Transgender
- 99... Refused **\*\*Do not read\*\***

**Q21** How long have you lived in Hawai'i? Code

- 99... Refused **\*\*Do not read\*\***

**Q22** What is the highest level of education that you have completed? **READ**

- 1 Some high school
- 2 High school diploma or GED
- 3 Some college, technical, or vocational training
- 4 College graduate or higher
- 96 Other Specify **\*\*Do not read\*\***
- 97 None/No qualifications **\*\*Do not read\*\***
- 98 Don't know **\*\*Do not read\*\***

**Q23** At present, are you ...? **READ** Code first option they say yes to

- 1..... Employed full time
- 2..... Employed part time (less than 30 hrs/week)
- 3..... Retired
- 4..... Student
- 5..... Unemployed
- 96.... Other Specify **\*\*Do not read\*\***
- 99.... Refused **\*\*Do not read\*\***

Thank you very much for your help, my name is **NI** from QMark Research. If you have enquiries about this survey, please call the Principle Investigator, Claire Townsend:  
808-692-1042.

DURATION: \_\_\_\_\_minutes

DATE: \_\_/ \_\_/ 2000

## References

- Abrams, M. (1999). Intergenerational transmission of trauma: Recent contributions from the literature of family systems approaches to treatment. *American Journal of Psychotherapy*, 53(2), 225-232.
- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology*, 19(6), 586-592.
- Andrade, N. N., Hishinuma, E. S., McDermott, J. F., Jr., Johnson, R. C., Goebert, D. A., Makini, G. K., Jr., . . . Waldron, J. A. (2006). The National Center on Indigenous Hawaiian Behavioral Health study of prevalence of psychiatric disorders in Native Hawaiian adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45(1), 26-36.
- Backhaus, P. (2006). Multilingualism in Tokyo: A Look into the Linguistic Landscape. *International Journal of Multilingualism*, 3(1), 52-66.
- Baker, K., Crockett, J., Onaka, A., Horiuchi, B., Liu, L., Tottori, C., & Dannemiller, J. (2003). *Considered, Made a Plan, and Attempted Suicide: Baseline Estimates Adult Population of Hawaii, Hawaii Health Survey 2001*. Honolulu: Hawaii Department of Health.
- Barker, V., & Giles, H. (2002). Who supports the English-only movement?: Evidence for misconceptions about Latino group vitality. *Journal of Multilingual and Multicultural Development*, 23(5), 353-370.

- Barker, V., & Giles, H. (2004). English-only policies: Perceived support and social limitation. *Language and Communication*, 24, 77-95.
- Barker, V., Giles, H., Noels, K., Duck, J., Hecht, M. L., & Clément, R. (2001). The English-only movement: a communication analysis of changing perceptions of language vitality. *Journal of Communication*, 51(1), 3-37.
- Barnard, M. A. (1984). Enabling and implementing legislation and state constitutional convention committee reports. *University of Hawai'i Law Review*, 6, 523.
- Belsley, D. A., Kuh, E, Welsch, R E. (1980). *Regression diagnostics: Identifying influential observations and sources of collinearity*. New York: John Wiley and Sons.
- Blair, J., & Conrad, F. G. (2011). Sample size for cognitive interview pretesting. *Public Opinion Quarterly*, 75(4), 636-658.
- Bourhis, R., Giles, H., & Rosenthal, D. (1981). Notes on the construction of a “subjective vitality questionnaire” for ethnolinguistic groups. *Journal of Multicultural and Multilingual Development*, 2, 145-155.
- Braun, K. L., Mokuau, N., Hunt, G. H., Kaanoi, M., & Gotay, C. C. (2002). Supports and obstacles to cancer survival for Hawaii's native people. *Cancer Practice*, 10(4), 192-200.
- Braun, K. L., Mokuau, N., & Tsark, J. U. (1997). Cultural themes in health, illness, and rehabilitation among Native Hawaiians. *Topics in Geriatric Rehabilitation*, 12, 19-37.

- Brittain, J. (2002). *The heartbeat is strong: Aboriginal language maintenance and revitalization in Newfoundland and Labrador*. Unpublished paper presented at Memorial University of Newfoundland.
- Brown, H. J., McPherson, G., Peterson, R., Newman, V., & Cranmer, B. (2012). Our land, our language: Connection, dispossession and health equity in an indigenous context. *Canadian Journal of Nursing Research*, 44(2), 44-63.
- Bushnell, O. A. (1993). *The gifts of civilization: Germs and genocide in Hawai'i*. Honolulu, HI: University of Hawai'i Press.
- Carlton, B., Goebert, D. A., Bell, C. K., Horton, M., Else, I. R. N., Marcinowski, M., Yamada, L. (2011). Integrating cultural values into mental health treatment. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 7(1), 159-184.
- Cerrada, C., Weinberg, J., Dresner, D., Boah, A., Sherman, K., & Saper, R. (2012). Comparison of paper surveys and computer-assisted telephone interviews in a randomized controlled trial of yoga for low back pain. *BMC Complementary and Alternative Medicine*, 12(Suppl 1), P370.
- Cram, F., McCreanor, T., Smith, L. T., Nairn, R., & Johnstone, W. (2006). Kaupapa Māori research and Pākehā social science: epistemological tensions in a study of Māori health. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 3(1), 41-68.
- Cho, S., Salvail, F., Gross, P., Crisanti, A., Gundaya, D., & Smith, J. (2008). *Depression and anxiety among adults in Hawai'i: A focus on gender and ethnicity*. Honolulu: Hawaii State Department of Health.

- Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin*, 112(1), 155-159.
- Cook, B. P., Withy, K., & Tarallo-Jensen, L. (2003). Cultural trauma, Hawaiian spirituality, and contemporary health status. *Californian Journal of Health Promotion*, 1, 10-24.
- Crabbe, K. M., Kaholokula, J. K., Kenui, C. K., & Grandinetti, A. (1996). *Prevalence of depression, degrees of Hawaiianess, and modes of acculturation among Native Hawaiians living in rural North Kōhala, Hawai'i*. Paper presented at the National Institute of Health - Asian and Pacific Islander American Health Research Conference, Honolulu, HI.
- Cresswell, J. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage Publications.
- Crosby, A. (1992). Hawaiian Depopulation as a model for the Amerindian experience. In T. Ranger, Slack, P. (Ed.), *Epidemics and Ideas: Essays on the Historical Perception of Pestilence* (pp. 175-201). New York: Cambridge University Press.
- Crystal, D. (1997). *English as a global language*. Cambridge, England: Cambridge University Press.
- Cummings, A. (1997). English language-in-education policies in Canada. In W. Eggington & H. Wren (Eds.), *Language policy: Dominant English, pluralist challenges* (pp. 91-105). Australia: Language Australia Ltd.
- Dailey, R. M., Giles, H., & Jansma, L. L. (2005). Language attitudes in an Anglo-Hispanic context: the role of the linguistic landscape. *Language & Communication*, 25(1), 27-38.

- Dana-Sacco, G. (2012). Health as a proxy for living the good life: A critical approach to the problem of translation and praxis in language endangered indigenous communities. *Fourth World Journal*, 11(2), 7-24.
- Edelman, L. J. (2010). *Linguistic landscapes in the Netherlands: a study of multilingualism in Amsterdam and Friesland* (Doctoral Dissertation). Retrieved from Institutional repository of the University of Amsterdam (182709).
- Fishman, J. (1996). What do you lose when you lose your language? In G. Cantoni (Ed.), *Stabilizing indigenous languages* (pp. 13). Flagstaff: Center for Excellence in Education, Northern Arizona University. Retrieved from [www.akha.org](http://www.akha.org).
- Fishman, J. A. (1991). *Reversing Language Shift: Theoretical and Empirical Foundations of Assistance to Threatened Languages*. Clevedon, United Kingdom: Multilingual Matters.
- Fiske, A. P., Kitayama, S., Markus, H.R., & Nisbett, R.E. (1998). The cultural matrix of social psychology. In D. T. Gilbert, Fiske, S.T., & Lindzey, G. (Eds.), *The Handbook of Social Psychology* (4th ed., pp. 915-981). Boston: McGraw-Hill.
- Florentina, R., Salvail, M. S., & Dung-Hanh Nguyen, B. S. (2011). *Behavioral risk factor surveillance system survey data*. Retrieved from Hawaii State Department of Health <http://hawaii.gov/health/statistics/brfss/brfss2011/demo11.html>
- Fowler, R. (1996). Linguistic criticism. In R. Caldas-Coulthard & M. Coulthard (Eds.), *Texts and practices: Readings in critical discourse analysis* (pp. 1-16). Oxford: University Press.

- Frendreis, J., & Tatalovich, R. (1997). Who supports English-only language laws? Evidence from the 1992 national election study. *Social Science Quarterly*, 78(2), 354-368.
- Fries, E., Hesse, J., Hellhammer, J., & Hellhammer, D. H. (2005). A new view on hypocortisolism. *Psychoneuroendocrinology*, 30(10), 1010-1016.
- Fuchs, L. H. (1961). *Hawaii pono: A social history*. New York: Harcourt Brace Jovanovich.
- Furubayashi, J. K., & Look, M. A. (2005). Type 2 diabetes in Native Hawaiians and Pacific Islanders in Hawaii. *Pacific Health Dialogue*, 12(2), 103-110.
- Ghaed, S. G., & Gallo, L. C. (2007). Subjective social status, objective socioeconomic status, and cardiovascular risk in women. *Health Psychology*, 26(6), 668-674.
- Gold, P. W., & Chrousos, G. P. (2002). Organization of the stress system and its dysregulation in melancholic and atypical depression: high vs low CRH/NE states. *Molecular Psychiatry*, 7(3), 254-275.
- Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: development and evaluation of a new indicator. *Pediatrics*, 108(2), e31, 1-8.
- Goodwin, R. D., Davidson, K. W., & Keyes, K. (2009). *Mental disorders and cardiovascular disease among adults in the United States*. *Journal of Psychiatry Research*, 43(3), 239-246.
- Gorter, D. (2006). Further possibilities for linguistic landscape research. In D. Gorter (Ed.), *Linguistic landscape: A new approach to multilingualism*, (pp. 81-89). Tonawanda: Multilingual Matters.

- Grandinetti, A., Seifried, S., Mor, J., Chang, H. K., & Theriault, A. G. (2005). Prevalence and risk factors for prolonged QTc in a multiethnic cohort in rural Hawaii. *Clinical Biochemistry*, 38(2), 116-122.
- Grimes, B. F. (2001). Global language viability: Causes, symptoms and cures for endangered languages. *Notes on Linguistics*, 4(4), 205-223.
- Halloran, M. J. (2004, July). *Cultural maintenance and trauma in Indigenous Australia*. Paper presented at the 23rd Annual Australian and New Zealand Law and History Society Conference, Perth, Western Australia.
- Harvey, R., & Koh, A. (2012). Landfill in paradise: Politics of waste management and environmental justice in Hawaii. *Anthropology News*. Retrieved from <http://www.anthropology-news.org/index.php/2012/10/01/landfill-in-paradise/>
- Hawai'i Advisory Committee. (2011). *Is there an uneven administration of justice for Native Hawaiians in Hawai'i*. Washington, DC: Hawai'i Advisory Committee.
- Hawaii State Department of Health. (2008). *Hawaii Health Survey*. Retrieved September 23, 2010, from [http://hawaii.gov/health/statistics/hhs/hhs\\_08/index.html](http://hawaii.gov/health/statistics/hhs/hhs_08/index.html)
- Hershel, H. J. (1986). Colonialism reconsidered: An analysis of socioeconomic and cultural factors affecting the mental health of Hawaiians. *Humanity & Society*, 10(4), 448-468.
- Hicks, D. (2002, April). *Scotland's linguistic landscape: The lack of policy and planning with Scotland's place-names and signage*. Paper presented at the World Congress on Language Policies, Barcelona. [www.linguapax.org/congres/taller/taller2/Hicks.html](http://www.linguapax.org/congres/taller/taller2/Hicks.html)

- Ho‘omanawanui, K. U. (2008). ‘Ike ‘Āina: Native Hawaiian culturally based indigenous literacy. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 5(1), 203-244.
- Horton, R. (2006). Indigenous peoples: Time to act now for equity and health. *The Lancet*, 367(9524), 1705-1707.
- Hughes, D., & DuMont, K. (1993). Using focus groups to facilitate culturally anchored research. *American Journal of Community Psychology*, 21(6), 775-806.
- Interagency Language Roundtable. (2012). History of the ILR Scale. Retrieved December 09, 2012, from <http://www.govtilr.org/Skills/IRL%20Scale%20History.htm>
- Ka‘awa, M., Hawkins, E. (1997). Incorporating technology into a Hawaiian language curriculum. In J. A. Reyhner (Ed.), *Teaching indigenous languages* (pp. 151-157). Flagstaff: Northern Arizona University, Center for Excellence in Education.
- Kaholokula, J., Grandinetti, A., Keller, S., Nacapoy, A. H., Kingi, T. K., & Mau, M. K. (2011). Association between perceived racism and physiological stress indices in Native Hawaiians. *Journal of Behavioral Medicine*, 35(1), 27-37
- Kaholokula, J. (2007). Colonialism, acculturation, and depression among Kānaka Maoli of Hawai‘i. In P. Culbertson, M. N. Agee, & C. Makasiale (Eds.), *Penina uliuli: Confronting challenges in mental health for pacific peoples*. (pp. 180-195). Honolulu: University of Hawai‘i Press.
- Kaholokula, J. K. (2008). Culturally informed smoking cessation strategies for Native Hawaiians. *Nicotine & Tobacco Research*, 10(4), 671-681.

- Kaholokula, J. K., Braun, K. L., Kana'iaupuni, S., Grandinetti, A., & Chang, H. K. (2006). Ethnic-by-gender differences in cigarette smoking among Asian and Pacific Islanders. *Nicotine & Tobacco Research*, 8(2), 275-286.
- Kaholokula J. K., Nacapoy. A., & Dang K. (2009). Social justice as a public health imperative for Kānaka Maoli. *AlterNative: An International Journal of Indigenous Peoples*, 5(2), 117-137.
- Kahumoku, W. (2003). A tragic indigenous mo'olelo: The decline of Kānaka Maoli linguistic Identity. *'Oiwī: A Native Hawaiian journal*, 3, 159-167.
- Kanaka-Gantenbein, C. (2010). Fetal origins of adult diabetes. *Annals of the New York Academy of Sciences*, 1205, 99-105.
- Kauanui, J. K. (2005). Precarious positions: Native Hawaiians and U.S. federal recognition. *Contemporary Pacific*, 17(1), 1-27.
- King, M., Smith, A., & Gracey, M. (2009). Indigenous health part 2: the underlying causes of the health gap. *The Lancet*, 374(9683), 76-85.
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British Medical Journal*, 311(7000), 299-302.
- Kohn, M. (2012). The Stanford Encyclopedia of Philosophy Summer 2012 Retrieved February 4, 2013, from <http://plato.stanford.edu/archives/sum2012/entries/colonialism/>
- Krieger, N. (2001). Theories for Social Epidemiology in the 21st Century: An Ecosocial Perspective. *International Journal of Epidemiology*, 30, 668-677.

- Kupau, S. (2004). Judicial enforcement of official indigenous languages: A comparative analysis of the Maori and Hawaiian struggles for cultural language rights. *University of Hawai'i Law Review*, 26, 495-535.
- Kuykendall, R. (1938). *The Hawaiian Kingdom, 1778 - 1854: Foundation and transformation*. Honolulu: University of Hawai'i Press.
- Landry, R., & Bourhis, R. Y. (1997). Linguistic landscape and ethnolinguistic vitality. *Journal of Language and Social Psychology*, 16(1), 23-49.
- Language Materials Project: Hawaiian. (2010). UCLA: Language Materials Project
- Lewis, M. P., & Simons, G. F. (2010). Assessing endangerment: Expanding Fishman's GIDS. *Revue Roumaine de Linguistique*, 2, 103-119.
- Li, C., Ford E. S., Zhao, G., Tsai J., & Balluz, L. S. (2012). A comparison of depression prevalence estimates measured by the Patient Health Questionnaire with two administration modes: Computer-assisted telephone interviewing versus computer-assisted personal interviewing. *International Journal of Public Health*, 57(1), 225-233.
- Lind, A. W. (1934). *Modifications of Hawaiian character*. New York: McGraw-Hill.
- Liu, D. M., & Alameda, C. K. (2011). Social determinants of health for Native Hawaiian children and adolescents. *Hawai'i Medical Journal*, 70(11 Suppl 2), 9-14.
- Lucas, P. F. N. (2004). No ke ola pono o ka lāhui Hawai'i: The protection and perpetuation of customary and traditional rights as a source of well-being for Native Hawaiians. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 1(1), 197-220.

- Lucas, P. F. N. (2000). E ola mau kakou i ka 'olelo makuahine: Hawaiian language policy and the courts. *The Hawaiian Journal of History*, 34.
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18, 302-318.
- Macalister, J. (2010). Emerging voices or linguistic silence?: Examining a New Zealand linguistic landscape. *Multilingua - Journal of Cross-Cultural and Interlanguage Communication*, 29(1), 55-75.
- Mau, M. K., Wong, K. N., Efird, J., West, M., Saito, E. P., & Maddock, J. (2008). Environmental factors of obesity in communities with native Hawaiians. *Hawai'i Medical Journal*, 67(9), 233-236.
- McCubbin, L. D., & Marsella, A. (2009). Native Hawaiians and psychology: The cultural and historical context of indigenous ways of knowing. *Cultural Diversity and Ethnic Minority Psychology*, 15(4), 374-387.
- McIvor, O. (2005). The contribution of indigenous heritage language immersion programs to healthy early childhood development. In J. Whitehead (Ed.), *Research Connections Canada: Supporting Children and Families* (pp. 5-20). Ottawa: Canadian Child Care Federation.
- McMichael, A. (1999). Prisoners of the Proximate: Loosening the Constraints on Epidemiology in an Age of Change. *American Journal of Epidemiology*, 149(10), 887-897.
- Meng, L., Maskarinec, G., & Wilkens, L. (1997). Ethnic differences and factors related to breast cancer survival in Hawaii. *International Journal of Epidemiology*, 26(6), 1151-1158.

- Mezuk, B., Eaton, W. W., Albrecht, S., & Golden, S. H. (2008). Depression and type 2 diabetes over the lifespan: a meta-analysis. *Diabetes Care*, 31(12), 2383-2390.
- Mikelsons, M., & Eschbach, K. (1993). *Housing problems and needs of Native Hawaiians*. Honolulu, HI: Department of Housing and Urban Development.
- Mokuau, N. (Ed.). (1999). Health and well-being for Pacific Islanders: Status, barriers and resolutions. *Asian American and Pacific Islander Journal of Health*, 4, 55–67.
- Morse, J., & Field, P.A. (Ed.). (1995). *Qualitative research methods for health professionals* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Mowbray, M. (2007, April). *Social determinants and indigenous health: the international experience and its policy implications*. Paper presented at the International Symposium on the Social Determinants of Indigenous Health, Adelaide.
- Native American Languages Act of 1991. *Hearings on S. 2044 To Assist Native Americans in Assuring the Survival and Continuing Vitality of Their Languages*, before the Select Committee on Indian Affairs. United States Senate, One Hundred Second Congress, Second Session. (1992).
- Nicholson, R. (1997). Marketing the Māori language. In J. A. Reyhner (Ed.), *Teaching indigenous languages* (pp. 206-213). Flagstaff: Northern Arizona University, Center for Excellence in Education.
- Office of Hawaiian Affairs. (2010). *The disparate treatment of Native Hawaiians in the criminal justice system*. Honolulu, HI: Office of Hawaiian Affairs.
- Okamura, J. (2008). *Ethnicity and inequality in Hawai'i*. Philadelphia: Temple University Press.

- Operario, D., Adler, N. E., & Williams, D. R. (2004). Subjective social status: Reliability and predictive utility for global health. *Psychology & Health*, 19(2), 237-246.
- Osorio, J. (2002). *Dismembering lāhui: A history of the Hawaiian Nation to 1887*. Honolulu, HI: University of Hawai‘i Press.
- Palmer, S., Fryer, K. (2009). *Methodology Report for the 2009 survey of the attitudes, beliefs & values towards the Māori language final report*. Wellington, New Zealand: Research New Zealand.
- Pini, B. (2002). Focus groups, feminist research and farm women: opportunities for empowerment in rural social research. *Journal of Rural Studies*, 18(3), 339-351.
- Pukui, M. K., Haertig, E. W., & Lee, C. A. (1979). *Nana i ke kumu: Look to the source*. Honolulu, HI: Queen Lili‘uokalani Children’s Center.
- Puzey, G. (2007). *Planning the linguistic landscape: A comparative survey of the use of minority languages in the road signage of Norway, Scotland and Italy*. (Doctoral dissertation). Retrieved from Edinburgh Research Archive.  
(<http://hdl.handle.net/1842/2118>)
- Representative No. 12. (1980). 1 Proceedings of the Constitutional Convention of 1978.
- Reyes-Salvail, F., Liang, S., & Nguyen, D. (2008). *Frequent mental distress prevalence and disparity: Hawaii BRFSS 2005-2007*. Honolulu: Hawaii State Health Department.
- Reyhner, J. (1996, June). *Maintaining and developing indigenous languages*. Paper presented at the World Indigenous People's Conference: Education Albuquerque, New Mexico.

- Reyhner, J. (1999). Some basics of indigenous language revitalization. In J. Reyhner, G. Cantoni, R. N. St. Clair, & E. P. Yazzie (Eds.) *Revitalizing indigenous languages*. (pp. v-xx). Arizona: Northern Arizona University.
- Rezentes, W. C. (1996). *Ka lama kukui: Hawaiian psychology: An introduction*. Honolulu, HI: 'A'ali'i Books.
- Rohleder, N., Joksimovic, L., Wolf, J. M., & Kirschbaum, C. (2004). Hypocortisolism and increased glucocorticoid sensitivity of pro-inflammatory cytokine production in Bosnian war refugees with posttraumatic stress disorder. *Biological Psychiatry*, 55(7), 745-751.
- Romaine, S. (2002). The impact of language policy on endangered languages. *International Journal on Multicultural Societies*, 4(2), 1-28.
- Royal Commission on Aboriginal Peoples. (1996). *Gathering strength: Report of the royal commission on Aboriginal Peoples*. Ottawa, Canada: Minister of Supply and Services.
- Ruzafa-Martinez, M., Lopez-Iborra, L., & Madrigal-Torres, M. (2011). Attitude towards Evidence-Based Nursing Questionnaire: development and psychometric testing in Spanish community nurses. *Journal of Evaluation in Clinical Practice*, 17(4), 664-670.
- Salvail, F., Nguyen, D., & Liang, S. (2010). *2010 State of Hawaii by demographic characteristics behavioral risk factor surveillance system*. Honolulu, HI: Hawaii State Department of Health.
- Salzman, M. B., & Halloran, M.J. (2004). Culture, meaning, self-esteem and the reconstruction of the cultural worldview. In J. Greenberg, S. L. Koole & T. A.

- Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. xv, 528 p.). New York: Guilford Press.
- 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.
- Serna, A. K. (2006). The application of terror management theory to Native Hawaiian well-being. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 3(1).
- Service de police de la Ville de Montréal. (2012). Psychological violence. Retrieved June 1, 2012, from [http://www.spvm.qc.ca/en/service/1\\_3\\_1\\_1\\_violpsycho.asp](http://www.spvm.qc.ca/en/service/1_3_1_1_violpsycho.asp)
- Silva, J. K., Kaholokula, J. K., Ratner, R., & Mau, M. (2006). Ethnic differences in perinatal outcome of gestational diabetes mellitus. *Diabetes Care*, 29(9), 2058-2063.
- Silva, N. K. (2006). *Aloha Betrayed: Native Hawaiian Resistance to American Colonialism*. Durham, NC: Duke University Press.
- Sloboda, M., Szabo-Gilinger, E., Vigers, D., & Šimičić, L. (2010). Carrying out a language policy change: Advocacy coalitions and the management of linguistic landscape. *Current Issues in Language Planning*, 11(2), 95-113.
- Smithson, J. (2000). Using and analysing focus groups: Limitations and possibilities. *International Journal of Social Research Methodology*, 3(2), 103-119.
- SMS Research & Marketing Services, Inc. (2009). *Department of Hawaiian Homelands Lessee Survey, 2008*. Honolulu: SMS Research & Marketing Services, Inc.

- Sotero, M. M. (2006). A conceptual modal of historical trauma: Implications for public health practice and research. *Journal of Health Disparities Research and Practice*, 1(93-108).
- Srinivasan, S., & Guillermo, T. (2000). Toward improved health: disaggregating Asian American and Native Hawaiian/Pacific Islander data. *American Journal of Public Health*, 90(11), 1731-1734.
- Stiles, D. B. (1997). Four successful indigenous language programs. In J. A. Reyhner (Ed.), *Teaching indigenous languages*. Flagstaff, Arizona: Northern Arizona University.
- Survey of Attitudes, Values and Beliefs about the Māori Language 2003 (2003). Wellington, New Zealand: Te Puni Kōiri Retrieved from [http://www.tetaurawhiri.govt.nz/PDF%27s/2007/surv\\_2003\\_part1.pdf](http://www.tetaurawhiri.govt.nz/PDF%27s/2007/surv_2003_part1.pdf).
- Susman, E. J. (2007). Toward a psychobiologic understanding of youth health disparities. *Journal of Adolescent Health*, 41(1), 1-2.
- Sztompka, P. (2000). Cultural Trauma: The Other Face of Social Change. *European Journal of Social Theory*, 3(4), 449-466.
- Tabachnick, B. G., & Fidell, L. S. (2006). *Using Multivariate Statistics* (5th ed.). San Francisco: Allyn & Bacon.
- Taualii, M. (2012). Self-rated health status comparing Pacific Islanders to Asians. *Journal of Health Disparities Research and Practice*, 1(2), 7.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

- The Ministry for Māori Development, (2009). *Attitudes Toward the Māori Language*.  
Wellington: Te Puni Kōkiri.
- Tourangeau, R. (1984). Cognitive sciences and survey methods. In T. Jabine, Straf, M.,  
Tanur, J., Tourangeau R. (Ed.), *Cognitive aspects of survey methodology:  
Building a bridge between disciplines* (pp. 73-100). Washington, DC: National  
Academy Press.
- Trinidad, A. M. O. (2011). Sociopolitical development through critical indigenous  
pedagogy of place: Preparing Native Hawaiian young adults to become change  
agents. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 7(1).
- Tsark, J. U., Blaisdell, K., & Aluli, N. E. (1998). The health of Native Hawaiians. *Pacific  
Health Dialogue* (5), 228-404.
- Twiss, J., McKenna, S. P., Crawford, S. R., Tammaru, M., & Oprandi, N. C. (2011).  
Adapting the asthma life impact scale (ALIS) for use in Southern European  
(Italian) and Eastern European (Russian) cultures. *Journal of Medical Economics*.
- United States Census Bureau. (2010). American Fact Finder, from  
<http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>
- Van der Kooy, K., van Hout, H., Marwijk, H., Marten, H., Stehouwer, C., & Beekman,  
A. (2007). Depression and the risk for cardiovascular diseases: systematic review  
and meta analysis. *International Journal of Geriatric Psychiatry*, 22(7), 613-626.
- Walk, K. (2007). "Officially" what? The legal rights and implications of ‘olelo Hawai‘i.  
University of Hawai‘i Law Review.

- Whitbeck, L., Adams, G., Hoyt, D., & Chen, X. (2004). Conceptualizing and measuring historical trauma among American Indian people. *American Journal of Community Psychology*, 33(3-4), 119-130.
- Willis, G. B. (1999). Reducing survey error through research on the cognitive and decision processes in surveys. Paper presented at the *Meeting of the American Statistical Association*, Research Triangle Institute.
- Wilson, C. (2002). Census shows English is second language for 27 percent in Hawai'i. *Honolulu Advertiser*.
- Wong, K. L. (2004). He Hawa'e Kai Nui a Kau ma Kula. *Educational Perspectives*, 37(1), 31-39.
- Wong, K. L. (2011). Language, fruits, and vegetables. In M. E. Romero-Little, S. J. Ortiz, T. L. McCarty, & R. Chen (Eds.). *Indigenous languages across the generations – Strengthening families and communities* (pp. 3-16). Arizona: Arizona State University Center for Indian Education.
- Wong-Fillmore, L., & Valadez, C. (1986). Teaching bilingual learners. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3 ed., pp. 648-685). New York: Macmillan.
- Wurm, S. A. (1991). Language death and disappearance: Causes and circumstances. In R. H. Robins & E. M. Uhlenbeck (Eds.), *Endangered languages* (pp. 1-18.). New York: Berg; St. Martin's Press.
- Yamane, D. P., Oeser, S. G., & Omori, J. (2010). Health Disparities in the Native Hawaiian Homeless. *Hawai'i Medical Journal*, 69(6 Supplement 3), 35-41.

Young, B. (1980). The Hawaiians. In J. F. McDermott, Jr., N. Tseng & T. W. Marezki  
(Eds.), *People and cultures of Hawaii: A psychocultural profile* (pp. 5-25).  
Honolulu: University Press of Hawai'i.