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# KŪ KIA‘I MAUNA: THE LINGUISTIC LANDSCAPE OF THE MAUNA KEA PROTECTORS MOVEMENT<sup>1</sup>

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This paper describes the linguistic landscape of a single protest by the Mauna Kea Protectors’ movement against the proposed Thirty Meter Telescope project in Hawai‘i on June 24, 2015. It focuses primarily on the written language of protest signs and clothing, which move through the landscape over time. Using geosemiotics and intertextual analysis, this paper shows how this linguistic landscape helped to create a place of resistance using polylinguaging practices that mix English, Pidgin (Hawai‘i Creole), and Hawaiian. Communities of practice such as the Mauna Kea Protectors not only affect the discourse over land-use decisions, but also affect the visibility and prestige of indigenous languages.

**KEYWORDS:** linguistic landscape; geosemiotics; intertextuality; polylingualism; protest discourse; Hawaiian; English; Pidgin (Hawai‘i Creole)

**1. INTRODUCTION.** In 2015, resistance to the Thirty Meter Telescope (TMT) project slated for Mauna Kea on the island of Hawai‘i made international headlines. Through dynamic alteration of the landscape along the only road to the proposed construction site, a group identifying themselves as Mauna Kea Protectors repeatedly denied access to the construction crews and became a community-of-practice (Wenger 1998). The Protectors developed a unique semiotic repertoire in the course of their nine-month presence on the summit that included ritual protocols, physical (non-violent) resistance, and protest signs. All social actions occur at the intersection of three semiotic systems, in that “[s]patial repertoires are the available and sedimented resources that derive from the repeated language practices of the people involved in the sets of activities related to particular places” (Pennycook and Otsuji 2014:166). The linguistic landscape, or the use of written language in the cultural landscape, indexes sociopolitical conflict (Philip and Mercer 2002; Hanauer 2015), in that text is used to construct, maintain, and resist power relations through discourse (Barton and Tusting 2005). The focus of this paper is the use of visible text in the landscape of the Mauna Kea Access Road near the Mauna Kea Visitor Information Station as a form of protest discourse.

**1.1 RESEARCH QUESTIONS.** The linguistic landscape comprises “publicly visible bits of written language” (Blommaert 2013:1). The most salient aspect of the linguistic landscape of the access road demonstrations is the range of protest signs. However, text on clothing and other objects also plays a role in the construction and interpretation of the linguistic landscape. A close examination of the semiotic nature of multilingual texts in the linguistic landscape reveals the system of code preference, which both reflects and constructs prestige hierarchies for linguistic codes in a given community (Scollon and Scollon 2003). Communities-of-practice, such as the Mauna Kea Protectors and the law enforcement officers, inscribe “a diagnostic of social, cultural and political structures” (Blommaert 2013:3) onto the landscape. In order to describe the potential implications and inferences in this linguistic landscape, I used the following research questions:

How does language work with other modes of communication to create a place of resistance?

-What languages are present in the linguistic landscape?

-How are the languages distributed with regard to function and actors?

**1.2 CONTEXT OF THE LINGUISTIC LANDSCAPE.** Mauna Kea is the tallest mountain in the Hawaiian archipelago, and the tallest mountain in the world when measured from its base at the ocean floor.

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<sup>1</sup> *Kū* ‘stand’, *kia‘i* ‘guard’, *mauna* ‘mountain’. *Kū kia‘i mauna* ‘stand guard over the mountain’. All translations provided are simplified versions based on my limited ethnographic understanding of Hawaiian semantics, informed primarily by Mary Kawena Pukui’s definitions in *Nā Puke Wehewehe ‘Ōlelo Hawai‘i* (2017).

According to the extensive cultural survey of Mauna Kea conducted by Maly and Maly, before the 1820s, residents of Hawai‘i island traveled to the alpine regions of Mauna Kea “to worship, gather stone, bury family members, or deposit the *piko* (umbilical cords of new-born children) in sacred and safe areas” (2005:15; italics in original) or to travel from one side of the island to the opposite side.

In the 1820s, Europeans and Americans introduced ranch livestock to Hawai‘i Island, which grazed in the alpine regions and caused massive deforestation. In the early 1960s, University of Hawai‘i and National Weather Service scientists argued that Mauna Kea would be an ideal site for a telescope, and the State of Hawai‘i funded the first paved road to the summit. Many Hawai‘i Island residents support the telescopes, primarily because of construction, maintenance, and other jobs, but also for the scientific prestige they bring to the island. Other residents oppose the telescopes because of the negative impact of large-scale construction on a fragile and sacred landscape or because the telescopes are part of a larger pattern of outsiders making decisions without properly consulting Hawaiians.

TABLE 1: Support for TMT Project as of October 2015 (Ward Research Inc. 2015)

BY ISLAND	O‘ahu	Maui	Hawai‘i Island	Kaua‘i
Strongly Oppose	13%	21%	23%	7%
Somewhat Oppose	14%	8%	16%	15%
Somewhat Support	27%	25%	18%	18%
Strongly Support	27%	13%	41%	19%
Don’t Know/Refused	10%	13%	2%	19%
# Respondents	428	64	93	28

BY ETHNICITY	Caucasian	Filipino	Hawaiian/Part Hawaiian	Japanese
Strongly Oppose	6%	13%	34%	6%
Somewhat Oppose	14%	15%	15%	9%
Somewhat Support	27%	32%	18%	27%
Strongly Support	47%	28%	26%	43%
Don’t Know/Refused	6%	12%	6%	16%
# Respondents	143	75	140	120

In American culture, certain landscapes are valued for their lack of visual semiosis, especially “natural” or “wilderness” landscapes. The summit of Mauna Kea is one such landscape, and this is the crux of the conflict over land-use policies on the mountain. Many see the telescopes themselves as transgressive. While Hawaiians have built *‘ahu* ‘sacred cairns’ on the mountain for hundreds of years, these constructions were built using stones from the mountain itself. By contrast, the telescopes are clearly constructed from foreign materials. Although the US government, the University of Hawai‘i, and other major American scientific institutions have authorized these telescopes, many Protectors do not consider that these institutions have the authority to make such decisions.

Groups of Hawai‘i residents have vocally opposed the construction of each of the thirteen existing telescopes. In May 2010 an international non-profit consortium completed an Environmental Impact Statement as part of their proposal to build the Thirty Meter Telescope, which would be the world’s largest and most powerful telescope. The Hawaiian Board of Land and Natural Resources granted the building permit, and the Kahu Ku Mauna Council approved the sublease. Some of those who disagreed with the TMT project on Mauna Kea took part in the public hearings and felt that their concerns were not addressed. On October 7, 2014, TMT delegates took part in a Hawaiian blessing of the construction site, but opponents of TMT disrupted the ceremony, which made statewide news.

Opponents of the TMT project organized and began calling themselves Protectors. They camped out on the only access road to the construction site on the summit from April to December of 2015. The camp at the Hale Pōhaku Visitor Center grew over time and became a place of resistance. The landscape of resistance on the mountain consisted of semiotic relations in a number of different modes, including text,

clothing, dance, chants, speeches, crafts, and the manipulation of rocks and boulders. Images of Protectors and their linguistic landscape spread through international news outlets and social media, reaching a variety of audiences, both sympathetic and skeptical. This paper seeks to understand how Protectors used available semiotic resources to create an atmosphere of resistance and to communicate with multiple audiences. Understanding such processes allows both researchers and citizens learn from the effective spread of ideas and social movements.

**1.3 DESCRIPTION OF SAMPLE.** Since this particular linguistic landscape changed frequently in the course of a few months, it is infeasible to account for the entire period. Instead, I chose to look at a sample of the linguistic landscape on a particular day that was well documented. Although I was not present and able to collect data at the event discussed in this paper, the event is documented both in the news media and on social media. I collected a sample of 54 instances of visible text from a 25-minute video titled “Mauna Kea TMT Showdown June 24,” with permission from the videographer, David Corrigan. The video comprises a special report by Big Island Video News on the TMT blockade on June 24th, 2015. These texts included handheld signs, cloth banners, semi-permanent standalone signs, hats, and t-shirts.

I will refer to these instances of visible text as formulations. According to Bilmes, a formulation is “an expression or proposition in an actual occasion of use” (2010:3). Although usually found in studies of natural spoken conversations, this concept is also useful for analyzing the contextualized meaning behind the signs present on June 24, 2015 in the linguistic landscape on the summit of Mauna Kea. Since this event was one of a series of events in the same place with many of the same participants, the sample in this study can serve as an “excerpt” of an ongoing conversation in the linguistic landscape. Each text in the linguistic landscape is an expression that is reformulated through the course of the event. I will refer to the written text in an abstract sense as a text, which can appear in a variety of ways, whereas the text in context (on a particular sign at a particular moment in the video) is a formulation.

**1.4 METHODS USED.** Members of a community of practice constantly negotiate the membership of categories, the relations of categories to one another, and the activities associated with membership in each category. I will analyze how the Protectors use categories and category-bound predicates to make statements about authority on the summit of Mauna Kea. Knowlton argues that, “an anthropological investigation of writing requires multiple analytic levels that go beyond the referential content of the text-artifacts themselves” (2015:242).

Linguistic landscape studies provide a range of potentially useful methods for analyzing multilingual texts in context and determining how they contribute to a sense of place. In their landmark study of the linguistic landscape, Landry and Bourhis (1997) argue that,

The language of public road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings combines to form the linguistic landscape of a given territory, region, or urban agglomeration (25).

Since then, scholars have broadened the definition in a number of ways (Shohamy and Gorter 2009). Early studies focused on “fixed” signs in the landscape. Later studies included a number of mobile or temporary texts (Scollon 1997; Sebba 2010; Hawkins 2010; Coupland 2010; Jaworski 2014; Kasanga 2014). Much of this work deals with the quantitative distribution of languages in the linguistic landscape. Some work, however, takes a semiotic approach, analyzing “the social meanings of the material placement of signs [...] particularly in reference to the material world of the users of signs” (Scollon and Scollon 2003:4). Charles Sanders Peirce developed his theoretical framework of sign relations, or semiotics, in order to study how linguistic signs interact with other signs to produce meaning. Placing the study of semiotics within the physical context of the linguistic landscape is a geosemiotic approach.

Scollon and Scollon’s (2003) geosemiotic analysis takes “an integrative view of [...] multiple semiotic systems which together form the meanings which we call place” (12), namely visual semiotics, place semiotics, and the interaction order. Visual semiotics, based on the work of Kress and Van Leeuwen (1996, 2001), deals with the design elements of texts in the landscape, including color choices, composition, materials, and craftsmanship. Since readers likely give different interpretations to the same

text inscribed on a bronze plaque and on a hand-written cardboard sign, it is crucial to take into account the visual semiotics of each text. A geosemiotic analysis allows a researcher to discover many meanings of texts in the landscape.

**1.4.1 INTERACTION ORDER.** Studies of landscapes of protest necessarily take into account the temporality of the landscape, or the way the signs move and form new constellations of formulations over the course of the protest as people move around (Rubdy and Ben Said 2015). While the focus of this particular study is on the text found on signs, banners, and clothing, Seals (2012) argues that a multimodal analysis such as Scollon and Scollon’s (2003) geosemiotics provides a deeper understanding of the linguistic landscape, especially in the case of protest discourse, so I will not limit my analysis to written text. Readers of the landscape will not treat all texts equally, but will attend more to privileged texts. The extent to which they attend to these texts depends on their role in the interaction order of that particular place, at that particular time. Goffman relates this situated nature to the setting of social performance, in that, “those who would use a particular setting as part of their performance cannot begin their act until they have brought themselves to the appropriate place and must terminate their performance when they leave it” (Goffman 1959:13).

The genres and accompanying rules of social interaction that take place in the landscape comprise the interaction order, as constructed by Goffman. The interaction order is a description of the interactions that take place between various actors in the course of a given event. The interaction order in a public library follows a certain system of rules, which is different from the system of rules about social interaction at a music festival. Actors in an event interpret the actions of other participants in the context of their understanding of the interaction order, which involves both the construction and the interpretation of linguistic landscapes. The linguistic landscape represents a particular repertoire, or “the totality of linguistic forms regularly employed in the course of socially significant interaction” (Gumperz 1964:137).

On June 24<sup>th</sup>, 2015, Protectors gathered before dawn in the parking lot of the Mauna Kea Visitor’s Center to organize their actions for the day. According to Kaho‘okahi Kanuha, one of the event’s organizers who was arrested and interviewed upon his release, “The plan wasn’t to get arrested but the plan was to kū pa‘a, to stand. And stand until, you know, to be physically taken away, and if not, then I’m gonna be there” (Part 1, 0:57-1:05) The goal of the day was to construct “lines of resistance” using Protectors’ bodies and signs. As Sherry Bracken narrates in the video, “each line would be led by an *alaka‘i* ‘leader’ who would direct the discussion” (Part 1, 2:34-2:38) with the police officers trying to clear the roadway.

Protectors positioned themselves in lines of resistance along the gravel road at sunrise. News crews from Big Island News, Hawai‘i News Now, and other outlets were present and filming from the first meeting of Protectors before dawn until arrests late in the afternoon. Several Protectors gave ti-leaf lei to the Protectors in the lines. Greetings between the Protectors were in Hawaiian, Pidgin, and English. Some examples include:

English: “Let’s go, Keala!” (Protector, Part 1, 4:10-4:12)

Hawaiian: “Mākaukau” (Keala, Part 1, 4:11-4:12)

Pidgin: “I feel like I never see you guys fo long time” (Kaho‘okahi Kanuha, Part 1, 3:23-3:24)

Protectors in the back of one of the escort trucks used *pū ho‘okani* ‘conch shell instrument’ to announce their presence on the road. The lines of resistance opened for tourists and telescope employees, but blocked access to any vehicles associated with the TMT project. Several Protectors braided ti-leaf ropes in the line of resistance.

Hawai‘i County Police Captain Richard Sherlock addressed the Protectors just after sunrise, (see §4.1.2). TMT crews arrived at 7:20, and avoided any interaction with the Protectors while they waited for the police to clear the road. Protectors stood their ground and chanted “Ku kia‘i mauna” and “Aloha ‘āina” (see §4.3). Some Hawaiian speakers gave extemporaneous speeches about the *‘āina* ‘land’. Police

moved forward to remove the Protectors after about half an hour, at which point a line of children formed at the front of the line of resistance to offer lei to the police officers, which they accepted (see figure 1).

The officers moved forward and asked each individual to clear the roadway, and the Protectors slowly cleared the path for the TMT vehicles. The Protectors retreated up the road and joined the next line of resistance. This pattern lasted for four hours, and the TMT vehicles moved only a few hundred feet during that time. The first arrest was of Ulysses Consegra, on the misdemeanor charge of “Obstructing.” Upon reaching the gravel road leading to the TMT construction site, the State Police addressed *alaka‘i* ‘leader’ Lakea Trask.

In addition to dance, songs, and chants, the Protectors used material objects to semiotize the protest. Pennycook and Otsuji argue the importance of studying “the roles of both the materiality of language and the significance of material objects” (2014:167). Many Protectors carried flags of the State of Hawai‘i and the United States of America, which they turned upside down to deny the legitimacy of those authorities in this landscape (see §4.2.) Protectors also altered the physical landscape to express their dissent, using rocks and boulders from the landscape of the mountain itself to block construction crews. They built barricades, ‘*ahu* ‘sacred cairns’, and scattered boulders along the roadway. Without these material signs—the boulders, flags, and clothing—the text on the signs would not have the same rich symbolic power.

During this event, Protectors constructed a series of barricades, using their bodies or boulders. At each barricade, the police arrested one person, and the rest retreated to the next barricade up the road. In all, 12 Protectors were arrested, and the construction crews once again did not gain access to the building site. The human barricades resembled the image in figures 1 and 2, where Protectors held up their protest signs while standing shoulder-to-shoulder against the construction vehicles. It is in the context of this particular landscape that I discuss the semiotics of the written formulations below.

**2. PRESENCE OF LANGUAGES.** The first step in this quantitative analysis was to code the texts according to the language used. In many studies of linguistic landscapes, coding the texts is fairly straightforward. Many texts, especially in Europe where the study of linguistic landscapes first developed, are clearly monolingual texts or bilingual translations. On the summit of Mauna Kea, however, English (ISO 639-3: eng), Hawaiian (ISO 639-3: haw), and Pidgin (now known by most scholars as Hawai‘i Creole, but also referred to as Hawaiian Creole English; ISO 639-3: hwc) often appear on the same sign, but in this sample, there was not a single instance of translation. Instead, Protectors follow a polylingual norm, rather than a multilingual norm, using “whatever linguistic features are at their disposal to achieve their communicative aims as best they can, regardless of how well they know the involved languages ...” (Jørgensen et al. 2011:34). Multilingualism refers to the ability to switch among different languages and maintain fluency, whereas polylingualism, or polylinguaging, refers to the use of resources from multiple languages without fluency in all those languages. Protectors at this event expect at least some of their potential audience to use similar polylinguaging resources to interpret their message. For example, table 2 shows some texts that are particularly difficult to code as either English or Hawaiian.

TABLE 2. Polylingual texts<sup>2</sup>

TextID	Text	English Gloss
25	EAducation	sovereignty-education
27	<del>TMT</del>	no TMT
29	A‘ole / TMT	no TMT
48	ALOHA ‘ĀINA PROTECTORS / PROTECT MAUNA KEA / DESECRATION NO MORE	land love protectors / protect Mauna Kea / desecration no more

Text 25, shown in context in figure 1, below, demonstrates one challenge to applying traditional linguistic landscape quantitative analysis in this particular setting. “EAducation,” as seen on the black

<sup>2</sup> A full list of unique texts is provided in Appendix A. Spelling and capitalization are consistent with the formulations as seen in the video. Line breaks are indicated with a slash (/).

t-shirt worn by one of the children is a portmanteau combining the Hawaiian word *ea* ‘sovereignty’ and the English word “education”. Text 48 mixes Hawaiian and English on the syntactic level, using “Aloha ‘Āina” (see §4.3) as a modifier for the category “Protector.” On the next line, “Mauna Kea” is ambiguous in terms of which language it is, since it is a toponym commonly used in both languages. For this analysis, I separately coded toponyms and anthroponyms, such as the embroidered personal names on police officers’ uniforms, rather than try to fit them into a language category.

FIGURE 1. *Keiki* ‘children’ form at the front of the line of resistance to pass out lei to police officers



The text in the upper center of figure 1, Text 27, introduces a new element into the equation: the symbol “⊙”, which is widely understood in many settings and is not particular to one language or another. Similarly, the initialism “TMT” (Thirty Meter Telescope) is used not only with the non-language-specific “⊙,” it is also paired with both *a’ole* (negative) and “No.” Alicia Pérez, at the Kawaihuelani Center for Hawaiian Language, pointed out that in Hawaiian *a’ole* is not used as a negative before a noun phrase, unlike “No” in English (pers. comm.). This may be an example of English interference in the Hawaiian linguistic community, or merely an example of polylinguaging. In this analysis, I code acronyms and the symbol “⊙”, separately and do not assign them to a language category.

After toponyms, anthroponyms (personal names), initialisms, and “⊙” were removed, the sample included 172 words. Identifying the language of each word was still problematic when it came to words used in Hawaiian, English, and Pidgin by long-term residents of Hawai‘i. Such words include *keiki* ‘child’, *āina* ‘land’, and *aloha* ‘love, sympathy, pity, joy, compassion, affection, veneration, mercy’; translation from Imada 2012:8). Non-Hawaiian-speakers typically do not use the *‘okina* “ ‘ ” or the *kahakō* “ - ” that is standard in modern Hawaiian orthography. However, this cannot be used to determine whether these words are English or Hawaiian, because older Hawaiian orthography, such as that found in the Hawaiian-language newspaper archive, does not use these symbols, and many modern Hawaiian speakers prefer the older orthography. Furthermore, Pidgin can be written in standard English orthography, or in a variety of folk orthographies, so this analysis only treated non-standard English orthographies as Pidgin. In the case of the remaining ambiguous words, I coded them as the same language as the immediately preceding word in the text, or the following word if the ambiguous word is the first word in the text. However, this is an example of when it may be more helpful to look at these formulations as polylinguaging, rather than trying to clearly delineate which word belongs to which language.

Table 2 presents the resulting breakdown of words in each language in the sample. English words are in the majority, with 92 words, but Hawaiian words are a close second, with 77. What is perhaps surprising is the relative lack of Pidgin in the sample: 3 words comprising a single text in the sample. Considering that a majority of the spoken language at this event, including the language of the police officers, was in Pidgin, it should be the most salient language in the linguistic landscape as well. However, the linguistic landscape operates under a different prestige schema than spoken language, due to its written nature and the potential for signs to be removed from their original context and posted on social media. While Pidgin may be an important resource for invoking Local identities, Protectors may have chosen standard English orthography since it is ambiguous, and is accessible to both Pidgin-speakers and the global English-speaking world.

TABLE 1. Percentage of words in each language

<b>Language</b>	<b># Words</b>	<b>% Words</b>
Hawaiian	77	44.8
English	92	53.5
Pidgin	3	1.7
All Words	172	100

**3. DISTRIBUTION OF LANGUAGES.** Another important element of visual semiotics is the materiality of the signs. I use the word substrate, in the sense of the material on which a process occurs, to refer to the material on which the written formulation is inscribed. The durability of a sign speaks to the intended durability of the message and its relevance. Handmade cardboard signs are disposable, and require relatively little investment of time or money to produce. Table 3 shows the distribution of words by language and by substrate. English dominates in the category of handheld signs, with 39 words compared to only 18 in Hawaiian. Pidgin occurred only on a hastily-made handheld sign with three words. In contrast, the t-shirts and hats are durable enough to not only be used throughout the months of Protector activity on Mauna Kea and throughout the state, but also as symbols of involvement for years to come. These clothing categories are all dominated by Hawaiian, except for t-shirts which are dominated by English. Despite the English dominance on t-shirts, they are the substrate that shows the most Hawaiian words as well.

TABLE 3. Number of words by language and substrate

<b>Substrate</b>	<b>Hawaiian Words</b>	<b>English Words</b>	<b>Pidgin Words</b>
Banner	2	0	0
Button	3	0	0
Handheld sign	18	39	3
Hat	18	2	0
Hoodie	10	0	0
Standalone sign	5	12	0
T-shirt	21	39	0
<b>All Words</b>	<b>77</b>	<b>92</b>	<b>3</b>

Beyond these numbers, the materiality of particular signs can add social capital to particular languages and texts. The Protector in the center in figure 2, below, is wearing a bright orange shirt that says:

- (1) ‘A‘ole *No*  
 (2) TMT

FIGURE 2. Pidgin sign and polylinguaging t-shirt in line of resistance



This t-shirt is extremely simple, and may have been produced on a very small scale. The use of the Hawaiian word for ‘No’, ‘a‘ole, is one that speaks to long-time residents of Hawai‘i, even if they are not Hawaiian speakers. He is holding a handheld cardboard sign that says in Pidgin:

- (1) FO DA *for the*  
 (2) KEIKI *children*

The sign appears hastily made, using spray paint on cardboard. This was the only example of Pidgin I found in my sample. This is a clear instance of a text that is designed to reach the entire local community, rather than just those who identify as ethnically Hawaiian. While Pidgin has long symbolized a low-prestige social group in the islands, the language is beginning to appear in more and more public contexts (Marlow and Giles 2008; Higgins 2015). The Protector is also holding a ti-leaf rope that connects him to his fellow Protectors. The two Protectors to his right both have conch shells, which they used to add distinctly Pacific Island noises to this particular soundscape.

Place semiotics focuses on the environment that the texts inhabit, including built and natural elements. Specifically, place semiotics calls for the analysis of code preference, inscription, and emplacement of texts (Scollon and Scollon 2003:9). This deals with the idea that certain texts are privileged in their placement within the landscape, compared to other texts:

In producing meanings we must make choices; as we make choices we preference one option over another. All semiotic systems operate as systems of social positioning and power relationship both at the level of interpersonal relationships and at the level of struggles for hegemony among social groups in any society precisely because they are systems of choices and no choices are neutral in the social world” (Scollon and Scollon 2003:7).

**4. SEMIOTICS OF RESISTANCE.** How does written language work with other modes of communication to create a place of resistance? One of the most salient features of highly mobile and dynamic linguistic landscapes is the fact that the signs are designed to be meaningful both individually and as elements of various spatial configurations of the signs over time.

**4.1 VISUAL SEMIOSIS OF FLAGS.** One of the most visually salient aspects of this particular linguistic landscape is the use of color. Two color schemes predominate in this landscape: red, white, and blue; and red and yellow. Red, white, and blue simultaneously index the United States, the State of Hawai‘i, and the Kingdom of Hawai‘i. This allows different readers of the landscape to make different inferences about the sign authors’ implicatures. Many of the signs in the landscape are in fact flags with no explicit linguistic resources attached, as seen in figure 4. Placing the colors in well-known designs such as flags often serves as an index of positive alignment with the political entity associated with that flag.

The orientation of the flag has semiotic properties as well. In figure 4, there is a Protector standing on a ladder in the background holding an American flag. The flag is attached in a non-canonical orientation; actually in the opposite of the canonical orientation. Many readers of the landscape likely interpret this to be a negative alignment with the United States government. However, those familiar with traditional maritime flag semiotics will recognize that an upside-down flag is an international symbol of a ship in distress. According to one of the movement’s organizers, Kalaniākea Wilson, the upside-down flag in this setting is implicated as a symbol of distress, rather than of negative alignment, although he acknowledges that a protest reading could be inferred (pers. comm.). The same upside-down alignment is applied to the flag in the upper foreground, which is the flag used by the Kingdom of Hawai‘i, the Republic of Hawai‘i, the U.S. territory of Hawai‘i, and currently the U.S. State of Hawai‘i.

FIGURE 4. Flags in the line of resistance

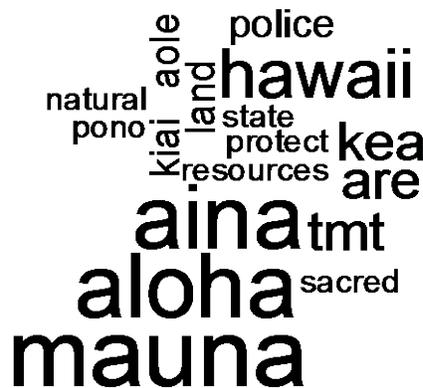


The other flag visible in figure 4 uses the color scheme of red, green, and yellow. This flag, sometimes called the *Kanaka Maoli* ‘Native Person’ flag, was established in 2001 as a symbol of the Hawaiian cultural renaissance. Many believe this flag to be the original Hawaiian Kingdom flag destroyed by the British in 1843, but there is no evidence that this is the case. Some Protectors use this flag to show positive alignment with Hawaiian culture and the sovereignty movement, but others believe it to be an unnecessary symbol, given the prior existence of the Hawaiian Kingdom flag (Kalaniākea

Wilson, pers. comm.). This flag uses red and yellow, which are often associated with the *ali‘i* ‘nobility’, as seen in the cloak worn by the Protector in figure 6. The flag also uses green, and the combination of red, green, and yellow can be inferred as an affinity with Jamaican island culture and the international reggae counterculture, and is often derided as the “Reggae Flag.”

**4.2 SEMIOTICS OF THE MOST FREQUENT WORDS.** Given that the Protectors used Hawaiian and English polylinguaging as their primary linguistic resource, the next step is to look at what words they used and how they used them. I included initialisms, anthroponyms, and toponyms in this analysis. Figure 3, below, shows a word cloud of all words that showed up more than twice in the sample, using the frequency table in Appendix B.

FIGURE 3. Word cloud of all words present three times or more<sup>3</sup>



The three most frequent words found in the sample are *mauna* ‘mountain’, *aloha*, and *‘āina*. It is significant that these words are all of Hawaiian origin, and have all been borrowed into the English lexicon of many Hawai‘i residents. The combination of these two aspects allows the language user to index both Hawaiian and Local social membership categories.

**4.2.1 MAUNA.** The term *mauna* occurs twelve times, five of those in the toponym Mauna Kea. Four of these toponyms occur in the phrase “we are Mauna Kea,” which was a popular social media tag at the time. The term *mauna* also appeared four times in the phrase “*kū kia‘i mauna*” ‘we stand guard over the mountain’, entirely on clothing items. Several designers and clothing companies made these shirts, many monolingually Hawaiian, available for people such as the Protectors to make their category membership visible in the linguistic landscape. Further, the phrase *kū kia‘i mauna* makes the act of protecting the mountain, specifically against the TMT Project, the single most defining category-bound predicate of being a Protector. An indirect category-bound predicate made relevant by these t-shirts is the ability to understand, or at least recognize, the Hawaiian phrase.

**4.2.2 ALOHA.** The second most frequent words are *aloha* and *‘āina*, which each occur eleven times. Ten of these eleven occurrences are in the phrase *aloha ‘āina*, which I will discuss in detail below. When *aloha* does not co-occur with *‘āina*, it occurs in the text shown in the top right corner of figure 3 below. “Aloha is our superpower” associates the word *aloha*, with all its potential semantic connotations, with the Protectors, and places it high on a hierarchical scale of attributes. This membership categorization device is explained in detail in the next section.

*Aloha* is “the very kernel of Hawaiian ethics” (Reverend Akaiko Akaka; see Imada 2012:8). In organizing the Protectors’ movement, the phrase *kapu aloha* ‘aloha ethics’ was used by the older

<sup>3</sup> Generated using the “wordcloud” package in R.

generation to guide the actions of the younger activists toward the ideals of non-violent resistance, as practiced by Mahatma Gandhi and Dr. Martin Luther King, Jr. in their respective movements. Several law enforcement officers also recognized and committed to the *kapu aloha* interaction order. First Deputy Kekoa Kaluhiwa of the DLNR addressed the Protectors’ before DLNR officers began their attempts to clear the road.

Kaluhiwa: “‘O Kekoa Kaluhiwa ko‘u inoa piha.<sup>4</sup> Aloha.”

Protectors: “Aloha.”

Kaluhiwa: “No Kāneohē mai au.<sup>5</sup> I want to just uh express our sincere aloha to all of you for acting- abiding to kapu aloha in deep respect. Uh I just wanted to say aloha to all of you and um commit to you a similar respect from the gentlemen and the wahine behind me, who many of you are related to I’m sure, personal friends, so we’re here with aloha.”

He then began to sing an *oli* ‘chant’ of his own composition to the Protectors:

1	E nā ‘ōiwi o ka ‘āina, aloha ē	Oh the natives of the land, aloha to you
2	Hea mai mākou e kipa nei ē	We call out to visit you now
3	E hea mai ia‘u e komo	Call me to enter
4	e komo aku nei	Enter now
5	aloha ē	Aloha to you
6	aloha ē	Aloha to you
7	aloha ē	Aloha to you (my translation, Part 2, 5:06-6:05)

He thanked them and greeted them in Hawaiian, at which point several Protectors took up the refrain of “Aloha ē” and continued to sing it. Despite the tensions in this linguistic landscape, the mutual respect required by kapu aloha likely prevented conflict from rising to the point of actual violence on this occasion.

**4.3 THE INTERTEXTUALITY OF ALOHA ‘ĀINA.** One expression that merits close attention in this study is aloha ‘āina. This phrase occurs ten times in this sample (see figure 5 below), by far the highest frequency two-word phrase in the study. One Protector called out “Aloha ‘Āina” as the lines of resistance first formed at sunrise (Part 1, 3:01-3:02; also greeting the escort vehicles at Part 1, 6:26-6:27). Another called out to Kaho‘okahi Kanuha on his way up the road, “Aloha ‘āina, cousin,” to which he replied, “‘Oia‘i‘o” ‘true; truth’ (Part 1, 6:03-6:07). This phrase expresses an ideal relationship between humans and the environment. The Protectors, like many other groups in Hawaiian history, use the membership categorization device of aloha ‘āina to make the argument that the Protectors are the most/only legitimate authorities to make land use decisions on the summit of Mauna Kea. The phrase “aloha ‘āina” not only appeared with high frequency, it appeared in forms indicating its high status within the linguistic landscape. The most prestigious form of written language in this sample is the golden cloth banner seen in Figure 5. This banner clearly required technical expertise and time to construct, and is designed to be used for more than a single event. This particular banner has appeared in the linguistic landscape of a number of environmentally-focused demonstrations both before and after the event described in this paper. As such, this phrase clearly has relevance in the discourse beyond the summit of Mauna Kea.

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<sup>4</sup> “My full name is Kekoa Kaluhiwa.”

<sup>5</sup> “I am from Kāneohē.” The pragmatics of Hawaiian encourage people to introduce themselves in relation to their personal geography.

FIGURE 5. Aloha ‘Āina banner on the access road



*Aloha ‘āina* translates most literally into English as ‘land love’. While this sentiment is attractive to many environmental activists, the phrase connotes a great deal beyond only having affection for the landscape. *Aloha ‘āina* has been discursively associated with resistance to Euro-American colonialism since at least the 1890s (Nogelmeier 2010). Using scholarly and historical sources, I will highlight the intertextuality of *aloha ‘āina* to begin to interpret the meaning of this expression as it is used in the sample. This phrase is one that has semantic force outside of the context of Mauna Kea, so it brings a multitude of external semiotic resources to this linguistic landscape.

*Aloha ‘āina* has not always been a major element of public discourse in Hawai‘i. One corpus available to study public discourse is the Hawaiian Language Newspaper Archive, which contains thousands of records of newspapers published 1834-1980 in Hawaiian<sup>6</sup>. During the period of American missionary control of all Hawaiian language newspapers, from the 1830s to the 1860s, the expression does not occur at all. The first newspaper devoted to resistance against foreign colonial pressures was *Ka Hoku o ka Pakipika* (The Star of the Pacific), which never published the phrase. The earliest occurrences refer to various nation-states as *ke aloha aina* ‘the beloved country’ in historical and current event articles about American and European leaders in *Ka Nupepa Kuakoa* (The Independent Newspaper), edited by the anti-monarchist Henry Whitney (Silva 2004).

Frequency of the phrase remained fairly constant until the 1890s. Following the Bayonet Constitution of 1887, a group of American businessmen gained power in the Hawaiian government and pushed for the annexation of Hawai‘i by the United States. Many Hawaiian citizens opposed annexation, including the Hui Hawai‘i Aloha ‘Āina, known in English at the time as the Hawaiian Patriotic League, and its branch for women members, Hui Hawai‘i Aloha ‘Āina o Nā Wāhine. According to Noenoe K. Silva, anti-annexationists working to retain Hawaiian sovereignty throughout the 1890s “called themselves ‘ka po‘e aloha ‘āina’ (the people who love the land)” (2004:131).

During the 1890s, anti-annexationists published three different newspapers with “*aloha ‘āina*” in the title, which accounts for a substantial number of occurrences in the newspapers during the annexation struggle. The first, *Ka Nupepa Puka Ia Aloha Aina*, began publication in September of 1893. *Ke Aloha Aina* and *Ke Aloha Aina Oiaio* followed suit in 1895 and 1896, respectively. The motto for all three

<sup>6</sup> This archive is available for public access at [papakilodatabase.com](http://papakilodatabase.com).

newspapers was *Ua Mau ke Ea o ka Aina i ka Pono* ‘The sovereignty/breath of the land is perpetuated in right action’. King Kamehameha III spoke these words in 1843 when the British government confirmed its belief in the sovereignty of the Kingdom of Hawai‘i. Today, the statement serves as the motto of the Hawaiian state government, and English dictionaries give the following meaning: “the life of the land is perpetuated in righteousness” (Merriam-Webster 2016). This sentence is also visible in the linguistic landscape sample used in this paper, as seen in figure 6, below.

FIGURE 6. *Ua mau ke ea o ka ‘āina i ka pono*



As these anti-annexation groups and newspapers formed, Ellen Keko‘aohiwaikalani Wright Prendergrast composed a song in honor of the Royal Hawaiian Band after they refused to swear loyalty to the annexationist government and lost their jobs. The song, given in full with English translation in table 5, goes by many names, including *Mele Aloha ‘Āina* ‘Song for the people who love the land’, *Mele ‘Ai Pōhaku* ‘Rock-eating song’, and *Kaulana Nā Pua* ‘Famous are the Flowers’ (Silva 2004:135).

TABLE 5. Mele ‘Ai Pōhaku with English Translation; Adapted from Elbert and Mahoe (1970:62–63)

1	Kaulana nā pua a ‘o Hawai‘i	Famous are the children of Hawai‘i
2	Kūpa‘a mahope o ka ‘āina	Ever loyal to the land
3	Hiki mai ka ‘elele o ka loko ‘ino	When the evil-hearted messenger comes
4	Palapala ‘ānunu me ka pākaha.	With his greedy document of extortion.
5	Pane mai Hawai‘i moku o Keawe.	Hawaii, land of Keawe answers.
6	Kōkua nā Hono a‘o Pi‘ilani.	The bays of Pi‘ilani help.
7	Kāko‘o mai Kaua‘i o Mano	Mano’s Kaua‘i lends support
8	Pa‘apū me ke one Kakuhihewa.	And so do the sands of Kahuhihewa.
9	‘A‘ole ‘a‘e kau i ka pūlima	No one will fix a signature

10	Maluna o ka pepa o ka ‘enemi	To the paper of the enemy
11	Ho‘ohui ‘āina kū‘ai hewa	With its sin of annexation
12	I ka pono sivila a‘o ke kanaka.	And sale of native civil rights.
13	‘A‘ole mākou a‘e minamina	We do not value
14	I ka pu‘ukālā a ke aupuni.	The government’s sums of money.
15	Ua lawa mākou i ka pōhaku,	We are satisfied with the stones,
16	I ka ‘ai kamaha‘o o ka ‘āina.	Astonishing food of the land.
17	Mahope mākou o Lili‘u-lani	We back Lili‘u-lani
18	A loa‘a ‘ē ka pono a ka ‘āina.	Who has won the rights of the land.
19	(A kau hou ‘ia e ke kalaunu)	(She will be crowned again)
20	Ha‘ina ‘ia mai ana ka puana	Tell the story
21	Ka po‘e i aloha i ka ‘āina.	Of the people who love their land.

Protectors on the summit of Mauna Kea sang this song, and also used the line “Ua lawa mākou i ka pōhaku” (line 15) in the linguistic landscape (see figure 6 below) to associate the current Protectors’ movement with the anti-annexationist movement of the 1890s. The lyrics of this song provide important historical context to the membership categorization device used by Protectors in this linguistic landscape. Aloha ‘āina as a category of ethical code makes the following predicates relevant in the song: loyal to the land, helped by the land, not valuing money offered by the government, willing/able to eat rocks and receive nourishment, and supporting Queen Lili‘uokalani. By making one lyric visible in the linguistic landscape, the Protector in figure 7 invokes all the predicates long-associated with the category aloha ‘āina.

FIGURE 7. Ua lawa mākou i ka pōhaku



In the 1960s and 1970s, aloha ‘āina emerged again in public discourse as a core ethic for various groups in Hawai‘i. The Protect Kaho‘olawe ‘Ohana, dedicated to protecting the island of Kaho‘olawe from American military bombing exercises, adopted the phrase “Aloha ‘Āina” as their official motto (Osorio 2014). Aloha ‘āina became a system of ethics ascribed to by a variety of land use and land rights activists in Hawai‘i. Systems of ethics can be described linguistically using membership categorization analysis. Each system of ethics is essentially a membership categorization device consisting of categories and category-bound predicates placed on a hierarchical scale of more ethical/less ethical. As Jonathan Kamakawiwo‘ole Osorio argues, aloha ‘āina “placed the community of humans on an equal plane with the rest of nature” (2014:150). Furthermore, humans and the land are categories that constitute a standardized relational pair, or a pair of categories that have reflexive obligations toward one another. ‘Āina, the most common term used to describe the land in general, is reanalyzed by some speakers as breaking into the morphemes ‘ai (eat) and -na (nominalizer) and meaning ‘stuff to eat’. This morphological breakdown makes one aspect of the relationship between humans and the land clear.

By making the aloha ‘āina system of ethics visible in the linguistic landscape, Protectors assert their membership in the category, as well as the superiority of aloha ‘āina to the ethical code they associate with the TMT Project. Another category in the aloha ‘āina system of ethics made relevant in this linguistic landscape is the category of sacred place. According to the cultural survey by Maly and Maly (2005):

Mauna Kea—though simply translated as “White Mountain” since at least 1823, the name, Mauna Kea is also known in native traditions and prayers as Mauna a Wākea (Kea), “The Mountain of Wākea.” It is the first-born mountain son of Wākea and Papa, who were also progenitors of the Hawaiian race. Mauna Kea is symbolic of the piko (umbilical cord) of the island-child, Hawai‘i, and that which connects the land to the heavens. (v)

Predicates bound to this category in this sample include: requiring minimal human interference with the landscape, observation of appropriate permission-seeking protocols, and the ability to be desecrated through inappropriate actions. The Protectors use their handmade signs to argue that the summit of Mauna Kea is a sacred place. One sign simply stated “wao akua” ‘place of the gods’, while another stated “Pro science / Anti desecration.” Protectors also used recognizable Hawaiian cultural practices such as *oli* ‘chants’ and *mele* ‘songs’ to support the interpretation of the space as sacred, and of the Protectors as those abiding by sacred protocol. Organizers of the event planned to use these semiotic resources in order to legitimize their use of the access road. At the morning meeting of Protectors, Alaka‘i Koho‘okahi Kanuha addressed his fellow Protectors saying, “try to mele, try to oli, fo gen (getting) dat image, if they're gonna arrest us it's going to be arresting people in ceremony” (Part 1, 1:06-1:12). By aligning with a system of ethics requiring minimal human interference with sacred places, and framing Mauna Kea as such a place, the Protectors place the TMT Project on the less ethical end of the scale, while simultaneously placing themselves on the more ethical end of the scale.

**5. THE LINGUISTIC LANDSCAPE OF THE PROTECT MAUNA KEA MOVEMENT.** As the landscape developed over time, Protectors developed a unique linguistic repertoire in order to engage with each other, with law enforcement officials, and with potential sympathetic audiences all over the world. This repertoire depends heavily on the use of Hawaiian. “So, every inhabited island, we got ‘em here. This is not a Hawai‘i Island issue...” (Kaho‘okahi Kanuha, Part 1, 5:23-5:29). “And what message do you think that sends?” (Reporter, Part 1, 5:35-5:37). *Ea mai Hawai‘i, Ea mai Hawai‘i nui ākea ea mai no ka mai o ka pō.* We are coming from the depths of the ocean and we are breaking the surface, just like the islands. And this is a sign of many, many good things to come” (Kaho‘okahi Kanuha, Part 1, 5:37-5:54). Mauna Kea Protectors effectively used English, Hawaiian, and to a much lesser extent, Pidgin, in this mobile landscape of protest to reach international, Hawaiian, and Local audiences. This case study is a description of how one community of practice used polylinguaging to express their beliefs about appropriate land use on the sacred summit of Mauna Kea.

**5.1 RESULTS OF THE DEMONSTRATION.** Due to their efforts both in this landscape and in the court system, the TMT Project has been significantly delayed. As of April 2017, the TMT project is on hold pending a ruling from the hearings officer after 44 days of hearings following the contested case court ruling. In case the permits do not go through by April 2018, an alternate site has been chosen in the Canary Islands (TMT 2017). Hawaii Governor David Ige announced, in response to the Protectors’ opposition to TMT, that the State would begin decommissioning several older telescopes to return those sites to natural use. The TMT may still be built, but the Mauna Kea Protectors movement managed to significantly increase the cost and timeline of the project, and brought international attention to issues involving indigenous land-use conflicts, the Hawaiian sovereignty movement, and scientific ethics.

**5.2 CONCLUSION: IMPACT OF THE LINGUISTIC LANDSCAPE.** The linguistic landscape of resistance on Mauna Kea began as a transgressive act. Over the course of the Protectors’ presence at the access road, the linguistic landscape became situated, and to some extent normalized. Through news and social media, protest signs, clothing, and memes spread to sympathetic audiences throughout Hawai‘i and the world, becoming the decontextualized (Zimmerman 1998). Today, anywhere in Hawai‘i, you are likely to see people walking around wearing “Ku kia‘i mauna” shirts, “Aloha ‘āina” hats, and “We are Mauna Kea” buttons. Many people even went so far as to tattoo these phrases and associated symbols on themselves. The identity that solidified among supporters of the Mauna Kea Protectors’ Movement is one that people continue to proudly display as an index of their position within society in Hawai‘i.

Just as the Protectors’ adopted strategies developed by other non-violent opposition groups, many of their strategies have been adopted for new purposes. Beyond Hawai‘i, other groups have used similar linguistic landscape processes in opposition to large-scale development projects. Most notably, current opponents of the Dakota Access Pipeline project in North Dakota identify themselves as “Water Protectors” and use polylinguaging of English and local indigenous languages to express their ethical argument for land-use policy on a sacred landscape. Such communities not only have an impact on land-use policy decisions, but also do important work to increase the visibility of indigenous languages in the United States.

#### APPENDIX A

Unique written texts collected from “Mauna Kea TMT Showdown June 24,” by Big Island Video News.  
Many of these texts appeared as multiple formulations in the sample.

- [1] PROTECT SACRED
- [2] EA
- [3] Pro science / Anti desecration
- [4] KŪ KIA‘I MAUNA
- [5] GORDON / MOORE: / SHAME!
- [6] ALOHA / ‘ĀINA / WARRIORS
- [7] WAO / AKUA
- [8] ALOHA / ‘ĀINA
- [9] HI
- [10] FAKE / 50TH / STATE / COURTS / TAXES / LAND / TITLES
- [11] WE ARE / MAUNAKEA / A'OLE TMT / MANUWAI / VELE, ROYS / PULU / KU'E / FAMILY
- [12] HAWAII / ALOHA ‘ĀINA
- [13] UA MAU / KE EA / O KA / ‘ĀINA / I KA / PONO
- [14] ALOHA ‘ĀINA
- [15] SACRED / MAUNA / KEA
- [16] MAUNA A WĀKEA / SACRED
- [17] WE ARE / MAUNA / KEA
- [18] Take care of / Mother Earth / before you explore / Father Sky!!!

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- [19] We Are / Mauna Kea
- [20] KŪ PONO / KŪ PA‘A / KŪ KIA‘I / MAUNA
- [21] WE ARE / Protectors / NOT / Protesters
- [22] HAWAI‘I / ALOHA / ‘ĀINA
- [23] EAducation
- [24] A‘OLE / TMT
- [25] ~~TMT~~
- [26] POLICE
- [27] A‘OLE TMT
- [28] AIOHA / AiNA
- [29] A‘ole / TMT
- [30] FO DA KEIKI
- [31] STATE OF HAWAII / POLICE / DEPT. OF LAND and NATURAL RESOURCES
- [32] L. KAMAKAU
- [33] HAWAII / NEWS NOW
- [34] PUBLIC NOTICE
- [35] MĀLAMA / HONUA
- [36] ua lawa / makou / i ka pohaku
- [37] HAWAI‘I / ALOHA ‘ĀINA
- [38] LAND and NATURAL RESOURCES / E MĀLAMA PONO IĀ HAWAII
- [39] ALOHA ‘ĀINA PROTECTORS / PROTECT MAUNA KEA / DESECRATION NO MORE
- [40] ALOHA IS OUR SUPERPOWER
- [41] Ea: Lahui Hawai‘i / Ku‘e
- [42] WE / ARE / MAUNA / KEA
- [43] PROTECT / OUR / MAUNA!
- [44] WE ARE / MAUNA / KEA / ~~TMT~~

APPENDIX B. Word Frequency in Sample. Words were standardized by removing ‘okina and kahakō. Includes initialisms, toponyms, and anthroponyms.

Word	# of Tokens
mauna	12
aina	11
aloha	11
hawaii	8
are	6
kea	6
tmt	6
aole	4
kiai	4
land	4
police	4
natural	3
pono	3
protect	3
resources	3
sacred	3

state	3
dept	2
desecration	2
education	2
kue	2
malama	2
our	2
protectors	2
warriors	2
50th	1
akua	1
anti	1
before	1
care	1
courts	1
earth	1
explore	1

fake	1
family	1
father	1
gordon	1
honua	1
kamakau	1
keiki	1
lahui	1
lawa	1
makou	1
manuwai	1
mau	1
maunakea	1
moore	1
more	1
mother	1
news	1

not	1
notice	1
now	1
paa	1
pohaku	1
pro	1
protesters	1

public	1
pulu	1
roys	1
science	1
shame	1
sky	1
superpower	1

take	1
taxes	1
titles	1
vele	1
wakea	1
wao	1
you	1

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