

Loanwords in Hawaiian

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1 The language and its speakers

The Hawaiian language (i.e., *ka ‘ōlelo Hawai‘i*) is indigenous to the islands of Hawai‘i. Until Western contact in 1778, Hawaiian was very likely the only language spoken throughout the archipelago. Hawaiian is an Austronesian language that belongs to the Eastern Polynesian language family and is closely related to Māori, Marquesan, and Tahitian (see Figure 1).

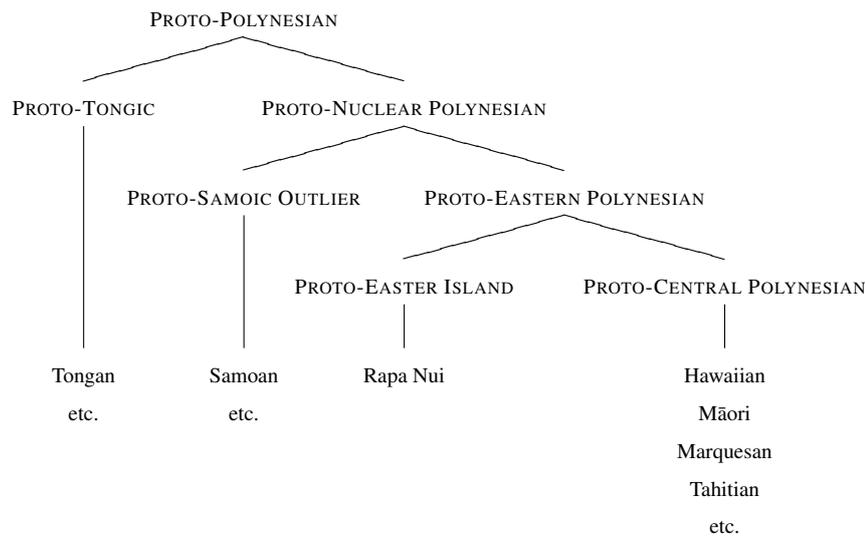


Figure 1: The Polynesian family tree (adapted from Pawley 1966, Clark 1979:258, and Schütz 1994:335)

The archaeological evidence suggests that Polynesians may have first settled Hawai‘i as early as 200 CE (see, e.g., Kirch 1998:161). Yet to arrive in Hawai‘i from the Marquesas or Tahiti, the early settlers had to cross over 2,000 miles of open ocean without the benefit of modern navigational instruments, such as a compass or a clock. According

to Hawaiian oral history, this remarkable achievement was in fact repeated many times. Moreover, the modern revival of stellar navigation provides strong evidence that such long-distance commutes were practicable (Pi‘ināi‘a 1998).

Although there is no accurate census or survey, Kapono (1998:199) estimates that there were about 5,000 Hawaiian speakers in 1995. Of these, 1,000 were *mānaleo* (i.e., ‘heritage speakers’ or ‘native-speaking elders’), 400 of whom had connections to the island of Ni‘ihau (see section 3 below). We may identify another 1,000 of the estimate to be young native Hawaiian speakers, who acquired the language naturally, during the critical period, and without formal instruction (for more on the critical period, see Penfield and Roberts 1959, Lenneberg 1967, and Pinker 1994). The remaining 3,000 speakers in Kapono’s estimate were second language speakers, who learned the language (often fluently) through formal instruction. It should be noted, however, that the population of Hawai‘i is approximately 1.14 million. So, less than 1% of the population actually speaks Hawaiian. Furthermore, over 100 languages were reportedly spoken by residents of Hawai‘i in the 1990 census (cited at Schütz 1998:199). Other than English and Hawaiian, these languages include Japanese, Tagalog, Ilocano, and Hawai‘i Creole English (Schütz 1998:198–200). As Romaine (2006:227) observes, Hawai‘i Creole English “is the first language of the majority of locally born children and the first language of somewhat less than half the state of Hawai‘i’s population of just over a million.” The Hawaiian language is only just recovering from near extinction, after two hundred years of foreign contact, much of which has been colonialist.

Many of the reasons for Hawaiian’s decline can be traced back to events in the 19th century. For example, the sovereign Kingdom of Hawai‘i existed in constant threat, because of foreign interest in Hawai‘i’s abundant natural resources, deep harbors, and strategic geopolitical position. This situation resulted in the mass dispossession of Hawaiian people, through the privatization of land known as the *Māhele* (‘dividing’). Sugar plantations then took root, importing indentured laborers from Japan, China, Portugal, and the Philippines, and attracting heavy foreign investment, especially from the United States. In 1886, US-allied businessmen coerced the monarch (King Kalākaua) to sign away his authority, while allowing him to remain as a figurehead. The resulting legislation became known as the ‘Bayonet Constitution’. When Kalākaua’s successor (Queen Lili‘uokalani) reasserted the monarchy’s popular authority, a small well-armed militia (supported by US marines) forcibly dethroned her by coup d’etat (Langlas 1998:177). As a corollary, Hawaiian went from being a language of prestige in the Hawaiian Kingdom to being something much less in the resulting Republic (1893), US Territory (1898), and US State (1959). To illustrate this, in the Kingdom of Hawai‘i, “more than 90 percent of the Hawaiian population could speak, read, and write in their native tongue” (Kapono 1998:199). After the overthrow, however, education in Hawaiian was banned, and, in some schools, children caught speaking Hawaiian were punished.

But on the heels of the Civil Rights Movement in America, Hawaiian language and culture experienced what is known locally as the ‘Hawaiian Renaissance’. During this renaissance, a grass-roots, language revitalization movement emerged based on the immersion school model of New Zealand’s *Kōhanga Reo* (‘language nest’) (for details, see Wilson and Kamanā 2001). These Hawaiian immersion schools, including *Pūnana Leo* (also ‘language nests’) and *Kula Kaiapuni* (‘immersion schools’), have become the locus for the revival and perpetuation of Hawaiian. Another important domain of Hawaiian use is the University of Hawai‘i, where a Hawaiian language B.A. has been available since the 1970s, and where an M.A. and Ph.D. have been available since 2002 and 2006, respectively. Hawaiian is used in the homes of some of the immersion school families, and, as an extension of these educational domains, Hawaiian is spoken in workplaces run by the ‘*Aha Pūnana Leo* (‘language nest gathering’), which, for example, develops materials for the schools. As Hawaiian remains endangered, much work remains to be done. Yet the revitalization movement in Hawai‘i already has a lot to be proud of. “Of all languages indigenous to what is now the United States, Hawaiian represents the flagship of language recovery, and serves as a model and a symbol of hope to other endangered languages” (Hinton 2001:131).

2 Sources of data

In general, the data in the Hawaiian loanword database were drawn from two Hawaiian dictionaries: the *Hawaiian Dictionary* (Pukui and Elbert 1986) and *Māmaka Kaiāo* (Kōmike Hua‘ōlelo 2003). These are not the only Hawaiian dictionaries (see, e.g., Andrews 1865), but they are representative of the modern standard. The two dictionaries stand in complementary distribution to one another. When the Kōmike Hua‘ōlelo repeats words from Pukui and Elbert’s dictionary, it is to update them (e.g., to extend the meaning of an existing word). As both dictionaries are available electronically (<http://ulukau.org/>), it was possible to mine them computationally for information. Therefore, in addition to the 176 loanwords documented for the Loanword Typology project’s core list (see the Loanword Appendix below), the Hawaiian database contains 1,836 additional borrowings.

Where other works have been consulted in the database, they are explicitly referenced. (A full list of the works consulted in the database is available in the Documentation File.) Other information in the database was supplied by the author, who grew up speaking Hawaiian as a part of the *Pūnana Leo* revitalization movement. The author was born and raised in the town of Hilo, on the island of Hawai‘i. The variety of Hawaiian described here is standard, as spoken across the Hawaiian Islands (except on Ni‘ihau and on parts of Kaua‘i).

3 Contact Situations

The contact situations are divided into nine categories, which are discussed in the subsections below (cf. Reinecke 1969). These categories are intended to help situate each loanword within the context it is believed to have been loaned in. Many of the categories' names should have obvious meanings. For example, the category *English to Hawaiian* contains English words that were loaned into Hawaiian. However, a few of the category names are less transparent. For example, the category *Ni'ihau* also contains Hawaiian words loaned from English. What distinguishes this contact situation from *English to Hawaiian* is that English words loaned into the dialect of Ni'ihau retain elements of that dialect's phonology. But the mapping from languages to categories is not just one-to-many. Two categories, *Lexicon Committee* and *Missionary Bible translation*, include words that were loaned into Hawaiian from English as well as a variety of other languages (like Czech and Classical Greek). So the mapping from languages to categories is *many-to-many*. In the subsections that follow, each of the context situations will be sketched.

Chinese to Hawaiian

In 1852, plantation owners in Hawai'i began recruiting contract laborers from China. Just over 2,000 Chinese immigrants were recorded in Hawai'i in 1875, the year in which the Reciprocity Treaty was signed between the Kingdom of Hawai'i and the United States of America, allowing free trade between these two countries. New labor was sought to meet the growing US demand for Hawaiian sugar. As a result, a further 37,000 indentured laborers were imported into Hawai'i from China. Chinese professionals and merchants arrived later, after Hawai'i's annexation to the USA in 1898. Contract labor was abolished by law in 1900, although foreign laborers continued to arrive on the plantations.

All of the Chinese plantation workers came from the province of Guangdong (formerly Kwangtung) and spoke Hakka and Cantonese. In practice, the *Hawaiian Dictionary* (Pukui and Elbert 1986) makes no distinction between Hakka and Cantonese loanwords. In a single case, a loanword has been identified as "Informal Cantonese" (the word is Hawaiian *Pākē* 'Chinese' < Informal Cantonese *baak3* 'father's older brother'). The four other *Chinese to Hawaiian* loanwords have not been identified more specifically, so "Chinese" is left as their donor language.

English to Hawaiian

Contact between speakers of English and speakers of Hawaiian dates from 1778, when Captain James Cook sailed into Hawaiian waters. Thereafter, the Islands became a

frequent stop between America and the Asian or Australian coasts. New England missionaries arrived in the 1820s, massively increasing to the number of English loanwords in Hawaiian. Hawai‘i’s rich agricultural resources also enticed English-speaking entrepreneurs (typically the sons and grandsons of missionaries), who set up Hawaiian sugar plantations in the 19th century. These sugar barons increasingly influenced local politics in the Kingdom of Hawai‘i until overthrowing the monarchy in 1893 (with US support) and then setting up their ‘Republic’ (an oligarchy), which lasted until the United States of America annexed the Islands in 1898. One enticement for American annexation was Hawai‘i’s strategic position in the Pacific. US military bases increased the English-speaking population in Hawai‘i, although contact between soldiers and civilians remained limited. The Territory of Hawai‘i was voted into the Union in 1959, almost ensuring the English language’s dominance in Hawai‘i. Hawai‘i now receives American products, media, and tourists, and exports very little in the other direction. As mentioned in section 1, the lingua franca of Hawai‘i is Hawai‘i Creole English, which is an English dialect that is known in Hawai‘i as ‘Pidgin’. Unfortunately, no distinction is made in the Hawaiian database between words that were borrowed from Pidgin or from another variety of English. The majority of loanwords in the database were borrowed from some variety or other of English.

Japanese to Hawaiian

Although the Japanese contract laborers arrived on the plantations after the laborers from China, they also left a notable impression on the local culture. From 1897 to 1907, the majority of laborers who sought work on the sugar plantations were Japanese. Like other plantation workers, many Japanese laborers settled in Hawaiian cities after completing their 3–5 year contracts. Connections between Hawai‘i and Japan remain strong today, as Japanese visitors constitute a major tourist presence in the Islands. The dictionaries identify four Hawaiian words as Japanese borrowings: *mōchī* ‘sticky rice cake’ (< *mochi*); *musubī* ‘rice ball’ (< *musubi*); *koiū* ‘soy sauce’ (< *shō-yu*); and ‘*eka‘eka*’ ‘Japanese taro’ (< *adado*). Of these, the last one seems phonologically suspect: why would *adado* not be integrated into Hawaiian as something like ‘*akako*? Pukui and Elbert (1986) do not say.

Lexicon Committee

Hawaiian language immersion schools emerged in the 1980s as part of the cultural revival inspired in part by the Civil Rights movement in America. These schools required new pedagogic materials for primary and secondary curricula. However, a lexicographic void was left after the final edition of Pukui and Elbert’s *Hawaiian Dictionary* in 1986. In response, the *Kōmike Hua‘ōlelo* ‘Lexicon Committee’ assembled in 1987. Although the *Kōmike Hua‘ōlelo*’s membership changes, it typically includes teachers, scholars,

and other Hawaiian language experts from across the Islands. In terms of content, the Kōmike Hua‘ōlelo’s dictionary stands in complementary distribution with Pukui and Elbert’s dictionary, adding new terminology like *Pūnaewele Puni Honua* ‘internet’ (a claque on ‘World Wide Web’).

The Kōmike Hua‘ōlelo favors loanwords from Polynesian or other endangered languages over loanwords from English. This is a conscious response to the overwhelming dominance of English in Hawai‘i, as students are strongly exposed to English outside of school. Since the vocabulary in Kōmike Hua‘ōlelo 2003 has been influenced by an educated and formally assembled committee, it is important to distinguish words that were coined by the Kōmike Hua‘ōlelo from words borrowed in other contact situations, even if they are ultimately modeled after the same source language (e.g., French).

Kōmike Hua‘ōlelo 2003 records words from: Assyrian, Czech, English, French, Japanese, Māori, Rarotongan, Tahitian, and Ute. But since the Kōmike Hua‘ōlelo does not always cite source words, there are some guesses in the database which I should like to flag. These are indicated with question marks (showing uncertainty), as in the Rarotongan source word for *ma‘aka* ‘uppercase’ (< Rarotongan *ma‘aka?*).

Missionary Bible translation

Missionaries arrived in Hawai‘i in 1820, bringing with them their New England ideals of education, literacy, and religion. They eventually devised a rudimentary Hawaiian orthography and began producing reading material in the Hawaiian language. Foremost amongst their products was a translation of the Bible. This required developing a number of new Hawaiian words for Biblical characters, animals, theological terms, and so forth. Although in many cases they borrowed words from English into Hawaiian, such as *hīmeni* ‘song’ (< English *hymn*), they also borrowed words from the classical languages. Thus the modern Hawaiian vocabulary contains words like *nahesa* ‘snake’ (< Hebrew *naḥāš*), *aeko* ‘eagle’ (< Church Latin *aetos*), and *‘alopeka* ‘fox’ (< Greek *alopeks*). Why did the missionaries borrow vocabulary from these classical languages? In some cases, the missionaries’ puritan ideals were involved. For example, *meli* ‘honey’ was borrowed from Greek rather than from English, because, as Schütz (1976:79) suggests: “*Honi* ‘kiss’ and *hani* ‘act flirtatious’ would have given an undesired risqué meaning to such phrases as ‘land overflowing with milk and honey’ (especially with ‘milk’ translated by a phrase that means ‘breast liquid’) or ‘lips of a strange woman drop honey’.”

In building the database, it was not always easy to determine when an English loanword should be categorized as *Missionary* or not, so some missionary loans from English may have been omitted from the database unintentionally. On the other hand, many of the loanwords from the classical languages are identifiable from their spellings (which retain the foreign consonants of their source words). Such words are reliably classified as *Missionary* borrowings.

Ni‘ihau

The westernmost of the Hawaiian Islands, Ni‘ihau, has a separate history from the rest of the Islands. Since Ni‘ihau is privately owned, the comings and goings of visitors are very tightly controlled. The current Hawaiian population of approximately 200 has been sheltered from the modern world, though it continues to be strongly influenced by the 19th century (via the missionary bible).

Only one word is marked in the database as coming specifically through the island of Ni‘ihau. This word is *tuko* ‘glue’, which Pukui and Elbert (1986) claim to be a loan from *Duco*, an automotive lacquer developed by DuPont in the 1920s.

No Information

Seven words have been included in the database, although their contact situations remain opaque. These all happen to be loanwords from French, which might be attributed to the influence of francophone Catholics in Hawai‘i.

Portuguese to Hawaiian

Several hundred Portuguese immigrants entered Hawai‘i before 1876, while the majority came later, after the effect of the Reciprocity Treaty. About 10,000 Portuguese immigrants came in the first wave, between 1878 and 1887. The second wave brought another 5,000 Portuguese immigrants to Hawai‘i between 1906 and 1913, many of whom did not settle. In addition to their strong presence on the plantations, the Portuguese have remained a visible group in Hawai‘i. Puerto Rican and Spanish immigrants to Hawai‘i have typically been subsumed under a Portuguese identity. The database records three loanwords from Portuguese: *pakaliao* ‘codfish’ (< *bacalhau*); *Pakoa* ‘Easter’ (< *Páscoa*); and *pīpīnola* ‘type of squash’ (< *pepineiro*).

Spanish to Hawaiian

Cattle arrived in Hawai‘i in the late 18th century, as a gift to King Kamehameha from the British explorer Captain George Vancouver. Mexican *vaqueros* were subsequently invited to Hawai‘i (from what is now California) to help on the Hawaiian cattle ranches. These Mexicans introduced *paniolo* ‘cowboy’ into the Hawaiian vocabulary, which comes from the Spanish word *español*, meaning ‘Spanish’.

4 Numbers and kinds of loanwords

Hawaiian is not usually described as having adjectives or adverbs; instead, the language is described as having another set of syntactic categories (e.g., stative verbs; see Elbert and Pukui 1979:43–44, 49–51). Moreover, many Hawaiian bases function as both nouns and verbs (see, e.g., the category of noun-verb in Elbert and Pukui 1979:43). However, in order to compare the languages in this project, the word classes reported here have been standardized, using a set of semantic categories. This standardized set consists of nouns, verbs, function words, adjectives, and adverbs, as in Table 1 (cf. the Semantic Category field in the database). Of these standardized parts of speech in the Hawaiian

		<i>Noun</i>	<i>Verb</i>	<i>Function word</i>	<i>Adjective</i>	<i>Adverb</i>	<i>Total</i>
<i>Source language</i>	English	17.11	3.63	2.49	1.81	0	11.86
	Classical Greek	0.77	0	0	0	0	0.49
	Māori	0.13	0	0	0	0	0.08
	Hebrew	0.13	0	0	0	0	0.08
	Czech	0.13	0	0	0	0	0.08
<i>Total loanwords</i>		18.27	3.63	2.49	1.81	0	12.59
<i>Total non-loanwords</i>		81.73	96.37	97.51	98.19	100	87.41

Table 1: Semantic word class by donor language (%)

database, nouns were the most commonly borrowed, followed by verbs, function words, and finally adjectives. No borrowed adverbs are recorded in the database. Why did Hawaiian borrow so many nouns? One contributing cause is probably the number of new things that have been introduced to Hawai‘i since contact, along with their names.

Interestingly, some of the borrowed verbs in the database may have entered Hawaiian as nouns. For instance, the verb *pūlumi* ‘to sweep’ came into Hawaiian from the English noun *broom*. Thus, one might literally ‘broom’ in Hawaiian, rather than ‘sweep’, as in English. Another possible example is the verb *kupa* (*l*) ‘to boil’ from the English noun *soup*. Both *pūlumi* and *kupa* (*l*) exist in Hawaiian as nouns, too. As in English, the nouns mean ‘broom’ and ‘soup’. As mentioned above, many Hawaiian bases function as both nouns and verbs. For example, a native Hawaiian word like *‘ōlelo* may be employed as a verb (meaning ‘to speak’) or as a noun (meaning ‘language’). So, once in the language as a noun, a loanword might also be used as a verb. Thus, a number of borrowed verbs in Hawaiian may also have entered the language as nouns.

Of the source languages in Table 1, English is by far the most strongly represented. This accords well with the historical record, as discussed above (in sections 1 and 3). The influence of English can also be seen when we look at the Hawaiian data from the perspective of the semantic fields in Tables 2 and 3 (where each value has been rounded to the nearest hundredth). Some of the borrowed concepts in these tables were not present in pre-contact Hawai‘i. For instance, one thinks of the missionaries’ 19th-century biblical vocabulary, or of our modern terminology for radios, television sets, and computers. But some foreign concepts were arguably present in pre-contact Hawaiian, even though Hawaiian borrowed new vocabulary for them. Examples include the concepts of ‘to cook’ and ‘insect’, which were borrowed from English as *kuke* and *‘iniseka* (< *cook* and *insect*, respectively); rough pre-contact alternatives include *ho‘omo‘a* for ‘to cook’ and *mea kolo* for ‘insect’.

Between these idealized extremes of the unknown and known, many Hawaiian concepts were surely revised in response to foreign contact. For example, borrowed kinship terms like *‘anakala* ‘uncle’ (< English *uncle*) and *‘anakē* ‘aunty’ (< English *aunty*) tweaked the pre-contact understanding of *makua kāne* *makua* ‘parent’s older brother’ and *makua kāne ‘ōpio* ‘parent’s younger brother’. Notice that the traditional system nicely paralleled the distinction of age between other Hawaiian kinship terms, like *kaikua‘ana* ‘older sibling (of the same gender)’ and *kaikaina* ‘younger sibling (of the same gender)’. Thus, while the older brother of one’s parent would be one’s *makua kāne* *makua* ‘parent’s older brother’, the older brother of a boy would be the boy’s *kaikua‘ana* ‘older sibling (of the same gender)’. Although the traditional distinction between a parent’s older and younger sibling has fallen out of use, the Hawaiian concepts of *‘anakala* and *‘anakē* are not isomorphic to English *uncle* and *aunty*, since one’s parent’s friend may also be one’s *‘anakala* or *‘anakē*. Less familial relationship is entailed by the Hawaiian borrowings.

Finally, while nearly every domain of Hawaiian has been affected by English, the influence of the other donor languages has been severely limited. For instance, borrowings from the classical languages are typically Bible related. Furthermore, borrowings from other, more ‘exotic’ donor languages (like Czech and Ute) are extremely rare; indeed, such borrowings have typically originated in the Kōmike Hua‘ōlelo as a conscious attempt to offset the overwhelming dominance of English.

5 Integration of loanwords

There is a lot to say about the integration of Hawaiian loanwords, because of the differences between Hawaiian and donor language phonologies, because of the modality by which the words were borrowed (i.e., aural or visual), and because of top-down influence from institutions.

Borrowings, whatever their origin, generally conform to Hawaiian phonotactics. For

<i>Source language</i>	<i>14. Time</i>		<i>15. Sense perception</i>		<i>16. Emotions and values</i>		<i>17. Cognition</i>		<i>18. Speech and language</i>		<i>19. Social and political relations</i>		<i>20. Warfare and hunting</i>		<i>21. Law</i>		<i>22. Religion and belief</i>		<i>23. The modern world</i>		<i>24. Function words</i>		<i>25. Misc</i>		<i>Total</i>
English	3.77	2.31	0	4.81	8.62	6.41	0	0	0	0	0	0	0	0	0	0	0	9.3	42.88	0	0	0	0	0	10.63
Classical Greek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.65	0	0	0	0	0	0	0.41
Māori	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04
Hebrew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04
Czech	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07
<i>Total loanwords</i>	3.77	2.31	0	4.81	8.62	6.41	0	0	0	0	0	0	0	0	0	0	0	13.95	42.88	0	0	0	0	0	11.18
<i>Total non-loanwords</i>	96.23	97.69	100	95.19	91.38	93.59	100	100	100	100	100	100	100	100	100	100	100	86.05	57.12	100	100	100	100	100	88.82

Table 3: Semantic field by donor language (%), fields 14–25

instance, Hawaiian syllables are never closed, even in loanwords. Foreign codas are re-analyzed to fit the Hawaiian model, by consonant deletion, vowel insertion, or both. For example, the [n] in Classical Greek *amomon* [amomon] ‘amomum’ is deleted in Hawaiian ‘*amomo* [ʔəmomo]; the [t] in English *bill* [bɪt] is word-final, but in Hawaiian *pila* [pilə] the corresponding [l] precedes a paragogic [ə]; and the complex, word-final coda [nd] in English *island* [ʔaɪlənd] is both simplified in Hawaiian ‘*ailana* [ʔeɪlanə] to [n] and followed by a paragogic [ə]. (The ‘island’ example is from Schütz ms.) Note that, in case of vowel insertion, an English coda is reanalyzed as a Hawaiian onset (e.g., /pi.la/ and /ʔai.la.na/). Also note that both phonemically and orthographically vowel-initial words in English have phonetically glottal onsets in isolation. Hawaiian speakers, who contrast glottal stops phonemically, hear these and interpret them as phonemic in Hawaiian borrowings (as in the ‘island’ example).

In general, foreign consonant clusters are similarly reanalyzed. For example, the Hawaiian loanword *kalepa* [kələpə] (< English *scraper* [skɹeɪpə]) exhibits both consonant deletion and vowel insertion, as the English [sk] cluster is simplified in Hawaiian to [k], while the English [kɹ] cluster is broken up in Hawaiian by vowel epenthesis as [kəl]. (The ‘scraper’ example is also from Schütz ms.) However, a few Hawaiian loanwords do contain complex onsets, like [kɹ] and [st], which do not occur in native Hawaiian words. Examples of both occur in *kristo* [kɹisto] (< Classical Greek *Christos* [kʰristos]). Therefore, it is important to partition native and foreign vocabulary into separate lexical strata.

Another reason for having lexical strata in Hawaiian is the number of so-called loan phonemes, which are phones that only function to contrast foreign words. For example, [s] occurs in loanwords like *savana* [səvanə] (< English *savanna* [səvænə]), but no where in the native Hawaiian lexicon. Also the affricate [tʃ] only occurs in loanwords like *mōchī* [mo:tʃi:] ‘sticky rice cake’ (< Japanese *mochi* [mo:tʃi:]). Incidentally, foreign-sounding words can always be nativized by replacing the foreign phones with native ones, as in the variant pronunciations of *savana* [kəvanə] and *mōchī* [mo:ki:].

Many linguists have been interested by the question of loanword adaptation in Hawaiian, since a donor language like English has many more consonants and vowels than Hawaiian (e.g., Carr 1951; Pukui and Elbert 1957; Schütz 1994). So, how are English words adapted to fit the Hawaiian model? Table 4 summarizes some of the correspondences between foreign and Hawaiian phones. The asymmetry in the table is worth noting; more English phones map to fewer Hawaiian phones. Hawaiian [k] and [a] are the most common targets represented here. It is perhaps also worth noting that the mappings are both many-to-one and one-to-many. For example, both English [n] and [ŋ] map to Hawaiian [n]; English [s] maps to both Hawaiian [k] and [h].

Vowels are sometimes lengthened in Hawaiian borrowings, presumably to represent the stress patterns of their foreign sources, as phonemically long vowels are never unstressed in Hawaiian (Schütz 1994, ms). Compare the patterns of stress in an English

Consonants		Vowels	
English	Hawaiian	English	Hawaiian
m	m	i, ɪ	i
n, ŋ	n	e, ɛ	e
p, b, f	p	æ, a, ø, ə, ʌ	a
t, d, θ, ð, s, z, ʒ, tʃ, dʒ, k, g	k	ɔ, o	o
s, h, ʃ	h	u, ʊ	u
ʌ	hu		
l, ɹ	l		
v, w	w		

Table 4: Some correspondences between English and Hawaiian sounds in borrowings, adapted from Carr (1951), Pukui and Elbert (1957:xvii), and Schütz (1994:192)

word like *rabbit* [ˈræbɪt] and its Hawaiian borrowing *lāpaki* [laˈpaki]. Without the long vowel in this word, it would only have received one stress on the penultimate syllable [laˈpaki], which is suggested to be a poorer approximation of the source.

With this in mind, there are a number of apparent counterexamples, which less perfectly match stress patterns between the source word and borrowing. For example, consider the proper names in Table 5, which are listed in Pukui and Elbert 1992 and analyzed by Schütz (1994:195). All of these source words are stressed on their initial syllables, while the borrowings are stressed on their second syllables. Notice that the initial glottal stops are not represented in the Hawaiian borrowings either. Neither of these facts is surprising, given that glottal stops and long vowels were not regularly represented in the Hawaiian orthography until recently. So, while these Hawaiian borrowings might once have better approximated their source words (e.g., English *Alex* [ˈʔæləks] might have been pronounced as Hawaiian [ˈʔaːlikə]), the names now appear fossilized in their present forms both because of the deficiency of the old orthography and because of their relatively frequent occurrence in print.

Hawaiian borrowing	<	English source word
<i>Alika</i> [əˈlikə]	<	<i>Alex</i> [ˈʔæləks]
<i>Alena</i> [əˈlenə]	<	<i>Alan</i> [ˈʔælən]
<i>Amoka</i> [əˈmokə]	<	<i>Amos</i> [ˈʔeimos]
<i>Akoni</i> [əˈkoni]	<	<i>Anthony</i> [ˈʔænθəni]
<i>Hapaki</i> [həˈpaki]	<	<i>Herbert</i> [ˈhɜːbɜːt]
<i>Pakile</i> [pəˈkile]	<	<i>Basil</i> [ˈbæzɪl]

Table 5: Borrowed names with divergent stress patterns

In addition to such potential visual reanalysis, some words were apparently borrowed visually, rather than aurally, in the first place. For example, *hīmeni* [hi:meni] ‘song’ (< English *hymn* [hɪm]) realizes the silent *n* in the English spelling (Schütz 1994). Similarly, an early borrowing of English *beaver* [bivə] included the orthographic *ea* of the English spelling; Hawaiian *beava* [beavə] or *peava* [peavə] looked more like the English source than it sounded like it (Schütz ms). The modern word for ‘beaver’ (i.e., *piwa* [pivə]) more fully reflects the sound of the English source word.

In contrast, a good sign of an aural borrowing from English to Hawaiian is the presence of a word initial glottal stop in the borrowing, since, as mentioned above, English does not distinguish initial glottal stops phonemically. Some borrowings also suggest dialectal variation in the source words. For example, some dialects of English pronounce a post-vocalic /r/, while others do not. (This observation and the following examples are from Schütz ms.) Some words that were presumably borrowed from /r/-dialects are ‘*akele* [ʔəkele] (< *acre* [ʔeɪkə]) and *Hōmela* [ho:mələ] (< *Homer* [hoʊmə]). In these borrowings, each English /r/ is matched by a Hawaiian /l/. On the other hand, some words presumably not borrowed from /r/-dialects are ‘*anakā* [ʔanəkā:] (< *anchor* [ʔeɪŋkə]), *kinika* [kinikə] (< *ginger* [dʒɪndʒə]), and ‘*emepaea* [ʔemepæə] (< *empire* [ʔempaɪə]). There are no realizations of Hawaiian /l/ in these borrowings (corresponding to the phonetic realizations of English /r/), despite the presence of orthographic *rs* in the written forms.

A study of early Hawaiian borrowings suggests an interesting pattern for epenthetic and paragogic vowels, whereby the choice of vowel is influenced by the articulatory configuration of the preceding consonant (Schütz 1976, 1994:chapter 10). For example, after [m, b, p, v] there was a tendency to insert [u]. This parallels similar patterns in the related languages of Tongan and Fijian (Schütz 1970, 1978). However, these patterns got washed out after the arrival of the missionaries in 1820. Indeed, as one missionary wrote, a new policy was institutionalized. “When two consonants joined in a foreign word, need both to be preserved, we interpose the vowel *e*, and after a final consonant add usually the vowel *a*” (Bingham 1847:155, cited in Schütz 1976). An example of this new institution can be found in the Hawaiian borrowing *Bosetona* (< English *Boston*).

Finally, speaker attitudes to loanwords are mixed. The *Kōmike Hua‘ōlelo* (2003:xvii–xix) outlines its own guidelines for including a word within its pages. Ten guidelines are listed, in rank-order from most desirable to least desirable. “Record[ing] a word which is used by native speakers but is not found in the dictionary, or one which appears in the dictionary but is used by native speakers with a meaning which is different from that listed in the dictionary” is number two. Borrowing from other Polynesian languages is number nine, while borrowing from other languages is number ten, the least desirable option for increasing Hawaiian vocabulary. On the other hand, the actions of the *Kōmike Hua‘ōlelo* tell a more pragmatic than idealistic story, as a disproportionate number of the words in their dictionary are non-Polynesian loans (roughly, $9.7\% = \frac{634}{6521}$),

compared to the number of words in the dictionary that are Polynesian loans (roughly, $0.008\% = \frac{56}{6521}$). One motivation behind this might be transparency. For instance, Hawaiian immersion students must sit standardized tests in English. Another motivation could be expediency, as the supply of Hawaiian language resources (like textbooks) always seems to trail behind demand, and English source words are, of course, readily and plentifully available. All members of the Kōmike Hua‘ōlelo are fluent in English.

6 Grammatical borrowing

In addition to lexical borrowing, languages sometimes borrow from the grammars of other languages. However, I found no evidence for grammatical borrowing in the Hawaiian database.

For example, while there are a number of superficial examples of borrowed word order to consider, none of the examples stand up to serious scrutiny. Consider Hawaiian *hapenuia* (< English *Happy New Year*). One might have expected *hapenuia* to have been borrowed as *hape ia nu* in Hawaiian, given the regular post-modifying word order of Hawaiian (cf. *hau‘oli makahiki hou* [happy year new]). The claim that English pre-modifying word order overrides the Hawaiian post-modifying word order in *hapenuia* would assume that the borrowed phrase was analyzed into units that match the English source words, which could then reflect English or Hawaiian grammar. However, an alternative position is that the phrase was loaned whole, without analysis into word-sized constituents. In this case, no grammatical borrowing is necessary.

A similarly unconvincing case might be made for a word like *hau-kalima* [ice-cream], where one might have expected *kalima-hau* in Hawaiian if the modifier were *hau* ‘ice’ (as it is in English). But why must *hau* be the modifier? In other words, neither *iced cream* nor *creamed ice* seems like a nonsensical description of ‘ice cream’ in English; so, why not consider *kalima* ‘cream’ to be the modifier in Hawaiian? Other word-order examples, such as *Nuhōlani* ‘Australia’ (< English *New Holland*) and *ferousa sulafahate* (< English *ferrous sulfate*), can probably be excluded on grounds of being proper names, which require no internal constituency to function as designators.

Affixes are another place that one might expect to find grammatical borrowing. Indeed, Hawaiian appears to have borrowed a number of affixes, including *-kona* (< English *-(a)thon*), *heko-* (< English *hecto-*), *keni-* (< English *centi-*), and *polai-* (< English *poly-*). Table 6 contains examples of these affixes in Hawaiian words. Notice the productivity of the *-kona* suffix, which occurs with native bases like *hele* ‘go’, as in *hele-kona* ‘walk-athon’. Also notice that none of these affixes functions grammatically. These are not examples of grammatical borrowing in Hawaiian either.

Affix	Affix Gloss	Example	Example Gloss
<i>-kona</i>	‘-(a)thon’	<i>hele-kona</i>	‘walk-athon’
<i>heko-</i>	‘hundred’	<i>heko-kalame</i>	‘hecto-gram’
<i>keni-</i>	‘hundredth’	<i>keni-kalame</i>	‘centi-gram’
<i>polai-</i>	‘poly-’	<i>polai-posapahate</i>	‘poly-phosphate’

Table 6: Some borrowed affixes with examples

7 Conclusion

The stated goals of the Loanword Typology project are to assemble systematic information on loanword patterns in a sample of natural languages, and to evaluate lexical borrowability in a controlled and empirical way. To these ends, the present chapter and the Hawaiian database contribute a Polynesian representative to complement the other language families’ data. It also contributes an example of lexical borrowing in an endangered language.

By far, the majority of the loanwords in the database are from English. This is true both in general and for the specific words under investigation within bounds of the Loanword Typology project, which I list in the appendix. For the project dataset, we saw that English borrowings dominate the tables for both semantic word classes and semantic fields (Tables 1–3). We also considered that the overwhelming influence of English on Hawaiian makes sense given the exploitative history of the US in Hawai‘i, and the numbers and kinds of loanwords in Hawaiian echoes this history of exploitation. For example, consider the proportion of ‘modern world’ borrowings from English in Table 3, which is 42.88% of all ‘modern world’ items, where the complement 57.12% of ‘modern world’ items were not borrowed (they were added to the vocabulary by other means). Consequentially, 100% of all ‘modern world’ items *that were borrowed* were borrowed from English. The influence of English on Hawaiian has been profound.

In cases when Hawaiian has borrowed non-English vocabulary, it has often been from the top down. For example, loanwords from the classical languages were instituted by the missionaries in the 19th century. More recently, the Kōmike Hua‘ōlelo has instituted borrowings from a host of other languages in a conscious effort to offset the dominance of English (although the Kōmike Hua‘ōlelo also institutes borrowings from English). Other non-English loanwords seem to have entered Hawaiian through contact with the various foreign language speakers who once populated the sugar plantations.

To conclude, I should like to emphasize the utility of the Hawaiian database as a resource for future work. I have tried to include every loanword that I could mine from Pukui and Elbert and the Kōmike Hua‘ōlelo’s dictionaries. While the database contains everything required for the typology project, it also contains a lot more. My hope is that it might provide a useful corpus for further investigation of loanwords in Hawaiian.

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Loanword Appendix

Classical Greek

<i>'aeko</i>	'eagle'
<i>'alopeka</i>	'fox'
<i>kakalakeke</i>	'cormorant'
<i>kāmelo</i>	'camel'
<i>kiapolō</i>	'demon'
<i>meli</i>	'honey'

Czech

<i>pūkowi</i>	'birch'
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English

<i>'aila</i>	'oil', 'grease or fat'
<i>'alekohola</i>	'fermented drink'
<i>'alemanaka</i>	'calendar'
<i>'anakā</i>	'anchor'
<i>'anakala</i>	'uncle', 'mother's brother', 'father's brother'
<i>'anakē</i>	'aunt', 'mother's sister', 'father's sister'
<i>'ēkona</i>	'acorn'
<i>'ēleka</i>	'elk/moose'
<i>'elepani</i>	'elephant'
<i>'enekini</i>	'motor'
<i>'enemi</i>	'enemy'
<i>'iniseka</i>	'insect'

<i>'oka (1)</i>	'oats', 'grain'
<i>'oka (2)</i>	'oak'
<i>'oliwa</i>	'olive'
<i>'oma</i>	'to bake', 'oven'
<i>'opakuma</i>	'opossum'
<i>hāmale</i>	'hammer'
<i>haneli</i>	'hundred'
<i>hapa</i>	'half'
<i>haukapila</i>	'hospital'
<i>hē</i>	'hay'
<i>hipa</i>	'sheep'
<i>hō</i>	'hoe'
<i>hola</i>	'hour'
<i>huika</i>	'wheat', 'grain'
<i>huila</i>	'wheel'
<i>iākua</i>	'jaguar'
<i>kaioke</i>	'coyote'
<i>kakalina</i>	'petroleum'
<i>kākini</i>	'sock or stocking'
<i>kālā</i>	'money'
<i>kala (1)</i>	'collar'
<i>kalaima</i>	'crime'
<i>kalaiwa</i>	'to drive'
<i>kameleona</i>	'chameleon'
<i>kanakalū</i>	'kangaroo'
<i>kanakē</i>	'candy/sweets'
<i>kanapī</i>	'centipede'
<i>kaona</i>	'town'
<i>kauka</i>	'physician'
<i>kaukani</i>	'thousand'
<i>kāwele</i>	'towel', 'to wipe'
<i>kehena</i>	'hell'
<i>kēkake</i>	'donkey'
<i>kela</i>	'tailor'
<i>kelepona</i>	'telephone'
<i>kī (1)</i>	'tea'
<i>kī (3)</i>	'latch or door-bolt'
<i>kia (1)</i>	'deer'
<i>kikaliki</i>	'cigarette'
<i>kikila</i>	'kettle'

<i>kila</i>	‘chisel’
<i>kili</i>	‘chili pepper’
<i>kilika</i>	‘silk’
<i>kini</i>	‘tin or tinsplate’, ‘tin/can’
<i>kinika</i>	‘sink’
<i>kiulela</i>	‘squirrel’
<i>kīwī</i>	‘television’
<i>koloka</i>	‘cloak’
<i>kolū</i>	‘screw’
<i>kolūkalaiwa</i>	‘screwdriver’
<i>kopa</i>	‘soap’
<i>kopalā</i>	‘shovel’
<i>kope (2)</i>	‘coffee’
<i>kopena</i>	‘wasp’
<i>kopiana</i>	‘scorpion’
<i>kuapo</i>	‘belt’
<i>kuka</i>	‘coat’
<i>kuke</i>	‘to cook’
<i>kula (2)</i>	‘gold’
<i>kula (3)</i>	‘school’
<i>kūlina</i>	‘maize/corn’, ‘grain’
<i>kūmeka</i>	‘shoemaker’
<i>lai</i>	‘rye’, ‘grain’
<i>laiki</i>	‘rice’, ‘grain’
<i>laina</i>	‘line’
<i>laka</i>	‘lock’, ‘padlock’
<i>lakuna</i>	‘raccoon’
<i>lāpaki</i>	‘rabbit’, ‘hare’
<i>leinekia</i>	‘reindeer/caribou’
<i>leka</i>	‘post/mail’, ‘letter’
<i>lekiō</i>	‘radio’
<i>lilina</i>	‘linen’
<i>liona</i>	‘lion’
<i>lopi</i>	‘thread’
<i>lumi</i>	‘room’
<i>mākeke</i>	‘market’
<i>makika</i>	‘sandfly or midge or gnat’, ‘mosquito’
<i>makona</i>	‘mason’
<i>male</i>	‘to marry’
<i>manioka</i>	‘cassava/manioc’

<i>mīkini</i>	‘machine’
<i>mileka</i>	‘millet or sorghum’
<i>miula</i>	‘mule’
<i>mokeko</i>	‘mosque’
<i>mokokaikala</i>	‘motorcycle’
<i>nūpepa</i>	‘newspaper’
<i>paikikala</i>	‘bicycle’
<i>kupa (1)</i>	‘to boil’, ‘soup’
<i>paila (2)</i>	‘to pile up’
<i>paina</i>	‘pine’
<i>paka</i>	‘tobacco’
<i>pākeke</i>	‘pocket’
<i>palai</i>	‘to roast or fry’
<i>palaki</i>	‘brush’
<i>palaoa</i>	‘bread’, ‘flour’
<i>palau</i>	‘to plough/plow’
<i>pāma</i>	‘palm tree’
<i>panakō</i>	‘bank (financial institution)’
<i>paniana</i>	‘banyan’
<i>pāpulō</i>	‘buffalo’
<i>pea</i>	‘bear’
<i>pelekikena</i>	‘president’
<i>pena</i>	‘paint’, ‘to paint’
<i>peni</i>	‘pen’
<i>pepa (1)</i>	‘paper’
<i>pepa (2)</i>	‘pepper’
<i>pī (1)</i>	‘bean’
<i>pia</i>	‘beer’
<i>pika</i>	‘jug/pitcher’
<i>piku</i>	‘fig’
<i>pila (1)</i>	‘fir’
<i>pila (2)</i>	‘bill’
<i>piliwi</i>	‘to believe’
<i>pine</i>	‘pin’
<i>pipi</i>	‘cattle’
<i>piwa (1)</i>	‘beaver’
<i>piwa (2)</i>	‘fever’
<i>pokela</i>	‘potter’
<i>pola</i>	‘bowl’
<i>poloka</i>	‘frog’

<i>poloke</i>	‘broken’
<i>polū</i>	‘blue’
<i>puke</i>	‘book’
<i>puki</i>	‘boot’
<i>pūlumi</i>	‘to sweep’, ‘broom’
<i>puna (2)</i>	‘spoon’
<i>sawana</i>	‘savanna’
<i>tūkana</i>	‘toucan’
<i>tuko</i>	‘glue’
<i>uaki</i>	‘clock’
<i>uapo</i>	‘bridge’
<i>waina</i>	‘wine’
<i>winihapa</i>	‘brick’
<i>wulekula</i>	‘vulture’

Hebrew

<i>nahesa</i>	‘snake’
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Māori

<i>kalapuna</i>	‘seagull’
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