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Melodies of Hawai'i: The Relationship Between Hawai'i Creole English and  
'Ōlelo Hawai'i Prosody

by

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## **Abstract**

This dissertation offers a comparative study of speech melodies of Hawaiian and Hawai‘i Creole English (HCE), two languages spoken in the Hawaiian Islands. HCE, which is an English lexified creole, developed from many languages such as Chinese, Portuguese, and Hawaiian. This research proposes that Hawaiian intonation patterns remained even after relexification from a Hawaiian based pidgin to an English lexified creole. This comparative study of speech melodies of Hawaiian and HCE provides documentation of falling yes/no question intonation found in both languages, as well as for other utterance types, i.e. statements, wh-questions, and listing/continuation. Patterns emerged from the major utterance types revealing insights into creole genesis from substrate influence, and language universals and variation.

Of the utterance types examined, the most striking example is that of falling yes/no question intonation, present in both languages. This type of falling intonation is quite rare amongst the world’s languages, which strengthens the hypothesis I claim, that HCE received intonation patterns from Hawaiian. These findings also have implications for creole genesis as well as for language typology research for question intonation as well as universals and sociolinguistics. With regard to creole genesis, the evidence provided supporting Hawaiian as a contributing language strengthens substrate arguments and weakens a universalist view, specifically that of the Language Bioprogram Hypothesis (LBH). Also, the results show a typology of question intonation that makes use of a more latitudinal categorical distinction rather than the commonly used right-edge question intonation, which changes the perspective on language universals and variation, as well as biological codes. This dissertation also addresses language identity and how these two languages interact in the same linguistic landscape in Hawai‘i . While providing a much-needed inventory of intonation for all utterance types in

Hawaiian and HCE, this research project also addresses broader questions and linguistic topics such as creole genesis, language typology, universals, and sociolinguistics.

## Preface

From the years of researching Pidgin, to the hours listening to different Pidgin speakers, to the necessary trips to Hawai'i and all the knowledge I have gained about the complexities of the story of Hawai'i and how it came to be, I have grown closer and closer to gaining more understanding of these beautiful islands and the people who live there. I have become more acquainted with the culture- Malama Pono, Merrie Monarch, Kamehameha Schools song contest, slack key guitar, Hawaiian mele, the local foods at the markets, lumpia, lau lau, poke- the flavors and sounds of the Hawaiian islands stay with me. I have made friends and kept in touch through Facebook which in turn exposes me to postings entirely written in Hawaiian. This then lead me to learning more Hawaiian. What I want to stress is that I have not merely sat in front of a computer, analyzing data in a sterile cold environment- but I have jumped into the whole scene, where the language is alive, used by the people who speak it, surrounded by the sights, sounds, smells and tastes of the environment. Language is alive- it's organic, it is motivated by social exchanges and in order to study the language, it isn't enough to take one part out of the whole- the whole needs to be embraced, observed, appreciated, and respected. It is my intent to present my research in a respectful manner, embracing what I have learned and love about the Hawaiian language and culture, the Pidgin language, and their beautiful melodies.

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## **Dedication**

I dedicate this dissertation to my Mom and Dad.

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## List of Abbreviations

<b>Term</b>	<b>Abbreviation</b>
PH	Pidgin Hawaiian
SLM	Speech Learning Model
HCE	Hawai‘i Creole English
SH	Standard Hawaiian
SE	Standard English
HPE	Hawai‘i Pidgin English
LBH	Language Bioprogram Hypothesis
CAH	Contrastive Analysis Hypothesis
SLA	Second Language Acquisition
AM	Autometrical Segmental
TOBI	Tones and Breaks Indices

## Epigraph

*O ka 'Ōlelo ke Ka 'ā o ka Maui*

Language is the fiber that binds us to our cultural identity

(Kualono, University of Hawai'i, Hilo)

## **Chapter 1: Language Background for Hawaiian and Hawai'i Creole English**

### **1.1. Introduction**

Hawai'i Creole English (HCE), which is referred to in Hawai'i as "Pidgin", is a creole language consisting of a combination of elements from English, Chinese, Portuguese, and Hawaiian. Prior to becoming a creole, HCE started as a pidgin language which was initially a Hawaiian lexified pidgin that became relexified with English and stabilized into a creole language. A pidgin is a simplified language used as a means of communication between groups of people who do not share a common language. In general, once the second generation of speakers learns the pidgin as children, they create a more complex system, filling in linguistic gaps of the pidgin and turning it into a creole (Singh, 2000:13).

While each of the different languages spoken in Hawai'i contributed to the development of HCE, it has been argued by Siegel (2000:211) that of the substrate languages, Chinese and Portuguese were the most dominant during the stabilization of HCE. I have investigated the influence of native Hawaiian on HCE intonation and will validate what is commonly acknowledged locally in the Hawaiian Islands—that native Hawaiian intonation made an imprint on HCE in its development. One of the most striking features of HCE is the intonation used in yes/no questions. A yes/no question can be answered with either a "yes" or "no" response. In English, the intonation on the sentence, "Are you going to school *today*?" rises at the end of the question. The corresponding HCE question peaks at school and falls sharply on today. In Hawaiian, the yes/no question intonation also falls at the end of the question.

I hypothesize that Hawaiian had a strong influence on HCE and I have developed a formal analysis of HCE and Hawaiian in order to investigate this. As noted by Vanderslice and

Pierson (1967:156), “[t]he most neglected aspect of Pidgin [HCE] has been its suprasegmental or prosodic features.” This statement is still true today, over 40 years later. The study of HCE intonation has been untouched for decades, which makes the current thesis important to the contribution to the body of knowledge of HCE. The important contribution of this research also applies to the study of creoles, in general, by accounting for the influence of contributing languages such as Hawaiian, in the case of HCE. Siegel (2000:199) also points out that the substratal influence in HCE has not been recognized and “virtually discounted over the past two decades.” Moreover, a formal theoretical phonological account for Hawaiian influence on HCE has not yet been conducted and is crucial to the knowledge of HCE as well as Hawaiian intonation patterns.

In Chapter One, I provide background information on Hawaiian and HCE as spoken in the Hawaiian Islands. I present the history, use, and attitudes of these languages as information that will be useful in evaluating the intonation data in both Chapters Six and Seven. In Chapter 2, I present background information on prosody as well as information on biological codes and how they were developed to evaluate universal sound symbolism in intonation. I also provide descriptions of perceptual studies as well as methods of speech melody transcription and provide the framework from which I evaluate HCE and Hawaiian. I also present information on universals cross-linguistically with regards to question intonation as to frame the data I present in Chapters Five and Six. Chapter Three is a discussion of creole genesis and the theories that pertain to the development of HCE. This information is important in that it presents the options available that lead to the influence of Hawaiian on HCE. In Chapter Four, I provide a description of the methodology and a presentation of the hardware and software that I have used to conduct my study. Chapter Five is a description of Hawaiian intonation patterns by utterance

type, focusing on questions and statements. Chapter Six is a description of HCE intonation by utterance types, focusing on questions and statements. Chapter Seven is the results and analysis of the data presented in Chapters Five and Six. Chapter Eight provides theoretical discussions that explain the results presented in Chapter Seven. Chapter Nine is the conclusion of all things discussed in this dissertation. Within this dissertation research, I hoped to accomplish many things, which include: provide a description of Hawaiian intonation as well as HCE intonation, neither of which has been described in depth, suggest that Hawaiian has influenced HCE intonation and provide a possible explanation as to how this happened as explained in a creole genesis theoretical framework, show how Hawaiian and HCE intonation contours fit into the universals of question intonation and are consistent with current ideas of question variation and universals, and investigate how Hawaiian and HCE intonation differ and determine if Hawaiian supports the Functional Hypothesis as developed by Haan (2002).

#### RESEARCH QUESTIONS:

1. What makes HCE sound so different than Mainland English?
2. How does HCE fit into Universal Question criteria?
3. How does HCE compare to Hawaiian?
4. What key factors differ questions and statements in HCE and Hawaiian?
5. Is it possible that HCE received its intonation patterns from Hawaiian?

#### **1.2. Languages of Hawai‘i: Hawaiian and HCE**

Two languages spoken in the Hawaiian Islands are the focus of this dissertation. One is Hawaiian, referring to the language of the native people of Hawai‘i, a Polynesian language reportedly spoken by approximately 16,000 people as of the census years 2006-2008 (US Census, 2010). The other is Hawai‘i Creole English (HCE), referred to in Hawai‘i as “Pidgin”, a creole language consisting of a combination of elements from English, Chinese, Portuguese,

and Hawaiian. These two languages have a close relationship that began upon the arrival of Captain Cook, in 1778. Taken from the original journal entry for Captain Cook, dated November 30, 1778:

After a stay of about two hours, they all left us, except six or eight of their company, who choose to remain on board. A double sailing canoe came, soon after, to attend upon them; which we towed astern all night. In the evening, we discovered another island to windward, which the natives call Owhyhee. The name of that, off which we had been for three days, we were also told was Mowee. (Cook et al., 1784:532)

In this chapter I provide a historical sketch of how Hawaiian gave life to HCE and how they exist side by side in Hawai‘i, making a distinct linguistic landscape by providing unique speech melodies in the Hawaiian Islands. To begin, I introduce the history of the native Hawaiian language and the development of HCE. I will also discuss characteristics of each language in order to develop a broader picture of each before I discuss the data in later sections.

### **1.3. Native Hawaiian Language**

In this thesis, when I refer to the language spoken by native Hawaiians, I will always use the term Hawaiian. The many terms used to describe languages used diachronically can be confusing, but I will try to clarify each term as it relates to the time in history when it was used. The native Hawaiian language, however, remains Hawaiian throughout the entire thesis and timeline.

It is said that Polynesians arrived in the Hawaiian Islands around 400-500 AD (Kirch, 1997) and while there is controversy about which directions they arrived from, historians can agree that these Polynesians were the first to inhabit the Hawaiian Islands. The Hawaiian language is a Polynesian language related closely to Maori, Tahitian, and Rapa Nui (Elbert,

1953). This subsection briefly surveys some basic features of the Hawaiian language. This section does not represent all features of Hawaiian.

### ***1.3.1 Syntax***

Hawaiian is a VSO language, meaning that the order of the sentence structure is canonically verb, subject, and then object. Hawaiian sentences can be simple, verbless, or complex (Elbert and Pukui, 1979: 39). In equational sentences (ones that indicate that ‘something is something’), Hawaiian omits the verb. A simple sentence is given in (1).

(1)

He kumu au

A teacher I

‘ I am a teacher’

### ***1.3.2 Phonological inventory***

Hawaiian is known for its especially short consonant inventory.

The consonant inventory for Hawaiian is as follows:

p, k, ‘, h, l, m, n, w

In Hawaiian the glottal stop or ‘, which is also called ‘okina, is a consonant. In Hawaiian, ‘okina means ‘cutting’. Words that are borrowed from English and that start with a vowel are usually pronounced with the glottal stop.

The Hawaiian language has both short and long vowels written accordingly:

a, ā, e, ē, i, ī, o, ō, u, ū

The macron used in the above list of vowels is called the kahakō, and is used to differentiate between short and long vowels. Long vowels are written with the kahakō.

### ***1.3.3 Syllable Structure***

Hawaiian's syllable structure is that of CV(V) whereby the C can be any consonant and the VV can be a double vowel or even a long vowel, which is marked with a macron, i.e. ā, ē, ī, ō, and ū. As mentioned, this macron is called the kahakō, and is used to differentiate between short and long vowels. The vowel with this macron should be pronounced longer than an unmarked vowel. English loan words are converted to this structure and make use of the Hawaiian consonant inventory. For example, the word 'steel' would become *kila* in Hawaiian, 'frog' becomes *poloka*, and 'school' becomes *kula*.

### ***1.3.4 Word Stress***

In Hawaiian, word stress is based on a stress group. Within a stress group, the stress falls on the next to last syllable. If the word ends in a long vowel (written with a macron), then the stress falls on that syllable.

### ***1.3.5 Intonation***

As this study focuses on the intonation of Hawaiian in greater depth in Chapter Six, I only state here that Hawaiian sentence structure is the same for yes/no questions and statements, and it is the intonation alone that marks the distinction in Hawaiian. There is also no morphological marker or other lexical distinction between yes/no questions and statements.

#### 1.4. Historical Sketch of Hawai‘i

The following section is a historical sketch of Hawai‘i, but more specifically diachronically focused on the linguistic landscape of Hawai‘i . I clarify the stages of development for HCE and illustrate the close bond that Hawaiian and HCE have shared over the decades.

Hawai‘i is situated in the South Pacific Ocean. There are eight main islands that make up the State of Hawai‘i (USA). Niihau, the island furthest to the west, is a privately owned island, which still has native Hawaiian speakers who reside there. The island with the majority of the population is that of Oahu, which is home to the capital of the state of Hawai‘i, Honolulu. The largest island, and the furthest island to the east is called Hawai‘i, but is also known as “the Big Island”.

**Figure 1.1 Map of the Hawaiian Islands**



courtesy of [www.freeworldmaps.net](http://www.freeworldmaps.net)

#### ***1.4.1. Captain Cook Arrives***

Captain James Cook's arrival in 1778 represents the first documented encounter with Europeans. At this time, the Hawaiian language was not a written language and missionaries arriving in Hawai'i developed a writing system to represent sounds in Hawai'i whereby they could write and preach the scriptures in Hawaiian to the Hawaiian people. The arrival of Cook was only the beginning of the flood of people who were to come to the Hawaiian Islands in search of work or as a stop over during the Sandal Wood Trade and Whaling Era. Immediately, initial contact with Hawaiians resulted in a need to communicate, which started as rudimentary gestures, body language and basic Hawaiian vocabulary learned (Roberts, 1995:9).

The development of what is now Hawai'i Creole English (HCE) in the Hawaiian Islands dates back to these early days of the 1800s. At this time, Hawai'i was a stopover as well for the fur trade between China and North America (Singh, 2003).

#### ***1.4.2. Hawai'i: Trading Eras***

Hawaiians simplified their language when talking to foreigners such as sailors stopping in ports during the sandalwood trade, fur trade, and whaling eras. From this simplified version of standard Hawaiian emerged Pidgin Hawaiian. Most people (immigrants) at this time used Pidgin Hawaiian and not an English-lexified pidgin in order to communicate with each other and with native Hawaiians. Even Hawaiians on board ships taught others this simplified Hawaiian so that other sailors who did not speak Hawaiian could communicate with them. Roberts, (1995:19) provides the account of Munger, possibly a sailor, who had acquired enough Hawaiian in six months of contact.

I have already seen enough of the Sandwich Islanders to be enabled to get along with them in common conversation, in their own language. I am acquainted with the names of nearly everything in common use among them. We have had a number of them in the ship, for the last six months, and they have given me a considerable insight into their language.

Sailors and tradesmen interacting in business would have needed a language for negotiations. It is believed that the term “pidgin” is an actual pidginized word for “business”(Shi 1992:1). The earliest pidgin, Pidgin Hawaiian, emerged around 1790-1820 and was used by sailors as a trade language when stopping over in Hawai‘i (Roberts, 1995:10). This Hawaiian lexified pidgin had a profound impact on HCE or Pidgin, providing the roots for the language that is known today as HCE. Not long after the first European contact, the whaling industry increased and so did the population of Hawai‘i with the influx of immigrants.

#### ***1.4.3. Sugar Plantation Era***

The first reported plantation was built in 1835, on the island of Kauai. The first major group to immigrate to Hawai‘i was Cantonese men. In fact, these immigrants spoke Pidgin Hawaiian, reportedly with some Chinese influence (Roberts, 1995). The growing sugarcane industry demanded labor and this need was satisfied by workers from many different countries, speaking different languages. However, it was the Chinese who came first in greater numbers to work on the plantations. Roberts reports the following, based on correspondence between Bernice E. L. Hundley to Reinecke on March 4, 1933: “The Chinese who came rather early made no particular attempt, it was thought, to acquire English. They immediately made use of Hawaiian as is evidenced by the fact that the most old Chinese speak Hawaiian fluently” (Reinecke, 1933-1935:27).

Also, included in archival evidence is written by Reverend William Speer in 1856 about the use of Hawaiian among Chinese men who spoke different languages. Reverend Speer noted, “One of the amusing sights I have seen on the island has been ‘Canton’ men and ‘Amoy’ men resorting to the dialect of the Hawaiians as the only medium of ready communication with each other.” From these quotes, it is clear to see that observations were made as to the language commonly spoken or preferred by the Chinese plantation workers. Also the following supports the same observation by Coulter and Chun (1937:38):

Some of the Chinese who spoke different dialects found the Hawaiian language the most common means of communication between themselves. Some of the old Chinese interviewed for this study recalled with amusement sitting on the rice banks between patty [sic] fields side by side with natives, trying to imitate the sounds of Hawaiian so that they could learn to exchange ideas.

Roberts’ (1995) collection of historical evidence to support the expansive use of PH in Hawai‘i shows account after account to support the claims I make of the impact that Hawaiian and PH had on the linguistic landscape of Hawai‘i . If taking into account the arrival of Cook in 1778, which started the flow of foreigners to Hawai‘i, it would then be reasonable to assume approximately 100 years of Hawaiian and PH use before the increased use and promotion of English in the late 1800s. This is a bit simplified as there were other languages used by immigrants as well, but it appears solidly that through Roberts’ collection (1995), the general observation made is that PH was extensively in use among Hawaiians and immigrants and perhaps has not been given reasonable credit for the influence it has made on the environment in Hawai‘i to which HCE emerged.

In fact to go on, even reported as late as 1887 from a Reverend W. B. Oleson, stating that Hawaiian (it is not clear as to whether it was Standard Hawaiian or an approximation in PH

form), was used among Chinese and Portuguese for business. Roberts (1995:28) provides the following excerpt:

Really valuable work has been wrought for the Chinese through our mother-tongue, by city missionaries in San Francisco. But there, the English language is a common medium of communication, and there is a more pervasive English atmosphere. Here social necessities throw the Chinese into more intimate relations with Hawaiians. The Hawaiian language serves all business purposes and is more readily acquired... To a certain extent Hawaiians, Portuguese, and Chinese mingle on the same plane. Their contact is daily and hourly along all the lines of industrial employment and social necessity. They meet on the common basis of the Hawaiian language.

What I infer from these archived observations gathered by Roberts (1995) is that the presence of Hawaiian in whatever form it was spoken, was attested in all the major immigrant groups, i.e. Chinese, Portuguese, and even Japanese. This would have had a lasting impact on the development of the common language, an interlanguage for immigrants and would have also had an impact on the immigrants' native languages as well (to be discussed in Chapter Nine). The fact that initial contact and communication took place in Hawaiian and a pidginized form of Hawaiian was used for decades strengthens the argument that Hawaiian had a hand in developing HCE, perhaps more than has previously been acknowledged.

### **1.5. Immigrant Groups in Hawai'i**

As mentioned, when more laborers were needed to work in sugar plantations, people from Portugal and China came in larger numbers. However, Cantonese immigrants came before the Portuguese immigrants. I will expand on how these numbers taken from different census dates illustrate the linguistic landscape of Hawai'i through the years. The following table, adapted from Reinecke (1969:42) shows the population of Hawai'i spanning over almost eighty years and divided over different ethnic groups.

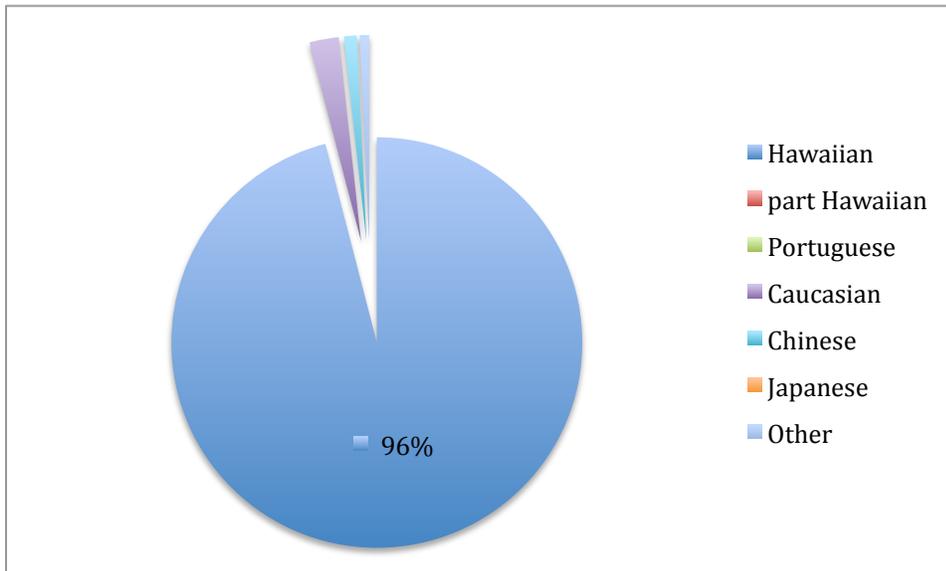
**Table 1.1 Population of Hawai‘i at various census dates, 1853-1930**

Year	Hawaiian	Part-Hawaiian	Portuguese	Puerto Rican	Spanish	‘other Caucasian	Chinese	Japanese	Korean	Filipino	Other	Total
1853	71,019					1,262	364				493	73,138
1860	66,984					1,600	700				516	69,800
1866	57,125	1,640				2,200	1,200				794	62,959
1872	49,044	2,487	424			2,520	2,038				384	56,897
1878	44,088	3,420	486			3,262	6,045				684	57,985
1884	40,014	4,218	9,967			6,612	18,254	116			1,397	80,578
1890	34,436	6,186	12,719			6,220	16,752	12,610			1,067	89,990
1896	31,019	8,485	15,191			7,247	21,616	24,407			1,055	109,020
1900	29,799	9,857	18,272	2,672		8,547	25,767	61,111			648	154,001
1910	26,041	12,506	22,301	3,734	4,890	14,867	21,674	79,675	4,533	2,361	1,071	191,909
1920	23,723	18,027	27,002	6,955	5,602	19,708	23,507	109,274	4,950	21,031	658	255,912
1930	22,636	28,224	27,588	12,592	6,671	44,895	27,179	139,631	6,461	63,052	780	368,336

When the first sugar plantation was built in Kauai, in 1835, mostly Hawaiian labor was used. As this industry grew, it was apparent that there was need for more labor; which meant a need for immigrant hands in the fields. The first workers came from China and the first year

reported was 1853, with a total population of 364 people. The next census shown in the Table 1, is from 1860, which is nearly thirty years after the first sugar plantation was established. The following figure is provided to show the percentage of native Hawaiian people at this time, compared to other immigrant groups. Populations documented in Figures 1.2, 1.3, and 1.4 are taken from Table 1.1, as adapted from Reinecke (1969:42). As reported by Roberts (1995:5), Hawaiian and Chinese immigrants spoke Pidgin Hawaiian extensively in the plantation fields in order to communicate.

**Figure 1.2 1860 Census of Hawai'i (adapted from Reinecke, 1969: 42)**



At this time, the Hawaiian population was 96% of the total population in Hawai'i .

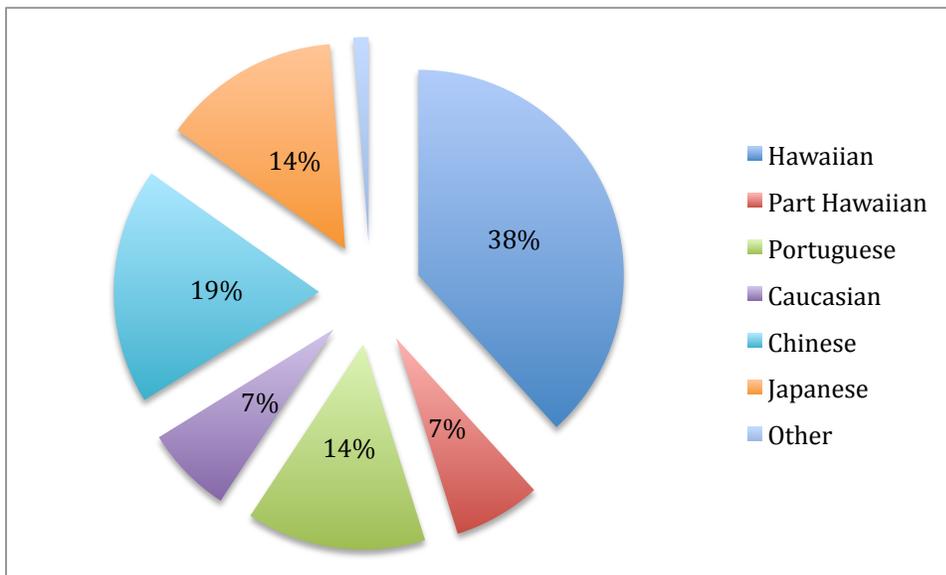
In 1872, Portuguese immigrants started to arrive in Hawai'i .

On 29 September 1878 the bark *Priscilla* arrived in Honolulu with 120 Portuguese from Madeira. They were well received on the plantations and it was quickly decided to bring more. In 1882 a sufficient number of Portuguese had come for a full-time consul to be stationed in Honolulu. By 1888 over 11,000 Portuguese had arrived from Madeira and the Azores islands. In that year immigration came to a virtual halt because of the high cost of transportation.

(Joesting, 1988:223)

The 1872 census reports 424 Portuguese people in Hawai‘i, which does not seem to be enough of the population to produce a substantial influence on the language at that time. Also according to Roberts (1995), in the beginning of the immigration to Hawai‘i, Portuguese immigrants worked along side Chinese immigrants and they all spoke PH in order to communicate. The Portuguese population jumped in 1884 to 9,967 and then to 11,000 in 1888 (Joesting, 1988:223). Portuguese immigrants started to take over more managerial positions on the plantations. Portuguese immigrants were also a driving force for English to take over as they wanted their children to learn English in schools rather than be taught in Hawaiian as was the case in many schools at the time (Siegel, 2000:204). Figure 1.3 provides a better view of the population in 1890, which is six years before the Language Act, making English the only language allowed for instruction in schools, was enforced

**Figure 1.3 1890 Census in Hawaii**



In Figure 1.3, the population of native Hawaiians was 38% of the population, still representing the majority of the total population of Hawai‘i . Taking into account those who are part Hawaiian as well as those who are Chinese, the percentage rises to 64% (representing 64%

of the total population speaking Hawaiian Pidgin). Based on what Roberts (1995) reports, it could be assumed that at least 64% of the population was using Pidgin Hawaiian and possibly Hawaii Pidgin English (Roberts 2004:107-108) indicates that these two co-existed together). At this time the Portuguese and Chinese as well as Japanese immigrants had nearly equal numbers. The demand for English, especially from Portuguese immigrants (as well as Americans, needless to say) started to take hold (c.f. Siegel, 2000). It is then reasonable to assume, based on Roberts' historical collections, that in 1890, Pidgin Hawaiian was spoken by more than half of the population of Hawai'i.

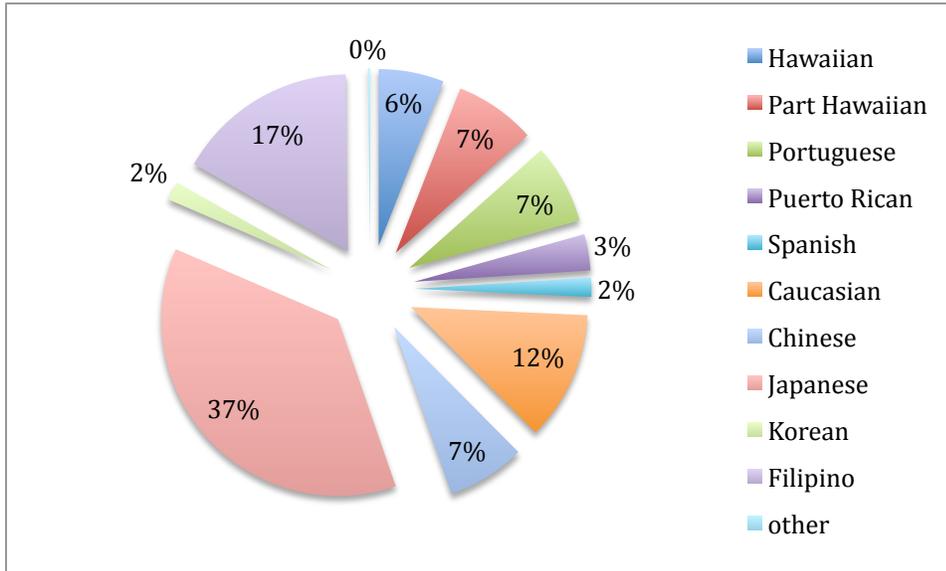
Notice that around the time that education was governed by the English language, in 1896, the population of native Hawaiians numbered 31,019, still representing the majority; this no doubt shaped the linguistic environment.

Roberts (1995:28-29) reports that PH was still strong and heavily used throughout the rural areas and plantations, despite the enforcement of the Language Act and increased use of English. The native Hawaiian population started to decline and other immigrants started to arrive. According to Roberts, (2004:266-269), the replacement of Hawaiian and Chinese laborers with Japanese and Filipino workers could have instigated the switch from one version of Hawai'i Pidgin English (HPE) to another. I suggest that due to the increased English use, as well as the preference English was given in schools, ignited the relexification of HCE.

Around the time that HCE was stabilizing, the Portuguese and Chinese influence along with the total population of Hawaii including more immigrant groups, was increasing steadily. Siegel (2000:203) maintains that the two most dominating substrate languages at the time of the stabilization of HCE were that of Portuguese and Cantonese. Of the two, Siegel places more importance on Portuguese as having the most influence on HCE because during the stabilization,

the Portuguese local born population represented the highest among immigrant populations. (Siegel 2000: 203).

**Figure 1.4 1930 Census in Hawaii**



In Figure 1.4, it is easy to see the diversity of people living in Hawai‘i in 1930. At this time HCE had already stabilized. Japanese immigrants made up the majority group at 37% of the population, and with the increased population came Japanese influence on HCE. This is reflected in some lexical items found in HCE, such as *boro boro* for dirty clothes as well as others (Sakoda and Siegel, 2004: 739).

As can be seen in Figures 1.2 and 1.3, the Hawaiian native population was robust in the early stages of Pidgin Hawaiian. In fact, Chinese, Portuguese, Americans, and Hawaiians used PH to communicate with each other from the beginning of the whaling trade through the plantation days. English taught schools were enforced in 1896, but more so on O‘ahu, in the more industrialized, urban areas. PH was reported to be spoken well into the 1900s and even as late at 1960 in the rural areas (Roberts, 1995:5). Portuguese immigrant numbers were not recorded until 1872 and Chinese numbers did not substantially increase until 1878. While

Portuguese and Chinese populations made a syntactic and lexical impact on HCE, as suggested by Siegel (2000), I suggest that the initial linguistic imprint from Hawaiian that shaped the intonation of PH and was carried to HCE, had already made its mark before Portuguese and Chinese influence and I will support this claim in the following chapters. Hawaiian also made a lasting impression on the syntactic structure of HCE (i.e. broke his car, cute the baby), as well as still providing many lexical items to current HCE. According to Siegel and Sakoda (2004:737), there are over 100 Hawaiian words in use representing the largest number among the substrate languages contributing to HCE (only second to English lexical items). While it is clear that other languages influenced the development of HCE, Siegel (2000:203) suggest that Hawaiian did not have a substantial influence on HCE due to the decline of the Hawaiian population during the stabilization of HCE. Likewise, Roberts (1998:35) shares the same claim that Portuguese and Chinese speakers (locally born), shaped the development of HCE.

However, Roberts' archival research tackles the debate as to the development of HCE, the dominance of the Hawaiian language in Hawaiian Pidgin, and its lingering impact on interethnic communication after 1896 (Language Act). In fact, even with the popularity of English in the urban areas, it was HPE and then HCE that Hawaiians and other immigrants on the plantations and rural areas began to speak, instead of the more Standard English variety used in the city. Thus language became a social barrier that divided town and country.

The contribution of my study is to shed light on a complicated linguistic history of Hawai'i and to attest to the impact that Hawaiian had on interethnic communication across the Hawaiian Islands. Providing evidence as to the dominance of the Hawaiian language for communication only strengthens my claims that Hawaiian and HCE have a close bond.

## 1.6. The Language Act of 1896

As already mentioned, it was not until 1896 that English in schools was treated as a priority. In fact there was a movement to encourage English, which in turn discouraged the use of Hawaiian use. This movement led to the Language Act and was put into law in 1896. The following is the rhetoric used to communicate this law.

The English Language shall be the medium and basis of instruction in all public and private schools, provided that where it is desired that another language shall be taught in addition to the English language, such instruction may be authorized by the Department, either by its rules, the curriculum of the school, or by direct order in any particular instance. Any schools that shall not conform to the provisions of this section shall not be recognized by the Department. [Signed] June 8, 1896 Sanford B. Dole, President of the Republic of Hawai'i

English-speaking immigrants coming to Hawaii wanted their children to be taught in English. Portuguese immigrants shared this preference as well. Prior to this, schools were taught in Hawaiian, and English was taught as a foreign language (Siegel, 2000:202). As well, the English taught was influenced by Hawaiian or Part Hawaiian instructors. As summarized by Reinecke (1969:92):

The Portuguese came as families, and their children were placed in the English schools, where they at once began learning English instead of Hawaiian and carried their English into their homes. (Naturally it was English strongly tinged with the Hawaiianisms of their native schoolmates and often of Hawaiian or Part-Hawaiian schoolteachers.) The Portuguese, being white, rose to positions of trust more readily than did Orientals and soon occupied a disproportionately large number of positions as skilled laborers, lesser foremen, and even clerks, where they could issue orders - in broken English - to workmen of other nationalities.

### **1.7. Hawaiian Revitalization 1960s**

The Hawaiian language had a significant decline in use with the declination of population. In the 1960s, on the tides of civil rights and rising pride in heritage and Hawaiian roots, efforts began to take shape to revitalize the Hawaiian language. By the 1970s there were efforts of academic programs to be established in the University system in Hawai‘i.

As of 1978, Hawaiian was re-established as an official language in the state of Hawai‘i (Kawai‘ae‘a, et al. 2007:184). Hawaii has two official languages, Hawaiian and English. Even though there are only about 1,000 native speakers of Hawaiian, there are many more second language learners making efforts to maintain and encourage the growth of the Hawaiian language.

There are programs at the major universities in Hawaii developed for the teaching and learning of Hawaiian culture and language as well around 2,000 students from nearly two dozen schools are enrolled in Hawaiian immersion programs that offer preschool to 12 grade instruction (‘Aha Punana Leo, 2013). Hawaiian language is thriving in Hawaii, although the total number of native speakers is very low, the Hawaiian people are making great strides in nurturing the culture and language on the islands. In fact, according to US Census for years 2006-2008, the number of people reported to speak Hawaiian in the state of Hawaii was over 16,000 people (US Census, 2010).

### **1.8. Hawaiian Creole English Language Description**

I will specifically examine intonation in this research project, but at this time it is important for a brief summary of other aspects of the language in order to provide a broader perspective. At first

look, HCE may appear very much like Standard English due to English being its lexifier; however upon closer investigation, HCE is quite different.

The next subsections offer brief descriptions of HCE. While these subsections do not represent all features of HCE, the information I provide here contributes to a broader understanding of the language.

### ***1.8.1. Syntax***

While HCE exhibits standard English grammatical structure, it can, in some cases reflect Hawaiian syntax.

For example:

(2)

cute da baby. (HCE)

*nani ka pēpē.* (Hawaiian)

(3)

ono da malasadaz. (HCE)

In examples (2) and (3), the construct parallels that of Hawaiian and not of Mainland English.

These sentences are considered verbless and verbless sentences in HCE (as well as in Hawaiian, refer to section 1.3.1 ) can have the adjective first, followed by the noun.

As well, the following example is more consistent with Hawaiian verbless grammatical structure.

(4)

My sistah hia. (HCE)

My sister is here. (Mainland English)

(Siegel and Sakoda, 2003:78)

Another example that differs from that on the Mainland and which is quite common and influenced perhaps from Portuguese is the use of 'stay' derived from *estar* or 'to be'.

For example:

(5)

I stay hungry. (HCE)

I am hungry. (Mainland English)

(6)

Da book stay on top da table. (HCE)

The book is on the table. (Mainland English)

(7)

I stay half haole. (HCE)

I am half Caucasian (Mainland English)

In sentences to express past tense, HCE uses 'wen' before the verb.

(8)

What you wen do? (HCE)

What did you do? (Mainland English)

Future tense is expressed with 'goin' (going)

For example:

(9)

God goin do plenny good kine stuff fo him. (HCE)

(Da Jesus Story)

### 1.8.2. *Vocatives*

This feature can also be found in PH as well as HCE. As noted in *Ka Lei Ha‘Aheo: Beginning Hawaiian* (Hopkins, 1992:10): “We do this in pidgin English, as in “Eh, Jack, try come.” Most of us think this is just sloppy pronunciation of the English “hey,” but it is probably a direct borrowing from Hawaiian.” I mention this as an important similarity, supposedly taken from Hawaiian and something that is also documented in historical accounts from Roberts (1995).

### 1.8.3. *Phonological inventory*

In Table 1.2 is the vowel system for HCE as documented by Sakoda and Siegel (2004: 222-225).

**Table 1.2 Phonological System for HCE**

Vowel	Basilectal	Mesolectal	Vowel	Basilectal	Mesolectal
FIT [KIT]	lax [i]	[i]	PRICE	[aɪ]	[aɪ]
DRESS	[æ̃], [ɛ]	[ɛ], [æ̃]	CHOICE	[oɪ], [ɔɪ]	[oɪ], [ɔɪ]
TRAP	[æ̃]	[æ̃], [æ]	MOUTH	[aʊ]	[aʊ]
LOT	[ɔ]	[ɔ], [ɑ], [ɒ]	NEAR	[iɑ]	[iɑ], [i·]
STUFF	[ɑ], [ʌ]	[ɑ], [ʌ]	SQUARE	[eɑ]	[eɑ], [i·]
FOOT	Lax [u]	[ʊ]	START	[ɑ]	[ɑ], [ɑ·]
ASK	[æ̃]	[æ̃], [æ]	NORTH	[ɔ], [o]	[ɔ], [o·]
NURSE	[ɜ̃]	[ɜ̃]	FORCE	[ɔ], [o]	[ɔ], [o·]
LEAVE [FLEECE]	Lax [i]	[i] ; [ij]	CURE	[ʊɑ]	[ʊɑ], [u·]
FACE	[eɪ], [e]	[eɪ], [e]	happY	[i]	[i]
PALM	[ɑ]	[ɑ]	lettER	[ɑ]	[ɑ], [ə·]
THOUGHT	[ɔ]	[ɔ], [ɒ]	horsES	[e]	[e], [ə], [i]
GOAT	[oʊ], [o]	[oʊ], [o]	commA	[ɑ]	[ɑ], [ə]
GOOSE	Lax [u]	[u]			

In HCE, the term basilectal refers to the variation of the creole which is the most creole-like, or the furthest from the target language or lexifier. The term, mesolectal refers to a variation of the creole which is closer to the target language. It appears in general that the basilectal version of the pidgin has less variation within the vowels themselves than the mesolectal form.

However, in some cases, through recent research, HCE speakers have merged /ɑ/ and /ʌ/, which means that the vowels found in cut and cot are homonyms and are different than the vowel in caught (Sakoda and Siegel 2008:225).

In HCE, which is considered a non-rhotic language and there are no non-prevocalic [r]-colored vowels with the exception of /ɜ:/ as in nurse (Sakoda and Siegel 2004: 222-223). For example, the word “letter” and “sister” end up sounding like, “letta” and “sista”.

The consonant system of HCE is similar to that of Mainland English, however, the glottal stop, or ‘okina can be found (from the Hawaiian consonant system), especially in Hawaiian loanwords. In addition, HCE does not use interdental fricatives, /ð/ and /θ/, which means that the word “with” is pronounced [wit] and the word “that” is then pronounced [dæʔ] (Drager, 2012:66). Moreover, alveolar stops are palatalized before /r/ in HCE (as they are for some speakers of Mainland English), so that “three”, “tree”, and “dry” are pronounced [tʃi:ɪ], [tʃi:ɪ], and [dʒɪɪ] (Drager, 2012:66).

#### 1.8.4. Word Stress

HCE also places stress differently than Mainland English at the word level. Notice the following words and where HCE places stress compared to Mainland English. I have indicated the stressed syllable by using **bold** text for easy identification.

**Table 1.3 Word Stress in HCE**

HCE Word Stress	Mainland Word Stress
hurri <b>CANE</b>	<b>HURR</b> icane
weed <b>WH</b> ackers	<b>WEED</b> whackers
gradu <b>ATED</b>	<b>GRAD</b> uated
town <b>HOUSE</b>	<b>TOWN</b> house
chicken <b>FIGHT</b>	<b>CHICKEN</b> fight
overcast	<b>OVER</b> cast
molo <b>KAI</b>	<b>MOL</b> okai
stomping <b>GROUND</b> S	<b>STOMP</b> ing grounds
head <b>REST</b>	<b>HEAD</b> rest
china <b>TOWN</b>	<b>CHINA</b> town
trauma <b>TIZE</b>	<b>TRAUMA</b> tize
pro <b>TEST</b>	<b>PRO</b> test
dis <b>COUNT</b>	<b>DIS</b> count

#### 1.8.5. Lexicon

The lexicon of Hawaii Creole English contains words from many different languages due to its historical development as outlined in Chapter One. A sample of common words used in HCE is

below with the origin identified on the right. Even when the word in HCE looks of English origin, the word used in HCE has changed from what is commonly used in Mainland English.

(adapted from Sakoda and Siegel, 2004: 739)

**Table 1.4 HCE Lexicon**

<b>HCE WORD</b>	<b>MEANING</b>	<b>ORIGIN</b>
<b>Akamai</b>	Smart	Hawaiian
<b>Haole</b>	Foreigner, Caucasian	Hawaiian
<b>Huli huli</b>	To turn, to flip over	Hawaiian
<b>Keiki</b>	Child	Hawaiian
<b>Moi moi</b>	Sleep	Hawaiian
<b>Ono</b>	Delicious	Hawaiian
<b>Puka</b>	Hole	Hawaiian
<b>Kane</b>	Man	Hawaiian
<b>Wahine</b>	Woman	Hawaiian
<b>Kaukau</b>	Eat	Chinese
<b>Malasada</b>	Doughnut	Portuguese
<b>Tako</b>	Octopus	Japanese
<b>Boroboro</b>	Tattered clothes	Japanese
<b>Shishi</b>	Urinate	Japanese
<b>Before time</b>	Long time ago	English
<b>Choke</b>	A lot	English
<b>Broke da mout</b>	Delicious	English

### 1.8.6. *New Word Compounds and Expressions*

Also found in HCE are words that are combinations of English and other substrate language influences to create new words in the HCE lexicon. Below are a list of a few of the more common ones.

**Table 1.5 HCE Expressions**

<b>Word</b>	<b>Meaning</b>
<b>Haolefied</b>	To become like a Caucasian person, 'haole' in Hawaiian meaning Caucasian
<b>Onolicious</b>	Combination of 'ono' for delicious in Hawaiian and delicious
<b>Poi dog</b>	Mixed breed island dog, from Hawaiian word, 'poi' for pounded taro
<b>Chawan cut</b>	Japanese word for rice bowl is 'chawan' and this expression is to mean, a haircut that looks like an inverted rice bowl.

(adapted from Sakoda and Siegel, 2004: 739)

### 1.9. **Is Pidgin that Different from Mainland English?**

Although English lexified, the history of Pidgin was closely tied with that of the Hawaiian language. Other languages such as Japanese and Chinese contributed to the development of Pidgin as well. This is apparent in the example below of a reconstructed dialogue written by Hawaiian scholar Larry Kimura. This dialogue is between a Japanese grandmother and a

Hawaiian grandmother. I also provide additional examples taken from a variety of sources in the following subsections to highlight the differences of HCE from Mainland English.

### ***1.9.1. Hawaiian Words in HCE***

The following text is titled, “Pololei You Speak Me” written by Larry Kimura, which is a reconstruction of Hawaiian and Japanese grandmothers representing plantation era Pidgin. In this dialogue, the term *Baban*= Japanese Grandmother and the term *Tutu*= Hawaiian Grandmother. I have bolded the Hawaiian words for easier identification. This dialogue provides an example of the extensive use of Hawaiian in plantation era Pidgin.

Tutu: Mama you **Pu‘uwa‘awa‘a mamua** stopu. Me all time look see you on top wagon go **Haina hale. Nani hanahana ka?**

Baban: Me **hale** makeku clean, clothes washu, kaukau **hanahana**, ol same any kind me **hanahana. Haina ma hale** too muchi nice. No ol same now.

Tutu: **Pololei** you speak me. Me too muchi **minamina. Mamua pua** any kind aru. Boss man **hanahana** man guru keep.

Baban: Bumbai me **Waimea** come. **Kane male. Pepe** too muchi keepu. You ol same pah?

Tutu: **Pepe** too muchi aru. Mama **‘opiopio**, papa **‘opiopio, pepe** too muchi **hanahana. Ol** same now too muchi **mo‘opuna** aru.

Baban: Ah now me buta keep. Kaukau any kind aru. **Honohono**, pipinola kaukau me **hanahana. Bumbai Kahaipuna** him **laho** bring buta **nui** aru. You like **keiki** me **makana** you.

Tutu: Me no like. You keep. Bumbai **laulau, kalua hanahana.**

Baban: Me no like **lili** time. Too muchi **pilikia**. All time **pa** him **hemo** outside come. **Lepo** any kind him make. Me **mahi‘ai** too muchi **poho.**

Tutu: Mama, you **nui hanahana** no guru. **Ho‘omaha** more beta.

Baban: Ah, bumbai **makule** more fastu come. **Wawae lolo** ol same. Me **hale** inside top no can. Outside **ho hana** more beta.

Tutu: Ah, mama, you **makule** me **makule** old same. You look see me. Me look see you.  
**Kamali'i** come, **kamali'i** go. Bumbai **makule** come, **like pu**. **Aloha no**.

Take note of the many Hawaiian words used in this dialogue. Assuming that this is an accurate representation of HCE used during the plantation era, the amount of Hawaiian words in the dialogue is quite significant, providing additional support to Roberts' (1995) claims of Hawaiian's strong influence on HCE.

### ***1.9.2. Lee Tonouchi "Da Pidgin Guerilla"***

Although, Pidgin or HCE was relexified from Hawaiian to English, the Pidgin we see and hear today is still very different from Mainland English. One advocate for the use of Pidgin is Lee Tonouchi. He is known as "da Pidgin Guerilla" and has written plays and poetry in Pidgin, his first language. The excerpt below was written by Tonouchi and called *Da State of Pidgin Address*, (Tonouchi, 2004:75-82). The purpose of presenting this work by Tonouchi, is to provide a more modern text of HCE to make comparisons to older HCE (as seen above in *Pololei You Speak Me*) and to take note of how a more modern version of HCE differs from Mainland English.

Try look dis concrete poem "Test Your Pidgin P.O.V.": NO CAN  
I wuz inspired for write dis piece aftah I saw Joe Balaz's Hawaiian Concrete

Poetry series on display.1 One time I wen fo' check out Joe at one of his readings and It oll 'em "Joe brah, your concrete poems, dey pretty SOLID." He go laugh. So den I wen ax 'em, "Eh, you eva tot about making one Pidgin Concrete series o' wot?" And he tot about 'em fo' awhile den he wuz all like "Eh Lee, YOU should go try." So I wuz tinkin shooots, I go chance 'em.

Now, wen you look at "Test Your Pidgin P.O.V." tell me wot you guys see? Wot?! Oooo, so much negativity brah; no can.

I use dis poem wen I go around for talk to classrooms, public, private, intermediate school, high school, college, anykine, and das da first answer dat students usually give

me too—NO CAN. So many Pidgin pessimists. Can you come up wit one more positive way of looking at dis piece o'wot? Try tink.

Right on. Ho, you get 'em. Das how. We get ONE Pidgin optimist in da house.

I like dis piece, not only cuz I wrote 'em, but cuz da ting mirrors actual life. We's brought up for believe dat we cannot do certain tings if we talk Pidgin. So ass why upon da initial examination, da negative reading is wot most people arrive at first.

In da real world get plenny Pidgin prejudice, ah. Dey, da ubiquitous dey, dey is everywea brah; dey say dat da perception is dat da Standard English talker is going automatically be perceive fo' be mo' intelligent than da Pidgin talker regardless wot

dey talking, jus from HOW dey talking. Get studies dat show dis kine speech biases and discriminations, but I no need really look da studies, cuz I can see dis happening insai my classrooms.

The above text exhibits the use of many lexical items associated with Pidgin, e.g. “plenny” for “plenty” and “dey” instead of “they”, also missing copula and some prepositions. When reading the text, it is easy to identify that it is different than Mainland English. The poem Lee describes in the piece of writing above is called NO CAN, which he wrote to help change negative views with regards to Pidgin. He mentions that people think if they speak Pidgin they ‘no can get a good job’ and they ‘no can work on the Mainland’.

I have spoken to Lee and interviewed him with audio and video recordings. I can attest that this writing example is exactly as he speaks. The reason I selected this particular text is to show Pidgin used in creative writing as well as to highlight the language attitudes with regards to Pidgin, attested by a Pidgin speaker. I will discuss language identity and attitudes in Section 1.11.

### **1.9.3. HCE on Facebook**

Another demonstration of the how the grammar differs is found on the public Facebook group, *You know you from Hawai'i when:*

- You can recognize that Hawai‘i "accent" immediately and be like ho, sup, wat part u from?
- When we never know pear in Hawai‘i was called avocado n we never have to go store to buy it. And never know we could eat it any other way then mash it with sugar...
- When way before food trucks if u go chicken fight get the van that sell halo-halo, rice cake, Okinawan donut, Filipino kine dessert, u guys remember
- You know you from Hawaii...when you walking in one crowd of haoles and one of um bump into you and no say excuse me... You loudly scream... Eh what you don't know how for say excuse me...

I highlight these examples from Facebook to show the use of HCE in current social media and to show that HCE has different structure than Mainland English.

The reason that these comparisons are important to make is that HCE is not a dialect of Mainland English, and it is not a “broken” language, but a fully formed language with rules like other fully formed languages. Another reason I provide these modern HCE texts is to show that HCE is alive and well and is in use in many different linguistic environments.

### **1.10. Code Switching and Code Mixing**

Not to be confused with the term Hawai‘i Creole English, Hawai‘i English is a variety of English spoken in Hawaii. It is apparent that when speaking Pidgin in a familiar setting and then having to speak a more Mainland English register, a Pidgin speaker would need to perform code switching by using a more Mainland English intonation and perhaps drop a number of lexical items and expressions that are common in Pidgin. Meyerhoff (2013:115-119) discusses decision trees of college students who speak Pidgin. These decision trees indicate in a flow-chart fashion

what determines whether the speaker selects Mainland (Standard) English or Pidgin to use. In each tree, it is clear that Pidgin is the preferred language with peers and family and others who speak Pidgin, and also preferred in casual situations as opposed to formal ones. Meyerhoff also discusses code mixing and indicates, “there can be a lot of mixing codes during a single exchange or even within a single speaker’s turn” (Meyerhoff 2013:120). It seems that the Hawai’i English used locally in the Hawaiian Islands makes use of code mixing of Mainland English and Pidgin whereby elements of Pidgin are used such as the intonation, the deletion of the post-vocalic /r/, as well as stress pattern shift, however the Hawai’i English speaker may not use all the lexical items used by the Pidgin speaker, such as the vocative, “brah” (Cook 2011:32-36). Also, vowel quality differs from Pidgin speakers to Hawai’i English speakers (cf. Cook, 2011:32). Cook does not think of Hawai’i English as a decreolized version of HCE, or Pidgin, but of a variety of Mainland English that used Mainland English as the target language, but was influenced by HCE and perhaps due to geographic isolation retained HCE features rather than merge with the Mainland variety (Cook 2011:32-36). In short, Hawai’i English, while exhibiting many common features of Pidgin, is not a decreolized version of Pidgin, but rather a Pidgin-tinged English.

Before moving on to more specifics on intonation and theories of creole genesis, I would like to clarify, at this time that this thesis is investigating primarily two languages, Hawaiian and Hawai’i Creole English, which is also referred to by locals as Pidgin in the Hawaiian Islands. I have provided such necessary background in this section mentioning languages such as Pidgin Hawaiian, which was a language used in the development of HCE or Pidgin and Hawaii Pidgin English which was the English-lexified pidgin used also in the development of HCE. I have also briefly discussed a variety of English used in Hawaii, which is called Hawai’i English.

### **1.11. Language Attitudes in Hawai‘i**

As mentioned, I entered this research quite naïve about the complexities of Hawai‘i’s linguistic landscape. Yes, I had read about how it came to be and what languages contributed to it, but I did not thoroughly understand attitudes towards the language—good or bad. I did not know about the near extinction of Hawaiian due to the preference for English in schools. I also did not know about how in 1987, Pidgin was almost banned altogether from being used or allowed in schools. As I became more exposed to these aspects, it deepened my view of Hawai‘i, Hawaiian culture, as well as Pidgin and the local culture that surrounds it. I have seen first-hand, the passion that the people in Hawai‘i have for their language, culture, and identity.

Language is organic, it’s living; it has history. It changes, evolves, follows paths and diverges like a stream. People feel passionate about their language; it is a part of their identity. Some people in Hawaii feel that Pidgin is a broken language, that it’s not ‘good English’ and those who speak it sound illiterate. There are others who are proud of speaking Pidgin. It is part of the local culture and it is one of the things that separate Hawaii from the Mainland states. In the 1960s and 1970s there was a movement for Hawaiians to embrace their roots and with that movement came the revitalization of the Hawaiian language (‘Aha Punana Leo 2013). Hawaiians embracing their heritage and language meant that, for some, Pidgin was polluting the purity.

Some Hawaiians also feel Pidgin is not a language worth speaking. In some of my contacts with Hawaiians, I began by explaining my project as being a comparison of HCE (“Pidgin”) and Hawaiian intonation. They responded to my request that they do not speak Pidgin and there really isn’t anything to write about it. Other Hawaiians feel that Pidgin and Hawaiian

share a history in Hawai'i. They also believe that studying Pidgin and embracing Pidgin is also important in order to completely represent the history of Hawai'i. Without including Pidgin, the history is incomplete.

This dissertation has been a journey into the historical, phonological, and sociolinguistic aspects of Hawai'i. At this point I would like to take a slight detour and express my journey as it has personally impacted me. As I mentioned above, I started researching this topic, through innocent eyes, until I began contacting speakers and learning about the language attitudes and history. I have been lucky to find speakers who are willing to help me and to share what they know, but I am also grateful for learning the entire story and for having a better understanding of the languages of Hawai'i. As I continue to study and compare the intonation of HCE and Hawaiian, I can hear more than just the intonation or see the rises and falls through pitch analysis. I can hear the love for the land and the culture through each person's words. Whether an HCE speaker or a Hawaiian speaker, each has a special framework from which they view the world. Hawaii is a beautiful complex land and for those who leave it to travel to other places, whether it is to the Mainland US or to other countries, their language travels with them as they share it with others, reminding themselves where they come from and who they are.

So as rewarding as it has been to analyze the rises and falls of HCE and Hawaiian intonation in yes/no questions, it has been just as rewarding if not more so to take this journey to discover the humanity behind these two languages, to conduct field work and make friends. Analyzing intonation patterns on a computer has been revealed the similarities between these two languages, but the research it took to gather the audio files to do the analysis has enlightened me. I've learned about what it was like to grow up in Hawaii through many different eyes over several decades. The journey has showed me the melodies of the Hawaiian Islands, music that I

have come to respect and love. However, not all people love HCE and this attitude was apparent when I began my research.

### ***1.11.1. Pidgin Stigmatized***

Although speaking HCE or Pidgin as it is referred to in Hawai‘i, is one major identifier of someone who lives in or is from Hawaii, it is not the only one and some people do not embrace HCE. Some people view HCE as a “broken language” and one that makes speakers sound unintelligent. In an interview between Katie Drager (University of Hawai‘i) and a Pidgin speaker, the speaker states:

“To me, when I hear it being spoke, sound kinda stupid” (for more information on these interviews, see Section 6.2).

This statement sums up what is ever present in Hawaii, the view that speaking Pidgin is speaking in an unintelligent way. Speaking “proper”, which means to speak the standard dialect of English from the Mainland states is what is desirable to obtain a good job or to be able to communicate effectively. This attitude that Pidgin is inferior was born from years of Hawaii’s linguistic landscape being shaped from the distribution of wealth and privilege from upper-class English speaking Caucasians and the fact that Pidgin English was spoken by the working class. As Kawamoto explains, “This stereotype continues to be present, and the current friction between Pidgin English proponents and opponents has its roots in Hawaii social inequalities” (Kawamoto 1993:201).

This view is quite common by people living in Hawaii, although there are others who support the study and promotion of HCE. Lee Tonouchi is one of these Pidgin advocates who is a creative writer, who writes and directs plays in Pidgin and who teaches classes such as Pidgin

Literature. He has taught at University of Hawaii (UH), Kapiolani Community College (KCC) and Hawaii Pacific University (HPU). Lee wrote his entire MA thesis in Pidgin, interviews for jobs using Pidgin and also writes letters of recommendation for students in Pidgin. He is known in Hawai‘i as “Da Pidgin Guerilla” and does what he can to advocate the use of Pidgin. I have interviewed Lee and had the opportunity to sit in his Pidgin Literature class at HPU. Another supporter of HCE is Kent Sakoda, who I also had a chance to interview and to become friends with. Kent and Lee have been great supporters of my research, helping out when they can.

As mentioned, HCE is supported by many, yet not embraced by some Hawaiians. While trying to recruit Hawaiian speakers for my research, I contacted a woman from a hula studio who I thought may speak Hawaiian. I provided the speaker with brief details of my project asking if she might be interested in helping me out. She indicated that Hawaiian has been their language since the beginning of their culture and that she did not wish to participate nor did she think most Hawaiians would. She described Pidgin as (text formatting maintained from original correspondence), “mispronounced words over the centuries by all of the different nationalities that have come to live here ALL THEIR LIVES!!! Japanese, Chinese, Portuguese, Spanish were some of the first field workers to come. THAT’S IT, no real scientific formula, just broken mispronunciation of Hawaiian and English words. You will not find many language people that will be willing to help, but I hope for you the best.”

### ***1.11.2. Pidgin Support***

Despite the attitudes towards the use of Pidgin, to speak Pidgin is to sound “local” and to many people who live in the Hawaiian Islands, speaking Pidgin identifies them as being “local” or *kama‘ aina*, separating them from the tourists who come from the Mainland. There is a great

pride found in the people living in Hawaii, feeling part of the Hawaiian spirit, even if not of Hawaiian descent. Living *aloha* (love) and showing *aloha* to others is a binding element for people living in the Hawaiian Islands. However, the language of so many hasn't been given *aloha* through the ages, in fact it has gone through disfavor especially in the education environment.

A newspaper article, *Hawaii debates classroom pidgin*, (1999) illustrates the opinions of Board of Education members trying to ban Pidgin in schools. In September of that year, an assessment was done and found that 72% of eighth grade students in Hawai'i were performing at or above basic achievement levels in writing. This compared to 83% nationwide. A quote from the newspaper article shows how school leaders placed the blame on the use of Pidgin.

"If you speak pidgin, then you think pidgin, and you write pidgin," states Mitsugi Nakashima, Board of Education chairman. He continues with, "If your thinking is not in Standard English, it's hard for you to write in Standard English."

In response to the debate over the ban to use of Pidgin, which erupted from the lower proficiency scores found in Hawai'i (based on Standard English tests), the Pidgin advocate group called, Da Pidgin Coup wrote a position paper called *Pidgin and Education*, in 1999. The following are key points taken directly from the paper, reproduced here to represent the linguistic compassion brought from Da Pidgin Coup about the use of Pidgin in schools.

**Pidgin and Education Position Paper, Da Pidgin Coup 1999**

- A. Pidgin is a language just as English is a language.
- B. All children come to school with a language, and that language should be accepted and never denigrated.

- C. Some children come to school with Pidgin. The language of these children deserves as much respect as any other language.
- D. No-one should be prevented from using Pidgin where it works in the learning process.
- E. While teachers should teach standard forms of English, in no way should learning English replace Pidgin.
- F. There's a fundamental difference between speaking and writing: most children learn to read and write when they come to school; all children can speak before they come to school.
- G. There are social advantages to being able to speak Pidgin, just as there are social advantages to being able to speak English.
- H. There's plenty of room for Pidgin and English to coexist peacefully and be mutually enriching.
- I. We recommend:
  - a. Language awareness seminars, classes or in-services for teachers, which include strategies for building on the home language, and for understanding language systems.
  - b. Language awareness programs for students to learn about the history and social functions of both Pidgin and English, and to discover ways in which Pidgin and English are different.
  - c. Research on the relationship between Pidgin and school success, and how to best build on the language that children come to school with in the achievement of school success.

Also, the following quote was taken from Da Pidgin Coup position paper about Pidgin and Education:

Given the value that Pidgin holds for its speakers and for the community as a whole, we should go beyond seeking mere tolerance in regard to its use and protection from discrimination for its speakers. We should in fact seek to provide a fostering environment that nurtures and appreciates the communicative skills that Hawaii's children bring with them to school. By recognizing and celebrating excellence in the use of Pidgin we

encourage the child to develop those skills further. There's plenty of room for Pidgin and English to coexist peacefully and form a symbiotic relationship in which the two are mutually enriching. Should we begin to move in this direction, school would certainly become a more positive experience for all concerned.

Pidgin is not going away, especially given the number of speakers at 600,000 out of a population of 1.3 million people in Hawaii (Drager 2012:1). Also, it is estimated at around 100,000 people living in the Mainland States who speak Pidgin. People still today speak and identify with Pidgin, even in a world made smaller and smaller through technology and social media. Also, with the abundance of television shows using standard English as heard from the Mainland United States people still speak Pidgin and embrace it as their identity. My point is that with an abundance of Standard English influence, Pidgin and local varieties of Hawaii English are still being embraced by many speakers as a solidarity, a “shaka” to being local to Hawai‘i (“shaka” being a hand sign used and recognized throughout the Islands, used as a signal in many ways, but one being of acknowledgement).

### **1.12. Conclusion**

Even with all the different attitudes towards Pidgin; acceptance or rejection, the language is a part of the history of Hawaii and has honored the Hawaiian language with maintaining the lexicon and prosody. No matter how the language is labeled, Pidgin, or HCE, or *Olelo Pa‘i ‘ai* in Hawaiian, which means “pounding taro language”, is staying. The language is not broken and doesn’t prevent children from learning and achieving goals in life. Advocates of the language and learning such as Jeff Siegel work towards making HCE a teaching tool to help kids learn. They can access HCE while learning Mainland English. These advocates of education don’t discourage the use, but encourage the duality.

I want to stress the importance of the close relationship Hawaiian and HCE have with each other.

I think that Marlene Booth said it best when, in her documentary she commented about how both languages help form the history of Hawaii.

All the people came together speak the language of Hawaii. Not the Hawaiian native language, but the language what used by all the peoples of Hawaii. There is pride in Native Hawaiian language and culture, but to say that HCE doesn't have a place in Hawaii would be telling only half the story of Hawaii.

(Pidgin: the Voice of Hawai'i)

## **Chapter 2: Intonation Transcriptions and Characteristics**

### **2.1. Introduction**

In the previous chapter, an overview of Hawaiian and HCE was provided so that the languages are properly introduced and characteristics and features found in these languages are represented before the theoretical frameworks are discussed. The current chapter discusses the foundations and theoretical frameworks surrounding prosodic study in order to view the intonation of these languages from the same framework. First, I will present an explanation of prosody and what must be considered when researching the intonation of Hawaiian and HCE.

### **2.2. Prosody**

What is prosody? Why is it important to speech? Although, it is perhaps not crucial to actual speech (people no doubt can speak without using intonation), however it is crucial to effective communication. Prosody is the melody and the rhythm overlaid on our communication. If we didn't use prosody, we would sound like robots. More importantly, if we did not use proper intonation, according to what is normal in our specific language in which we speak, we would be ineffective communicators and no doubt misunderstood. Take for example the simple matter of communicating a request or merely stating a comment. Questions and statements are often distinguished in languages with the use of intonation. Intonation provides meaning from form. We need intonation to help convey our messages, emotions, and requests. In Greek, the word prosody means, 'song set to music'. When listening to language, regardless of the language, it is easy to hear the melody of the language laid over the grammatical structure.

The term prosody encompasses intonation, which is the rise and fall of pitch (the perceived fundamental frequency of a sound). The linguistics term fundamental frequency ( $f_0$ ) refers to the rate at which the vocal cords vibrate to produce sound. For example, the faster the folds vibrate, the higher the pitch. The slower the folds vibrate, the lower the pitch. In a male speaker, the vocal folds tend to vibrate slower than in a female speaker, thus producing a lower overall tonal scale (cf. Ohala 1984:5). The differences between male and female pitch scales are perceptible intonational differences, which convey information about the physical attributes of a speaker. I will discuss this further in Section 2.3.

Emotions or feelings can also be conveyed through intonation. For example, if the speaker is excited, the pitch may rise and if the speaker is bored or tired, the pitch may fall. These emotional reflections are paralinguistic, meaning that while they inform of the physical state of a speaker, they do not change the grammaticality of the utterance. Intonation also serves other purposes such as marking a declarative statement or an interrogative (question). For languages that distinguish between declarative statements and interrogatives with contrasting intonation patterns rather than through syntactic variation or morphological cues, the contrasting intonation pattern can be the only cue in the language to differentiate between the two utterances. Intonation patterns also indicate whether or not a speaker has completed an utterance to provide mutual cooperation in turn taking as examined in pragmatics, as well as providing contrastive information signaling the focus or degrees of emphasis in an utterance.

The term prosody refers to the intonation as well as the rhythm, and the vocal stress in human speech, and provides an all-encompassing term. The prosodic elements of speech are described as suprasegmental features because they have an impact on all of the segments of the unit of speech, whether the unit is the syllable, word, phrase, or clause in the speech act. These

suprasegmental features are labeled with terms such as syllable length, tone, and stress. Stress is the relative force or loudness of syllables. Often, but not always, stressed syllables have a higher intonation level than unstressed syllables.

### **2.3. Biological Codes**

There is a generally accepted linguistic notion that the sound-meaning relationship is arbitrary, allowing for a great variety in sound combinations in languages, however suprasegmental tones commonly used to express interrogativity indicates the presence of sound symbolism (cf. Ohala 1997:1). This sound-meaning relationship, explained via biological codes is the focus of this section.

#### ***2.3.1 Frequency Code***

The frequency code as developed by Ohala (1983) and also incorporated by Gussenhoven (2002) in his three biological codes, which are the underlying motivators for the phonetic implementation of tones, is attributed to the physical properties of the vocal cords. The frequency code is described as attributing speaker information to the level (high or low) of pitch. Essentially, smaller vocal cords produce higher pitch while larger vocal cords produce lower pitch (Gussenhoven 2002:1) It seems to be an intuitive identifier and even young children instinctually interpret these biological codes. I asked my four-year old daughter, “What does a big dog sound like?” She barked, although her young voice is still high. I then asked her, “What does a small dog sound like?” Her voice got even higher to express the bark of a dog smaller than previous one. Physically, a smaller animal has a small voice apparatus that produces a higher pitch. The frequency code is then extended to this notion that a more diminutive creature

would produce a higher pitched sound and in return sound more submissive. Sounding more dominant and aggressive would entail the use of lower pitch. By being more submissive a metaphorical extension is also made that a person is uncertain. Politeness also is grouped into this extension as such that higher pitch equals uncertainty, politeness, and submissiveness in human interactions. Questions then would follow uncertainty and higher pitch would then signal them as such (Gussenhoven, 2002:1). On the converse, statements and certainty, including dominant behavior would be signaled by lower pitch. Frequency Code, thought to being innate to human speech, thus expresses cross-language similarities among the use of pitch to contrast questions, using high question intonation and statements, using low statement intonation (Gussenhoven 2002:1).

### ***2.3.2 Effort Code***

The Effort Code, as developed by Gussenhoven (2002), indicates that a higher excursion of effort will produce wider movements of intonation. For example, emotion and linguistic emphasis will produce more dramatic pitch movements. The Effort code would then predict that someone who is upset or excited would have higher highs producing wider movements. The Effort code could be interpreted to have different meanings, however, it is commonly used for emphasis or to place focus on a specific item in the utterance as to place prominence on it (cf. Hirschberg 2002).

### ***2.3.3 Production Code***

Another biological code which was developed by Gussenhoven (2002) is that of the production code which provides that a greater effort is placed at the beginning of an utterance when the subglottal pressure is higher. As the pressure lessens during the length of the utterance, the pitch

slopes downward, displaying declination. Gussenhoven (2002) claims that high endings indicate continuation of topic, while low endings indicate topic endings.

In summary, these biological codes are more paralinguistic in nature, but Gussenhoven (2004:83) claims that these codes have been grammaticalized and interpreted as “informational” in nature providing intonational meaning from paralinguistic cues, and that they are language specific in their implementation. I will discuss how these biological codes are implemented in Hawaiian and HCE in Section 9.5.

## **2.4. Melodies Perceived**

Now that the foundations of prosodic elements has been reviewed, I now shift the focus on the way in which we represent the melody in a language using transcriptions.

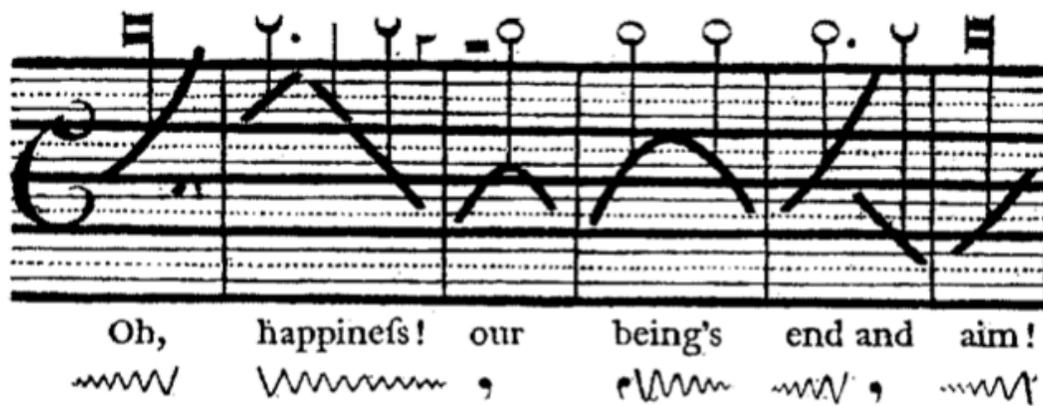
The published literature contains a variety of transcription systems used to document intonation patterns. The first transcription system I briefly mention used the musical scale to represent the rise and fall of pitch. This system was developed by Steele in 1775, and I mention it briefly to highlight the close link between music and intonation, as intonation is also called speech melody. I will then discuss more recent methods of representing intonation patterns, or speech melodies. In my research, I have used the software called Praat, which tracks pitch in audio recordings of speech in order to provide a visual of the pitch measured in Hz. Before such software was available, researchers documented intonation patterns in a variety of transcription systems. I review these systems and how they represent intonation the next section.

### **2.4.1 *Joshua Steele 1775***

One of the earliest representations of intonation provided by Joshua Steele in 1775, used musical conventions. The purpose of his essay, *An essay establishing the melody and measure of speech*

*to be expressed and perpetuated by peculiar symbols*, was to show, despite what was written at the time, that English changed tone in speech. Previous accounts discounted English intonation. Steele developed a way in which to document his intonation as he spoke, using a bass violin. As he spoke, he would make notation on the violin where his pitch movement would travel, up and down the fret board of the instrument. He would then mark this on paper and transfer these notes to a musical staff so that he could view the pitch movements, musically. Figure 2.1 shows his intonation representation.

**Figure 2.1 Joshua Steele Intonation Staff**



(Steele 1775:13)

The relevance of this study is to highlight the fact that language has musical qualities and as such, prosodic descriptions can be defined and labelled with common musical terminology (and vice versa). There have, in fact been studies of a possible relationship between an early form of language forming a so-called musilanguage, a common ancestor of language and music before they separated into different functions (cf. Brown 2000:274).

Joshua Steele's form of notation conveys the rise and fall of intonation and shows nuances of intonation represented in musical intervals. In order to offer a tool by which cross-

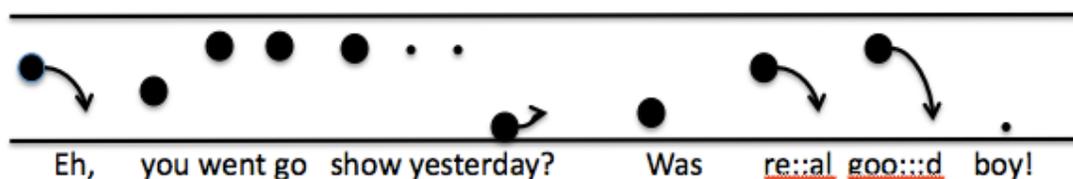




### 2.4.3 *Vanderslice and Pierson (1967)*

Vanderslice and Pierson (1967) use tadpole type illustrations to represent pitch rises and falls. In Figure 2.6, thicker tadpole heads represents stronger stress and smaller heads represent weaker stress. A falling tadpole tail shows the dramatic drop in pitch of HCE, which is referred to as Hawaiian American English (HAE) by Vanderslice and Pierson (1967).

**Figure 2.5 Transcription of HAE (Hawaiian American English)**

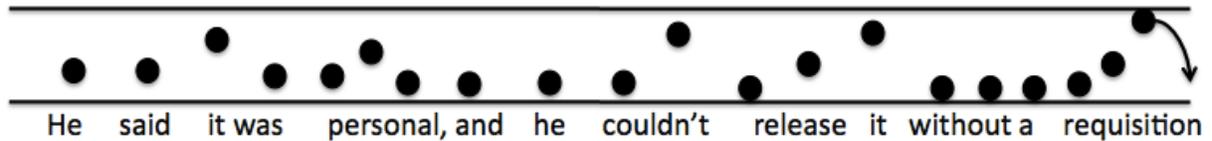


(adapted from Vanderslice and Pierson (1967:157))

Vanderslice and Pierson (1967) also point out the syllable-timed rhythm of HCE in Figure 2.6 contrasting against Mainland English in Figure 2.7. The HCE utterance demonstrates syllables that tend to have “equal prominence in terms of loudness and duration...” (Vanderslice and Pierson 1967: 157).

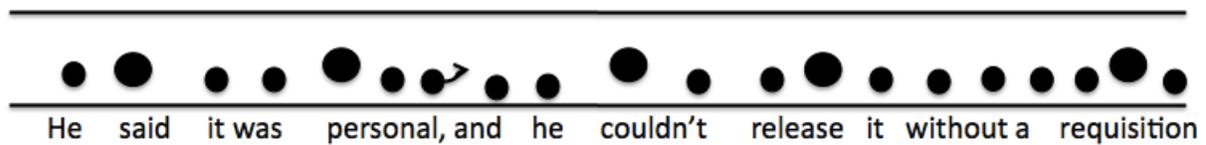
**Figure 2.6 Falling Continuation Intonation in HCE**

Hawaiian Creole English



(adapted from Vanderslice and Pierson 1967: 157)

**Figure 2.7 Mainland English Continuation Intonation**



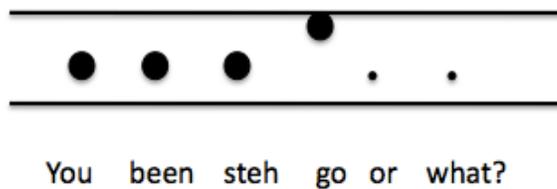
(adapted from Vanderslice and Pierson 1967: 157)

One difference between HCE and Standard English that Vanderslice and Pierson provide, that I have also noticed and have analyzed is found in the example above. In the example above, the longer utterance offers a point where the speaker is continuing with the utterance, using a continuation or listing intonation pattern. In the HCE utterance, note the word *personal*. In the HCE utterance, the word has a falling intonation pattern whereas the same word in the Standard English utterance has a rise indicating that the person has not finished speaking, but has more to say. HCE speakers use a continual falling tone to indicate the speaker has not completed the

utterance whereas the Standard English (Mainland English) speaker has a rising continuation pattern to indicate the utterance is not complete.

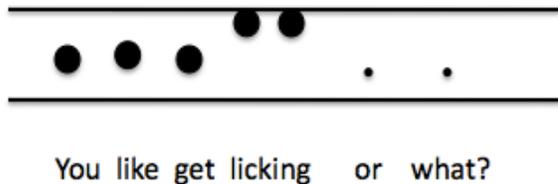
Another common use in HCE is typically added to yes/no questions with the tag, “or what”. Vanderslice and Pierson also make note of this in the HCE examples below.

**Figure 2.8 Yes/No Question Tag, Or What?**



(adapted from Vanderslice and Pierson, 1967: 165)

**Figure 2.9 Yes/No Question Tag “Or What?”**



(adapted from Vanderslice and Pierson, 1967: 165)

The tadpole notation shows a more gradient level of pitch, displaying a variation that using a more abstract system may eliminate. However, having varying thicknesses of tadpoles expresses the stress system of HCE while also providing a look at the height differences. Even in 1967, Vanderslice and Pierson pointed out that HCE prosody was neglected in terms of academic study, but they offer a rich look at the intonation of HCE at the time.

#### 2.4.4 Carr (1972)

Children using HCE in natural conversation are the focus of Carr's (1972) research. She transcribes an HCE conversation between two second generation Japanese boys living in Honolulu. She notes that their speech contains "sharply falling intonation at the ends of yes-no questions..." (Carr 1972:45). The figure below shows an excerpt from Carr's transcription, which uses arrows to indicate changes in pitch.

#### Figure 2.10 Carr (1972) HCE Falling Question Intonation

Boys A and B:

A: Ey, Marcus, wanna go show tonight? ↘▲

B: Show? →                      Where? ↘▲

(adapted from Carr 1972:45)

Carr notes that in General English (Mainland English) the yes/no question corresponding to the speaker A's question would be:

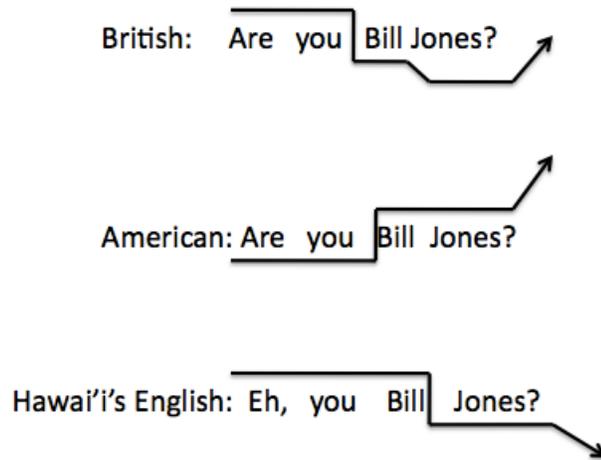
#### Figure 2.11 Carr (1972) General English Rising Question Intonation

Do you want to go to the show tonight? ↗

(adapted from Carr 1972:45)

Carr indicates that all reduced syllables of the sentence, which are not underlined are not included in the HCE utterance. Carr compares the same yes/no question in British, American, and Hawaiian Creole English. The Figure 2.11 below shows that the British and American English both have a final rising, while the HCE has a final falling pattern.

**Figure 2.12 Comparison of Question Intonation Contours (Carr, 1972)**



(adapted from Carr 1972:53)

While Carr's (1972) research reinforces the fact that HCE does not share intonation patterns with British English, and shows differences compared to Mainland English (referred to as General English and American in Carr's (1972) research), her use of lines and arrows does not quite convey the total picture of pitch accents. One example of the way this transcription system does not accurately depict the language is the way in which the pitch rises or falls; there seems to be an issue of alignment. For example, in the Hawai'i English example, the portion of the utterance starting with the vocative, "Eh", would have falling intonation. Also, in HCE (referred to as Hawai'i English in Carr's 1972 research) as I will explain further in Chapter Seven, has a steep fall on the last stressed syllable. Carr (1972) herself notes, "sharply falling intonation at the ends of yes-no questions..." (Carr 1972:45). Taking these items into consideration, I have created the following representation of HCE using Carr's (1972) transcription system.

**Figure 2.13 HCE Falling Question Intonation (Revised)**

Hawai'i's English: Eh,  you Bill Jones?

In Figure 2.13 I have taken the lines and arrows of Carr's (1972) transcription system and revised the alignment would more accurately represent HCE intonation in a yes/no question. I also would like to note that this particular way in which Carr has transcribed the intonation patterns does not accurately represent HCE's rise and dramatic fall. In Carr's (1972) transcription, the fall produces a flat representation where as in actual speech, the intonation would probably start rising and not falling to a lower pitch after the drop to "Jones" as Carr (1972) depicts. While this system mixes abstract and more detail, it still does not accurately represent the languages it is trying to compare. In review of several different intonation pattern transcription systems, it appears that there is need for one that better represents the intonation pattern for Hawaiian and HCE.

#### ***2.4.5 Autosegmental Metrical Theory***

In order to investigate in detail the influences of Hawaiian on HCE in terms of intonation, it is important to place Hawaiian and HCE into a framework that will best suit the process of comparison. The framework that I have chosen is that of Pierrehumbert's Autosegmental Metrical Theory (AM). I will also talk briefly about Ladd's arguments for a system that can provide a reliable theoretical framework in order to adequately assess intonation systems cross linguistically. Ladd has referred to the Autosegmental Metrical theory (AM) as providing "the basis for

describing pitch phonology in all languages in the same terms” (Ladd, 2008:156). For this reason I have chosen the AM approach to compare HCE, Hawaiian, and English in order to provide a coherent examination of these languages and to identify similarities and differences reliably.

Pierrehumbert’s AM intonation notation system represents a pitch contour through the use of pitch accents (marked with an asterisk) and edge tones or boundary tones (marked with the percentage sign). Pitch accents are represented through the use of a single H (high) or L (low) tone or a combination of the two. The stressed tone has an addition of an asterisk, i.e., H\* or L\*. The tones that occur after the pitch accent tone are considered trailing tones and are distinguished by using a raised hyphen, i.e. H<sup>ˉ</sup> or L<sup>ˉ</sup> (phrase accent as seen below).

Pierrehumbert’s model indicates that intonation patterns are made up of “one or more pitch accents followed by an obligatory phrase tone and an obligatory boundary tone.” (Ladd, 1996: 81). In Table 2.1 is an adaptation of Pierrehumbert’s Finite State Model, showing the full range of allowed intonational tunes in English (Pierrehumbert, 1980:99). The model illustrates the order of the targets for the boundary tones (marked with %), pitch accents (marked with \*), and phrase accents (marked with -) in English.

**Table 2.1 Pierrehumbert's (1980) Finite State Model**

Boundary Tone	Pitch Accents	Phrase Accent	Boundary Tone
<b>H%</b>	<b>H*</b>	<b>H-</b>	<b>H%</b>
<b>L%</b>	<b>L*</b>	<b>L-</b>	<b>L%</b>
	<b>L*+H-</b>		
	<b>L-+H*</b>		
	<b>H*+L</b>		
	<b>H-+L*</b>		
	<b>H*+H-</b>		

(adapted from Pierrehumbert, 1980:99)

For example, a typical yes/no Question intonation pattern for Mainland English (e.g. Are you Bill Jones?) would be H% (H\*) L\* H-H%. Most English utterances will start with the H% initial boundary tone; the first H\* is optional. The same question (Are you Bill Jones?) in HCE would be transcribed as, H% H\*+L L%.

Important to Pierrehumbert's approach to AM is the notion that the tone inventory is made up of pitch accents and boundary tones because target values are associated with stressed syllables and edges of a phrase. The advantage to this method of notation is that it can capture the same sequence of pitch accent and boundary over longer and shorter strings of words. To clarify, an utterance of a single word as well as a complex phrase can be described using this same method of notation.

I will use this version of the AM theory in my analysis of HCE and Hawaiian utterances. After comparing transcription systems used by others as presented in this section, I have determined that while there could be revisions (which I will explain in Chapter 8) to the AM theory and Tones and Breaks Indices (TOBI) framework, this system is somewhat better equipped to compare Hawaiian and HCE. One reason that the TOBI framework is useful when comparing intonation contours in Hawaiian and HCE is that it identifies similarities in the languages that need to be explored and more accurately expressed.

## **2.5. Intonation Universals in Questions**

Is there a universal question intonation? Phonologists such as Bolinger, Gussenhoven, and Ohala have made claims that intonation patterns are universal. Bolinger (1989:425) stated that in general declaratives have falling intonation patterns while interrogative or question intonation patterns have rising intonation patterns, as claimed in the Strong Universalist Hypothesis (SUH) in Bolinger (1978) as well this can be seen in Bolinger (1989:425) “It seems reasonable to say (and we can assume) that the unmarked intonation for yes/no questions is rising, while the marked intonation is falling. The reverse is true of wh questions.”

Cross-linguistically, the intonation of questions is frequently characterized by a sharp final rise in pitch (Haan, 2002:41) and more specifically, 70% of the world’s languages have rising intonation contours for questions and rising intonation for statements is quite rare (Gussenhoven, 2002:1). However there are languages that have falling question intonation providing evidence against the SUH. Of these languages, Hawaiian, Hungarian, Chickasaw, Neopolitan Italian and HCE, to name a few, have falling intonation which offer linguists a broader view of how question intonation is realized. Also, by not fitting into the common and

perhaps unmarked version in their use of question intonation, we can identify what could be the universal of question intonation.

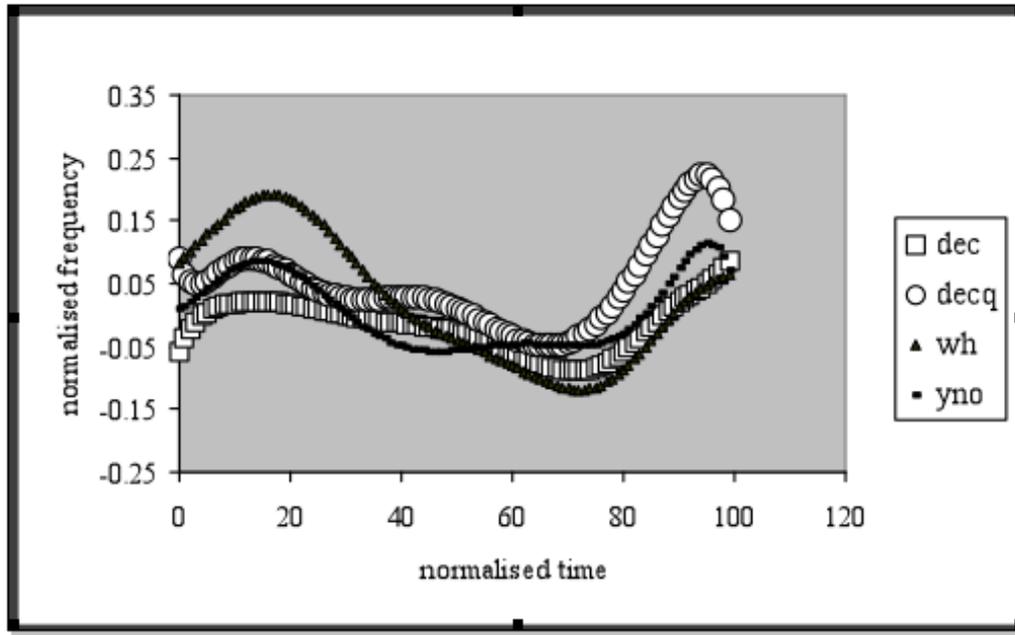
## **2.6. How do languages use intonation to convey questions?**

Overall it has been shown that rising intonation at the end of an utterance is a common strategy to indicate a question while falling question intonation is not as common. While the percentage above does not indicate what percentage of languages end questions with a high pitch vs. a low pitch, the statement is clear in that the cue that marks statements from questions is that of a high pitch. In some languages, the use of high pitch can be found at the beginning of the utterance, which is referred to as the “onset”. The onset height might be the most salient cue in some languages, may be a key factor producing categorical differences. Perhaps, instead of looking at the right edge of an utterance to identify typological differences (rising or falling intonation), we may find that more languages use higher onset pitch to signal questions. It would seem straightforward and efficient to present the question cue at the onset so that the intent is relayed as soon as possible, accentuating the need for information and cooperation in the conversation exchange between speaker and listener. Whatever the way in which languages phonetically implement the categorical distinction between questions and statements, it has been observed that all distinctions exhibit some kind of height difference. According to Haan (2002) this high pitch appears locally (only pertaining to the individual pitch), for example in the onset, mid-utterance or final position of the utterance. It can also be seen globally, as an overall higher pitch register spanning across the entire utterance. (cf. Bolinger 1982, Lindsey 1985, Geluykens 1986, Inkelas and Leben 1990). It can also be seen in the absence of  $f_0$  downtrend, which is commonly seen in statements.

## **2.7. A Closer Look**

As already mentioned, the final rise intonation is used in many of the world's languages, including English. Grabe's (2001) Intonational study of Variation in English (IVIE) spanning across nine dialects of English in the British Isles demonstrates that the way in which question intonation is implemented in a language can vary greatly over relatively short geographic distances. This suggests that although languages can appear quite similar, there can be striking variations in their prosody. For example, Belfast English, as well as Australian English, New Zealand English and Glasgow English have rising intonation with statements and questions. (cf. Grabe and Fletcher et al. 2003) This differs from English spoken in other locations, such as London or Leeds, also investigated by Grabe (2001).

Figure 2.14 Belfast English (Grabe et al. 2003:7)



When investigating a language which appears to have the same intonation in both questions and statements (as seen in Hawaiian in Fig. 2.2-2.4), the question arises as to what happens in the intonation to differentiate between statements and questions? From Figure 2.14 above taken from Grabe et al. (2003:7) the declarative (open square) starts (onset pitch) at a lower pitch than all the other question types. While all utterance types in Figure 2.14 in Belfast English follow a similar contour, there are differences found in the onsets. Also, the declarative question (a declarative posed as a question) has a higher final f0 compared to the other utterances. Onset height, as we see in Figure 2.14, is a type of distinction along with other cues is one way a language may differentiate between statements and questions.

## 2.8. Falling Question Intonation

Falling question intonation, while not as common as rising question intonation is found in several languages across the world, many of these being African languages (cf. Rialland, 2007), and others being Hungarian, Hawaiian, HCE, and Chickasaw. I will now provide a brief description of these languages so that a general comparison can be made of different phonetic implementations used for question intonation.

### 2.8.1 Hungarian

In Hungarian, the neutral location of the nuclear accent in a yes/no question is on the finite verb. While the finite verb has L\* associated with it, the question contour ends with a high-falling movement. An example of this is provided in Ladd (2008:82).

#### Figure 2.15 Hungarian Example of Falling Intonation

L\*      H L  
*Beszél a tanár*  
talks the teacher

(adapted from Ladd, 2008:82)

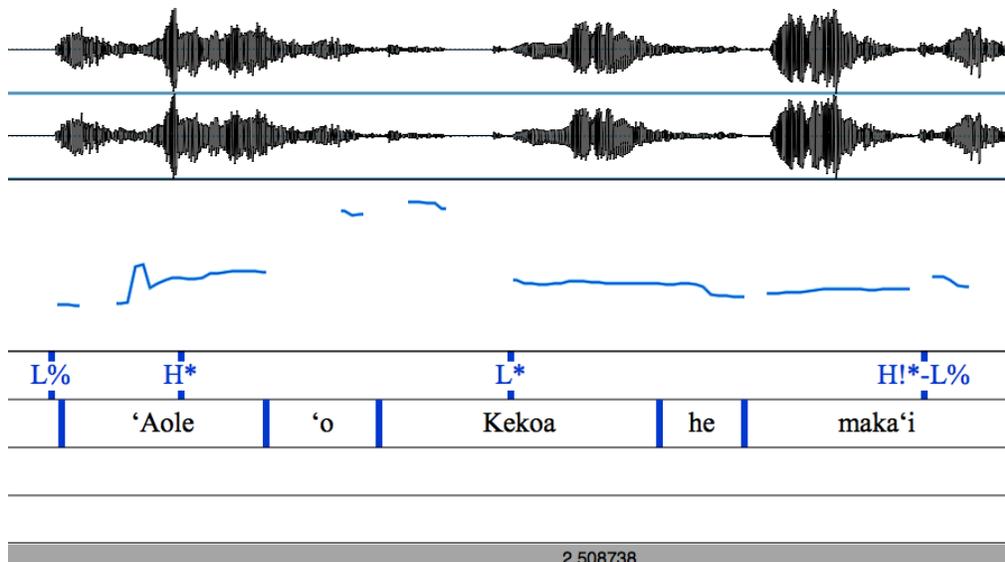
In Figure 2.15, the final word consists of two syllables. In this case the penultimate syllable has the H tone while the final syllable would have the L tone. If the final word were to consist of three syllables, the same pattern would occur as in the two syllable final word; the penultimate syllable would have the H tone while the final syllable would carry the L tone. This falling tone in Hungarian differs from other intonation patterns in European languages in that it has a different tonal sequence and ‘neutral’ accent is on the verb. (Ladd, 2008:82). Also, interestingly, if the last word of the utterance consists of only one syllable, the final L tone is

truncated so that the last tone is only the high tone, which means the utterance would have rising intonation. (Ladd, 1996:115-118).

### 2.8.2 Hawaiian

Hawaiian and HCE share the same strategies for differentiating statements and questions, which I will present in the following chapters of this dissertation. Previously I mentioned for Belfast English, it is a latitudinal variation in height that achieves the categorical distinction. For Hawaiian, a statement starts lower than a question, rising gradually (plateau appears to gradually rise) to the last stressed syllable and then falls over the remaining syllable or syllables. Questions start at a higher pitch and maintain a high plateau before peaking at the last stressed syllable and then falling dramatically over the last syllables of the question. So while questions and statements have a similar contour, the question contour starts higher, stays higher, peaks higher, resulting in a more dramatic fall.

**Figure 2.16 Hawaiian Statement**



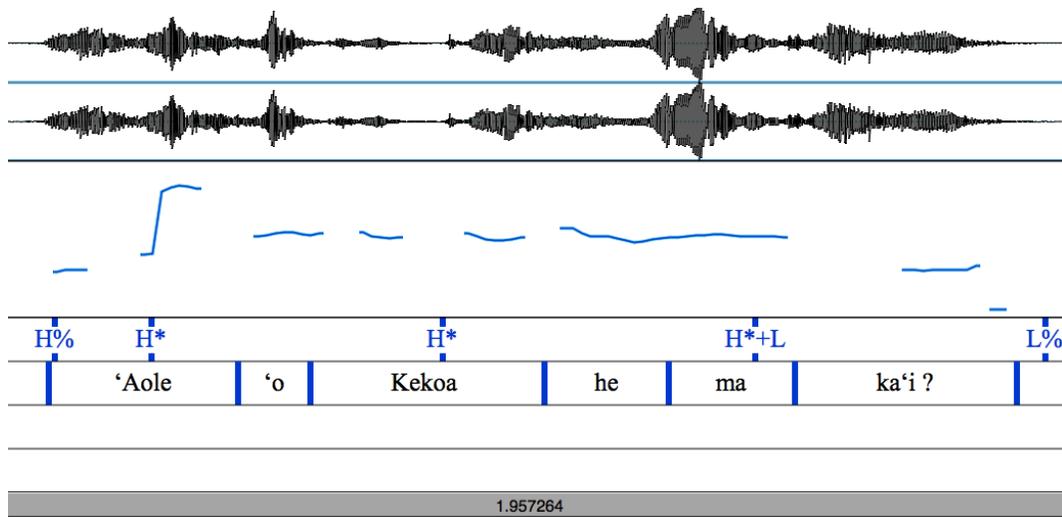
Hawaiian: 'Aole 'o Kekoa he maka'i.

English: Kekoa is not a police officer.

The Hawaiian statement from Fig. 2.16, starts at a lower pitch and carries a lower pitch tune throughout the utterance in comparison to the same sentence asked as a question, using question intonation.

The question in Hawaiian in Figure 2.17 shows a higher onset, followed by a higher tune carried throughout the utterance, followed by a fall.

**Figure 2.17 Hawaiian Negated Yes/No Question**



This falling intonation in questions will be explored more in chapters to follow. At this point I merely wanted to point out, in general, Hawaiian has falling question intonation.

### 2.8.3 Chickasaw

According to research done by Gordon (2005) on Chickasaw, the Chickasaw statement ends in a high boundary tone while a question ends in a low boundary tone. On further inspection, Gordon's work on Chickasaw reveals that Chickasaw statements start at a low pitch and questions start at a high pitch, demonstrating that the left edge of the utterances are consistent

with what I mentioned earlier about onset height signaling the difference between statement and question (regardless of the right edge falling or rising).

**Figure 2.18 Chickasaw Statement Intonation (Gordon, 2005:4)**

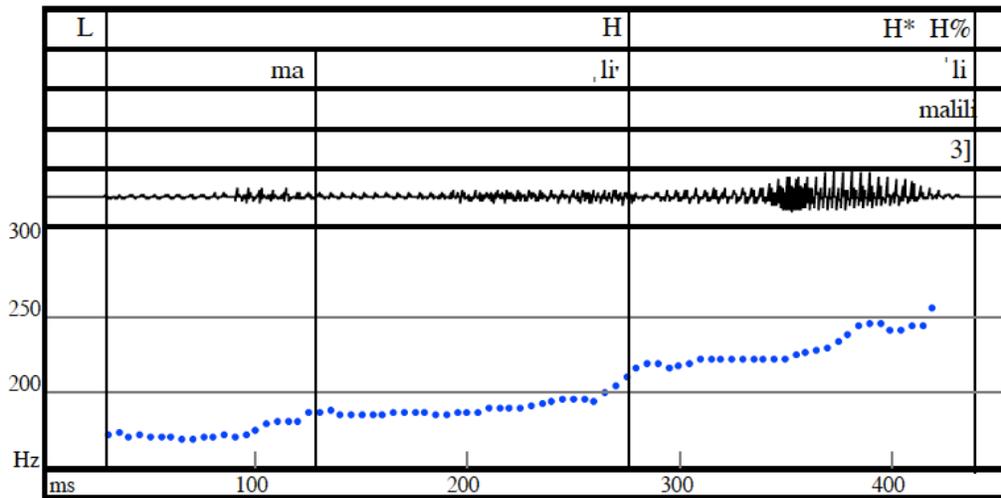
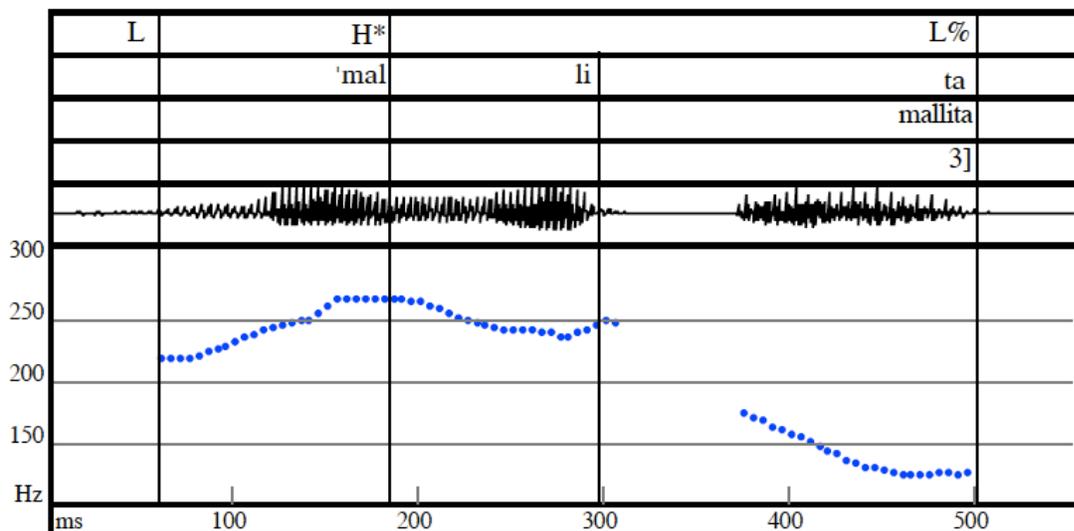


Figure 2.18 is an example taken from Gordon (2005:4) which shows a statement produced by a female speaker of Chickasaw (“Malili”, she/he runs). The statement starts low, below 200 Hz, perhaps around 175 Hz.

Thus, even though this Chickasaw statement is rising, the utterance starts at a low pitch. Figure 2.19 shows falling question intonation in Chickasaw spoken by a female question intonation (“Mallita?”, Does she/he jump?). The question onset starts much higher than Figure 2.18, estimated around 225 Hz. The peak is over 250 Hz on the stressed syllable.

**Figure 2.19 Chickasaw Question Intonation (Gordon, 2005:5)**



In summary, although Chickasaw has rising statements and falling questions, the onset of the utterance shows us that the statements starts low and the question starts high, still conforming to a type of Universal message that high pitch signals uncertainty and low pitch signals finality and certainty, yet still implemented in a less common manner (as compared to the overall preference for high rising question intonation in the world's languages).

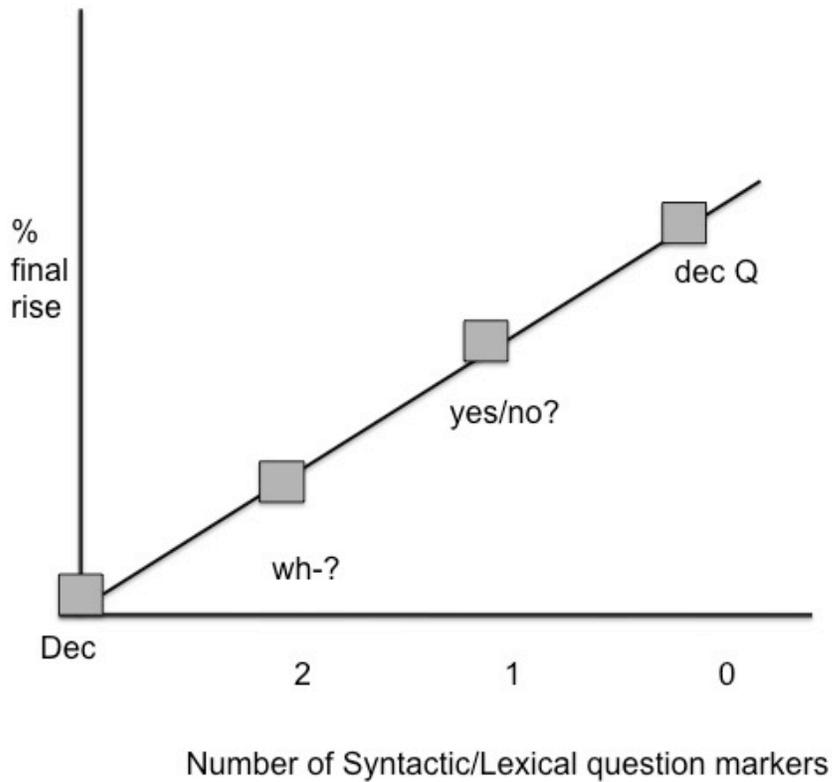
## 2.9. Question Universals

With a brief cross-linguistic review of current phonological studies focused on question intonation, it appears that there are limitations in the methods of analysis as well as location of analysis. As previously mentioned, Gussenhoven (2004, 69-73) indicates that intonational meaning is universal and language specific. Higher pitch sounds more uncertain and questioning. Language variation in the way higher pitch is implemented has resulted from grammaticalization of the paralinguistic meaning. In this way, high pitch, as expressed by the

Frequency code discussed in Chapter 2, means uncertainty and questioning. High pitch is achieved in a variety of ways cross-linguistically. Haan (2002:147) expresses this idea in the formula  $Q=H$ . Question intonation equals height/highness. This does not mean that question intonation is always final rising, but rather highness or high intonation can occur in different locations in the question. High intonation can also start at the beginning of the question, giving an early cue, signaling a question.

Analyzing the percentage of final rises in  $F_0$  Haan (2002) showed in Dutch that questions with more lexical or syntactic markers to signal interrogativity had lower percentage of final rise and therefore suggesting a trade-off between overt lexical/syntactic markings and intonation. Declaratives sentences had the lowest percentage of final rise, and declarative questions having the highest percentage of final rise. Figure 2.20 illustrates the predictions expressed in Haan's (2002:148) Functional Hypothesis.

**Figure 2.20 Functional Hypothesis**



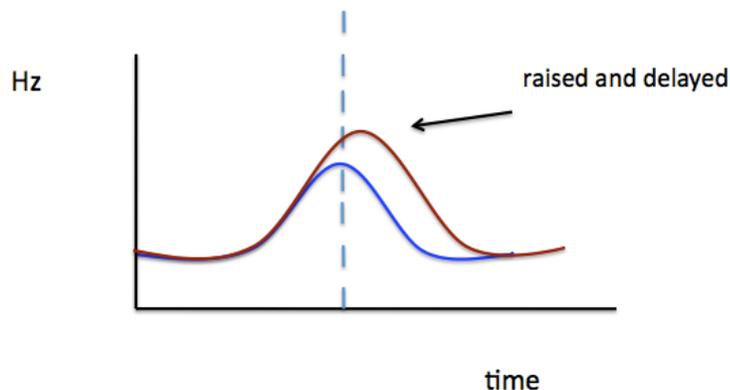
Grabe (2002) found the same to be true across the nine varieties of English from her IVIE research, as well as with Polish. Investigation of the three types of questions, average highest intonation was with declarative questions while the next highest was that of yes/no questions and then wh- questions followed due to the aid of question words sharing the work to show interrogativity. Thus, it appears that when lexical or syntactic markers are absent (or simplified), the intonation compensates by providing the necessary marking through height. It appears that the Functional Hypothesis (Haan, 2002:148) is attested in Dutch, the question is raised whether her findings will be found in Hawaiian and HCE.

### 2.9.1 Delay Peak

A hypothesis developed by Gussenhoven (2002:6) which proposes to explain the physics of the cues differentiating questions and statements is suggested by Gussenhoven (1999, 2002)

Gussenhoven suggests that a signal used to cue interrogativity is the use of a delayed peak and that the higher the pitch peak, the longer it takes to reach creating a delay in the pitch peak. If starting at the same point, it takes longer to reach a higher peak than a lower one, resulting in a delay. The following graph illustrates this point.

**Figure 2.21 Gussenhoven Delay Peak Alignment**



(adapted from Gussenhoven, 2002:6)

According to Gussenhoven (2002:6), speakers have this under control, even if they do not achieve a high peak, a delayed peak can achieve the same information that a high peak can.

Thus using the delayed peak as a substitution for a high peak. However, languages which start at a high pitch and carry a high pitch across the utterance would not use delay peak as a cue. For example, looking at Hawaiian and HCE, as I will explain further in Chapters 6 and 7, delay peak does not transparently play out. In Hawaiian and HCE, both languages have a higher onset and higher plateau in questions than in statements, thus not having the characteristics described in

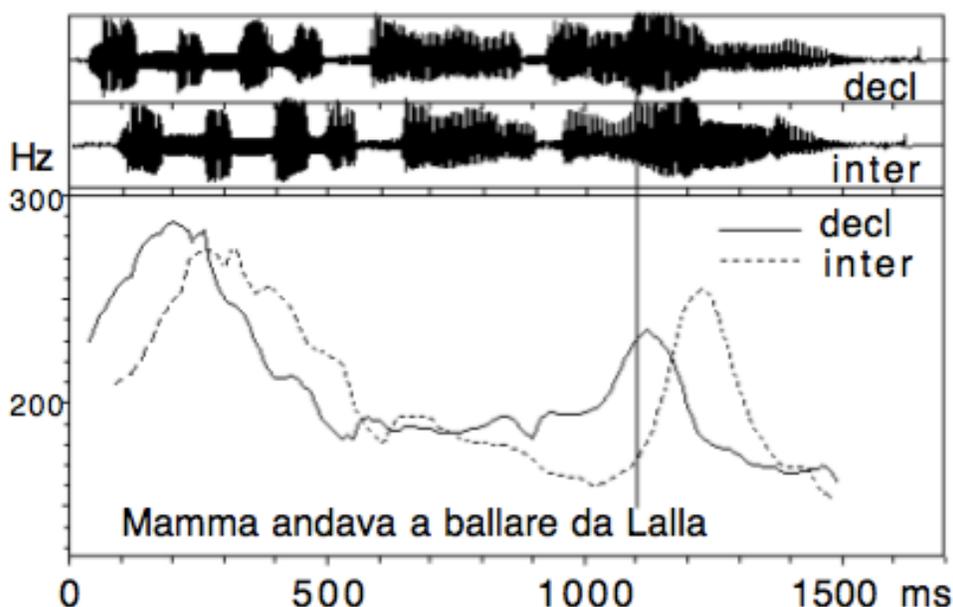
Gussenhoven's (2002:6) peak delay. To expand, the starting point before the high peak in the question is already high and does not have far to go. If merely the result of physics in that the effort and time needed to reach a higher peak results in a delay, it would not apply to the situation in Hawaiian and HCE. The other condition that perhaps negates the need for a delay peak to signal a question in Hawaiian and HCE is the use of a high onset, which cues the question from the beginning of the utterance. In addition, high pitch onset appears to be a common cue cross-linguistically as the studies from Grabe (2001) and Haan (2002) demonstrate.

In other words, what Gussenhoven suggests in Figure 2.21, and described in the quote is not evident in Hawaiian or HCE (nor Gordon, 2005, nor D'Imperio and House, 1997). What I have seen in Hawaiian and HCE is represented in the instrumental analysis from PRAAT (as seen in examples below). A higher start, with a high continuation, leading to a sharp fall. What Gussenhoven shows is a sharp rise to reach a high peak, resulting in a late fall due to the effort exerted to reach the high peak. I suggest that pre-planning results in increased effort and the rate in which it takes to reach the high pitch matches the rate at which it takes to reach the lower peak. For example in basic distance-rate-time formula, ( $d=rt$ ), the timing that it takes for a car to travel a certain distance, i.e. 20 kilometers, going a rate of 20 kilometers per hour, it takes considerably less time for the car to reach the destination if the effort of the car (acceleration) were increased to 60 kilometers per hour. For example, if by chance, a question was reduced to a single word, the effort by which is needed to reach a high peak in a limited space would need to substantially increase. If Gussenhoven's peak delay graph is correct, in a scenario where the question was greatly abbreviated to one word, then the peak would have to be delayed so much, the cue would be awkward and imperceptible.

In summary, in Hawaiian and HCE, the speaker is already at a high pitch and does not need to rise to that high peak from a lower pitch. They merely stay at the high peak through the utterance and then produce a dramatic fall. This is achieved through pre-planning because they set up the question at the onset, providing the listener the cues early on.

Also, with the lack of question words, the high pitch onset provides the needed message early and intonation does all the work. Having started higher and maintaining a high plateau creates an environment that is then in need of a pitch movement. This movement has nowhere to go but down, to fall, a dramatic fall. This fall signals the end of the utterance in both a question and statement. The difference between the question and statement is the length of the fall at the end of the sentence as well as the height of the onset. Also, in languages that have onset as the high to convey a question, then the delay peak is neutralized. The onset high has already conveyed the question-like meaning and peak delay would be more of an emphasis at that point, and redundant. I do not necessarily discount delay peak as being present in some instances in other languages, but it does not apply to all languages. For example, HCE and Hawaiian, using a high onset, and high plateau is already high when the fall occurs. Thus, the effort of reaching a high pitch peak is different than what Gussenhoven produced in the hypothetical example. According to D'Imperio and House (1997:1) in Neapolitan Italian, it is the pitch movement through the last accented vowel that is the most important cue and not the pitch alignment (late or early) that contrasts a statement and question. A rise has to occur during the last accented vowel to signal a question and a fall occurs on the last accented vowel to signal a statement and peak delay is merely a by product of the most important signal. Figure 2.22 is an example from D'Imperio and House (1997:2).

**Figure 2.22 Neapolitan Italian Intonation**



(D’Imperio and House, 1997:2)

D’Imperio and House (1997:1) state, “The results show that the primary perceptual cue for questions is a rise through the vowel, while the primary cue for statements is a fall through the vowel.” They continue with, “...a clearly perceptible rise within the syllable nucleus is more important than the late timing of the high target as a cue for the identification of questions (D’Imperio and House, 1997 :1).

Given what Gussenhoven predicts, if the utterances start around the same level, the higher question rise will take longer predicting a later pitch peak. However, in Figure 2.22, the low pitch in the question dips even lower than in the statement and thus would predict an even later pitch peak to reach the pitch height. It would appear then, that pitch peak delay is not a crucial cue in the languages represented in this sample of studies. Perhaps peak delay is a product of manipulations to adhere to other cues that are more salient within the language. Peak

delay could be the by-product of preplanning and not what is actually used as a universal cue to contrast questions and statements.

## **2.10. Conclusions: Right or Left Edge?**

In review of several languages and the way in which they implement question intonation, it is important to look, not just at what each language does at the right edge of the phrase, but what is going on at the left edge, or the onset of the phrase. Perhaps we need to rethink question intonation universals and how they are implemented in languages. The left edge might be the most important location for question intonation. For example, a language like Chickasaw has rising statement intonation and falling question intonation. This language behaves quite contrary to the majority of the world's language, as noted in *Linguistics for Dummies*, (2012:76), in a short passage pointing out that rising intonation is not a universal: "Many languages have similar intonation patterns- rise on questions and within lists- fall on statements and at the end of lists- but these aren't universal. Some languages, like Chickasaw (a language from the southeastern U.S. fall on yes/no questions and rise on statements." However, identifying what Chickasaw uses for categorical distinctions allows us to see what could be the most important universal in the question/statement contrast.

To further this point that perhaps onset is a key factor in salience of categorical distinctions, a closer look at languages that have the same apparent right edge, Hawaiian Creole English and Hawaiian as well as Belfast English provides clues that another location in the utterance must be working to make the contrast. Interestingly, Hawaiian and HCE both have falling intonation for questions and statements, and Belfast English has rising intonation for both. For languages such as these, the onset height could make this contrast.

What I would like to revisit here is that although languages may have more variation on the right edge, perhaps the left edge is what provides the question intonation universal cross-linguistically. The simple relative highness that differentiates questions from statements is what sets up the listener to take notice and receive the appropriate cues, indicating that information is required of them. In revision of what could be looked at as a violation of a universal in question intonation, I would propose that all languages adhere to the universal of high pitch in question intonation and that Gussenhoven (2004) stated this correctly when stating that the Universal is realized differently cross-linguistically. Haan (2002) also proposed this concept with  $Q=H$ .

In summary, from several studies conducted of various languages, it appears that an earlier cue used to signal interrogativity is an important one that should be analyzed further to see if it is a cue used to differentiate questions from statements. It is not only the right edge of an utterance that needs to be examined, but the left edge as well. It could be that we see less variation cross-linguistically if we compare the onset pitch of questions and statements (relative within the language).

I emphasize from this last section is that although there is a great deal of variety in the world's languages by which questions are implemented phonetically, there is a phonological rule that all adhere to and the formula as developed by Haan (2002) is  $Question = high\ pitch$ . In order to gain more understanding of how HCE developed and how Hawaiian may have been an influence, I will now discuss theories of creole genesis along with the Language Bioprogram Hypothesis in Chapter 3.

## **Chapter 3: Creole Genesis and the Language Bioprogram Hypothesis**

### **3.1. Introduction**

This chapter will discuss theories, which have been developed to explain creole genesis, or the way in which creoles emerged. I will not discuss all theories here, however, I will discuss in more detail, the two main theories, which have received the most attention and consideration. The first theory I address is that of Bickerton's Language Bioprogram Hypothesis, also known as the LBH, which is a Universalist theory. The second theory is the Substratist theory.

### **3.2. Creole Genesis and the Language Bioprogram Hypothesis (LBH)**

Many theories of how pidgins and creoles develop have been reviewed over the decades. Of these theories it seems that two; the Universalist and Substratist, have received the most attention. One of the earliest creole researchers, Adolpho Coelho (1880), developed the precursor of a theory that is more commonly known today as Bickerton's Language Bioprogram Hypothesis (1981). Coelho (1880) took note of universal features governed by psychology and physiology which were seen in many creole features. Bickerton (1981) questioned theories that would suggest that creoles emerged from pidgins and posited a theory that would include the use of innate human language requirements.

In developing the Language Bioprogram Hypothesis (LBH), Bickerton did not include all creoles in his theory; he defined a "classic creole" situation that could be explained through the LBH. In this definition, the "classic creole situation" would be one where the creole speaking community would be those who were abruptly removed or "torn" from their native cultures and whose native languages (the substrata) would be considered unfavorable. These "classic creoles"

would also have emerged in situations where a pidgin language was used for a very short time and no more than 20% of the community population represented superstratal speakers (80% of the remaining community population was linguistically diverse). Bickerton used this definition to narrow down his research area to those languages for which “human linguistic capacity is stretched to the uttermost.” (Bickerton, 1981:4). In using this definition, he identified HCE as falling into the category of “classic creole”.

Bickerton did extensive fieldwork in Hawaii in 1973 and 1974 with a team who recorded speakers of both Hawai‘i Pidgin English (HPE) and Hawaiian Creole English (HCE). In evaluating HCE through his classic creole definition, Bickerton found that elements in HCE were missing in HPE and thus came to the conclusion that HCE did not emerge from HPE, which supported his theory that not all creoles emerge from a pidgin and that classic creole characteristics are due to the LBH. The main claim of the LBH is that even though the pidgin is provided an impoverished language input, the output produced by the evolved creole is not impoverished, showing that elements that emerged in the creole, creating a whole and complex system, came directly from the innate human language capacity, and not from any influence of substrate languages. Although Bickerton’s LBH provided a platform from which scholars could discuss creoles in a generative framework, there have been challengers to the LBH. Siegel (2007) provided analysis of the 12 LBH elements, which Bickerton claimed were missing in HPE and since emerged in HCE. The LBH elements found by Siegel (2007) in historical accounts of HPE proved their existence prior to the development of HCE. Other elements are accounted for in substrate languages.

### **3.3. Creole Genesis through Simplification**

With regards to phonology, if the LBH claims that “classic creoles” share innate syntactic and semantic universal language characteristics, then could it also assume universal phonological characteristics? To expand, Bickerton (1981) indicates that the creoles reflect a type of default setting, which provides unmarked features to the creole. McWhorter (2001:157) argues that even when proven that a language is made up of unmarked features, this does not necessarily mean that the language is ‘simpler’. McWhorter (2001:135), through use of a metric tool by which he determines whether a language is simple or complex, shows that markedness is independent from simple/complex criteria.

Further, it can be supposed that due to the simplification of Standard Hawaiian provided as input to immigrants, and due to the simplified English as well used to interact with immigrants, it is no surprise that the contact language that would result would be missing features found in the standard version of the target language (in this case, Mainland English). McWhorter (2011) suggests that “the pidgin-level variety emerged via starkly abbreviated acquisition of the lexifier language at the outset of contact between lexifier and substrate speakers.” Due to the corrosion of information, the contact language lacked the complete grammatical structure. As well, McWhorter indicates that creole languages are unique due to the conditions in which they were born. These conditions contributed to the stripping away of complexities in the creole, “such that the complexity emerging in a creole is arising essentially from ground zero, rather than alongside the results of tens of thousands of years of other accretions” (McWhorter, 2011:155) In fact, McWhorter includes that older languages such as Polynesian languages (such as Hawaiian) fall closer to a “creole” in their level of complexity.

The theme of simplicity and simplification is emphasized in McWhorter (1998) as mentioned above, as part of the creole genesis story. I suppose that, while it could be easy to discredit the LBH as having a major role in this story, the issues present in the LBH could be resolved by investigating the curious environment shared by creoles that results in elements simplified in foreigner speak as input as well as elements simplified as output. Ferguson and DeBose (1977) made the parallel of the seemingly universal connection between “foreigner speak” register and the structure of pidgins. As well, Koefoed (1979) made similar parallels taking notice of common features in creoles also found in universals of language simplification.

The similarity no doubt arises from a common sense approach to language simplification in both input and output that would result in reaching the basic communicative purpose by only including those elements crucial to the message, stripping the language down to the most basic form, without the ornamentation from millennia of grammatical evolution (cf. McWhorter 2001:132). In this sense, the LBH, represents “protolanguage” (cf. Bickerton 1990).

To clarify, the impoverished input simplifies features, leaving only the elements needed to communicate a message or request, and this simplicity could be the result and influence of the most basic form of language. As mentioned, these parallels have been made in earlier creole research, however, the LBH has been continually weakened by other creole genesis stories. Siegel (2007) investigated and discovered the elements in HCE were also found in HPE, demonstrating that in fact there was not a stark contrast between the stabilized pidgin and HCE in its complexity. As McWhorter (2001) points out, that even when a language is stripped of ornamentation evolved over centuries, the language still has full capacity for complete communication. This provides for a theory that creoles are not truly lacking in communicative robustness and can in fact resemble much older grammars. From McWhorter (1998:799) “On the

contrary, creoles are invaluable in demonstrating that the rich and nuanced linguistic expression we associate with 'regular' languages is possible without inflection, lexically or syntactically contrastive tone, or derivational paradigms. For all their structural and expressive richness, such things are ultimately but inexorable accretions over time, arising and eroding in an endless cycle like mountain ranges, and with no more inherent necessity.”

McWhorter (2001) regards simple and complex grammars as being independent of marked vs. unmarked features. This view is contrastive to the LBH view that renders creoles to unmarked, simple grammars. Driving the point home, pidgins born out of simplicity, via impoverished input represent language unadulterated. If elements are needed which aid in communication, the creole can and does organically acquire these elements over time, through natural evolution and perhaps use surrounding substrate influences. It would seem then, that there are parts of McWhorter's (1998) views on creole genesis and the LBH that have some commonality. Such is that McWhorter forms his Creole Prototype based on three common traits found in creoles that he attributes to “low perceptual saliency with low import to basic communication, encouraging learners acquiring the language rapidly and informally to bypass acquiring them.” McWhorter explains common creole traits as not being readily acquired and Bickerton attributes common traits found in creoles as a product of the basic blueprint humans have for developing language. While both views are motivated differently, it would seem that a better interpretation would come from the universal parallel between simplified input and simplified output with the understanding that missing elements are not elements that necessarily have a detrimental effect on the communicative saliency in the structure of the language. To further this, languages that undergo a simplification process within the syntax may compensate in other ways.

In summary, many different theories have been developed to explain the development of pidgins and creoles. Frequently weakened, the LBH would appear to be missing some crucial evidence that would demonstrate abrupt disruption of linguistic information. In the HCE scenario, it has been argued by Roberts (1995; 1998) that the speakers always had access to their first language as well as the pidgin or creole and thus it is nearly impossible to determine LBH influence. In fact, it would be a truly difficult scenario to find, one where speakers have an abrupt interruption of language so that they need to reach to the LBH in order to complete communicative ability. One scenario that comes close to the criteria of the LBH, is that of the well-known study of deaf students in Nicaragua who had to make up their entire sign language (cf. Kegl and Iwata 1998). In this case, the complete language was developed by the first generation.

As mentioned, many different theories have developed over the decades to explain the emergence of pidgins and creoles and one such theory that remains one of the most entertained theories is the substratist approach, supported by Siegel (2007), which I will discuss later in this section.

### **3.4. Intonation Overlooked**

All things considered, it appears that intonation, seemingly ruled by biological codes and intrinsically based on sound-meaning principles, escapes the simple/complex debate.

Interestingly, falling intonation is considered “marked”, where the majority of the word’s languages have rising question intonation (cf. Gussenhoven 2002). Being that Hawaiian has falling “marked” intonation, it would appear that this pattern would not be accepted in HCE, being that according to Bickerton (1981), “unmarked” features as ruled by the LBH are present in his criteria of “classic creoles”.

To clarify, “classic creoles” would share unmarked phonological characteristics such that it would be commonplace to hear these similar intonation patterns in many of these “classic creoles”. What would be viewed as default or “unmarked” intonation patterns used for yes/no questions and declaratives could be identified in these creoles. In short, yes/no questions would have a high final tone while statements would have a low final tone. This is not the case in HCE, which has “marked” falling yes/no question intonation like Hawaiian does. Bickerton crucially, explicitly presents HCE as a “classic creole” as he states, “the forms and structures arrived at by HCE resemble far beyond the scope of chance the forms and structures arrived at by a variety of other creole languages...It seems reasonable, therefore, to assume that the gap between HPE and HCE that is reflected in our data is a genuine phenomenon accounted for by extremely abrupt changes which took place while the first creole generation was growing to maturity” (Bickerton, 1981:16-17).

In fact, the intonation did not arrive by chance, but by the influence of HCE’s first lexifier. As already mentioned, if indeed the most default or simple or “unmarked” intonation pattern was available either through the LBH or even other substrate languages that had this type of contour available (English, Chinese, and Portuguese), it would make sense that we should see it in HCE. The fact that this “unmarked” pattern was indeed available from the various substrate languages in Hawaii even makes this argument stronger. Hawaiian, being the only substrate language to have this type of falling “marked” question intonation, passed this contour on to HCE.

I agree that using foreigner speech contributes to the deletion of similar features, cross-linguistically and certain non-crucial features would be naturally and easily deleted leaving a coherent message still in place. I think that McWhorter only addresses what all creoles have in common and not necessarily how certain features are combined from different substrate languages

to make up the creole as a whole. In the analysis and comparisons of grammars of creoles, it seems that intonation is generally overlooked. McWhorter (1998) emphasizes the importance that creoles are born from simplification and that simplification carries into the creole, where features from the substrate languages are non-existent.

This concept that simplification is part of creole genesis can be seen in various examples from Roberts' (1995) archives among Pidgin Hawaiian, HPE, and Standard Hawaiian texts. Perhaps, it is possible that intonation is unaffected by simplification of grammars, being that the basic message it conveys can not be simplified. Meaning that categorical distinctions made between statement and questions are in their basic forms, efficient in form and function, unable to be simplified. To add to this speculation, as mentioned earlier, if rising question intonation was available (and it was) to creole speakers, and the preference was to use the "marked" falling intonation pattern, then there must be someone about this pattern that was simple, uncomplicated, efficient and effective, so that it prevailed. Another hypothesis is that by being "marked" it was more noticeable (cf. Chapter 9) and thus more prone to being learned and wholly adopted.

### **3.5. Arguments Against the LBH**

Given the explanation of creole genesis through simplification of input from the target language, it weakens aspects of the LBH in its strongest form. The criticism of the LBH carries special weight given Bickerton's description of HCE as a "classic" creole, whereby he defined his LBH characteristics by comparing HPE and HCE from examining movement rules, articles, verbal auxiliaries, *for-to* complementization, relativization and pronoun-copying (Bickerton, 1981:17). I provide the following sections evidence that the intonation system in HCE is very similar to that

of Hawaiian, which would be more consistent with a substratist approach, or one that attributes creole genesis to substrate language influences.

Another piece of evidence that weakens the LBH is that one “classic creole” characteristic of the LBH is the lack of inversion for yes/no questions. This is also a characteristic of native Hawaiian, as I have mentioned previously. Only intonation sets apart declaratives and yes/no questions; there is no syntactic difference between the two. I hypothesize that Hawaiian is the influence instead of the LBH.

What is complicated about creole genesis in Hawai'i is that native Hawaiian was used predominately during the development and settlement years of the islands and English did not have a strong hold until much later as the superstratal language. In fact, Hawaiian could be considered the superstrate in the early stages, and only later on due to the influence and demand for English education, became a substrate after relexification of the creole from Hawaiian to English. Hawaiians worked on sugar plantations speaking their native language and schools were instructed in the Hawaiian language (see Chapter 1).

It was not until the sugar industry expanded and more labor was needed, around the early 1900s, that there was an influx of other languages such as Chinese, Portuguese, and Japanese. Bickerton (1981:3) has stated that his interest lies in situations where “the normal continuity of language transmission is most severely disrupted.” As Roberts (1997:34) suggests such a disruption in language transmission in Hawaii and that the first locally born children acquired their parent's language as well as learned the ‘Pidgin’ in school and in the community. Thus, the population still had their heritage language to use within their ethnic communities while also acquiring the ‘Pidgin’.

As previously mentioned, in the early plantation days, the first immigrants working on the plantations were Cantonese. The Cantonese immigrants learned an approximation of Hawaiian, given that the standard variety of Hawaiian was not usually spoken to them. This approximation would have been transferred as an approximation to other members of the community, so that an approximation of an approximation would possibly evolve. In line with a superstratist point of view, the Superstratists would claim that approximations of approximations could be considered variations of the lexifier, attributing creole genesis to a version of the lexifier (c.f. McWhorter, 1998, 2011).

Learning Hawaiian with reduced input and causing an approximation of Hawaiian to be learning, would result in a pidginized version of standard Hawaiian. These language learners would use this pidginized form of Hawaiian, while also introducing lexical items from their own heritage language (as well as speaking their heritage language among family). This environment would not lead to a break in transmission leaving them for a need to innovate features in the language in order to communicate (consistent with the LBH point of view). In fact, Mufwene (1996) claims, in support of the Founder's Principle (to be discussed in Chapter 9), features were not innovated in the creole such that the LBH suggests, but rather features were a mixture of the languages in contact.

In summary, when comparing HPE to HCE, Bickerton identified characteristics that were missing in HPE but present in HCE and thus attributing the characteristics in HCE as innovations created by the LBH. McWhorter (2011 :111) has identified three characteristics that he claims supports his Creole Prototype Hypothesis whereby all creoles share these characteristics. Of these characteristics, McWhorter (2011 :111) lists the following: little or no inflectional

affixation, little or no distinction of monosyllabic lexical items, little or no noncompositional combination of nonreduplicative derivational morphemes with roots.

### **3.6. LBH Definition of Classic Creoles Compared to Elements in Hawaiian**

I agree with McWhorter (2001, 2011, 2012) that simplification played an important part of shaping pidgin and creoles. I also agree with Siegel (2007) in that substrate language influence and the stabilization of the creole answers the question as to why HPE and HCE differ.

In this section, I will identify those characteristics which I have found evidence also exist in the Hawaiian language and thus can not be attributed to the LBH. McWhorter (2011:155) also acknowledges that Polynesian languages demonstrate some of the features in his prototypical creole.

The following common characteristics that Bickerton identify are listed below:

- movement rules
- articles, the use of zero for non specific NP.
- Tense Modality and Aspect (TMA) systems (expressed as preverbal free morphemes)
- Realized and Unrealized Complements
- Relativization and Subject Copying
- Negation
- Copula
- Adjectives as Verbs
- Questions (no different structure than declaratives)
- Question words (wh-question words preposed to the declarative form)
- Rare Passive Constructions

Of these characteristics that Bickerton has identified as being common in a “classic” creole, I will address a number for which Hawaiian has an equivalent characteristic.

### **3.6.1. Copula**

The copula is commonly missing in pidgins. “Zero copula is probably the single feature most readily associated with pidgins. However, it is not an exclusively pidgin feature by any means...Thus, while zero copula may exist, or have existed at some time, in all pidgins, it is not a feature which distinguishes pidgins from other languages” (Baker, 1995:8). This lack of copula structure is also found in Hawaiian in verbless sentences (cf. Chapter 1).

The normal order for simple sentences in Hawaiian is VSO (verb-subject-object) word order. Hawaiian sentences can be labeled as simple, verbless, or complex (Elbert and Pukui 1979: 39). HCE also has the option to omit the copula in equational sentences. For example: *cute da baby* as well as *da baby cute* are acceptable orders and both omit the copula. Hawaiian has the same equivalent: *nani ka pēpē* (cute the baby). In Mainland English, the sentence would be: *the baby is cute*. The copula “is” links the noun and the predicate of a sentence. So while it is difficult to say whether this feature is one taken from Hawaiian or one that is common in pidgins based on simplification of input, remains to be determined. However, I merely point out that this feature can be found in Hawaiian. For further examination, Roberts (2004:75-79) provides more detail of the use of copula (and the changes that took place) in HPE and HCE over the decades of development.

### **3.6.2. Lack of Question Inversion**

The Hawaiian declarative and the Hawaiian yes/no question has the same grammatical structure. Hawaiian does not have question inversion, it is the intonation that marks the sentence for interrogativity. HCE has the same feature as mentioned by Bickerton (1981:70).

### **3.6.3. Adjectives as Verbs**

This is also common in Hawaiian as adjectives and adverbs are not formally distinguished as a class, but the most common verb in Hawaiian is stative. Words that commonly function as adjectives and adverbs in English, are stative verbs in Hawaiian.

### **3.6.4. Sentential Complementation**

Bickerton (1981:32) mentions that sentence embedding of any kind is “virtually non-existent in HPE”. As described in Alexander (1920:44), “what would form a long sentence in English, in Hawaiian is generally broken up into several independent propositions.” While HCE shows a form of conjunction using *fo* (for), I hypothesize that due to HPE having more Hawaiian influence, could be why HPE did not have sentence embedding, although it is hard to say whether the feature came from Hawaiian or from simplification of input. In order to address the fact that HCE has a form of sentential complementation, using *fo* as a conjunction, (Siegel, 2007:63) states that the Portuguese, *para* functions to introduce “sentential complements with an overt subject in the nominative case.”

Bickerton (1981: 9-42) identifies characteristics in HCE that did not exist in HPE. He suggests that the differences between HPE AND HCE could be explained by a kind of ‘innovation’ that was created from tapping into the innate human language capacity. These innovations are apparent in HCE where they do not exist in HPE. Instead of the LBH to explain

the differences between HPE and HCE characteristics, I suggest that the differences come from stabilization and relexification. HPE no doubt in the early stages would still have had a strong Hawaiian influence as seen in the counter examples I have provided. Even in HPE, there is evidence of simplified Hawaiian, as compared to Standard Hawaiian (cf. Roberts 1995).

HCE, while undergoing stabilization and more English influence would have undergone changes that would reflect the English relexification and grammaticalization of features, syntactic and otherwise. While this section does not aim completely to reanalyze the LBH in terms of HCE evidence, this section's purpose is to merely point out the specific problems that HCE poses a Universalist account of creole genesis. The points below reiterate what was discussed in this section to highlight evidence that counters the view of HCE as a "classic" creole as defined by Bickerton.

- Hawaiian speaker population made up the majority when HPE was developed.  
(plantation language and education language in Hawaiian) This can support Hawaiian language influence on syntax and phonology instead of LBH
- Bilingualism in Hawaii-children spoke both the language of their parents as well as the local 'pidgin' language; no break in language transmission
- Laborers were not torn from cultures but brought culture with them
- Reduced input in both Hawaiian and English can attribute for features that are lacking in HCE, simplification is a common feature in creoles (cf. McWhorter 2011, 2012)

Although HCE provides some problems to the LBH, I do not discredit this approach entirely. I acknowledge that the genesis of HCE was not solely based on substrate language influences and that many factors went into the evolution of this language.

The purpose of this section of the dissertation was to point out problems with a strict LBH approach. Children are assumed to be the agents of change in language and creoles are no exception. In the creolization continuum, children no doubt supplied linguistic information that was lacking in the pidgin languages available to them in order to complete the language systems. In doing so, the children expanded on the pidgin and created a creole. If the missing linguistic information was provided by innate language requirements, substrate, or superstrate influences, it is difficult to say. The development of HCE over 100 years and various languages providing input created the HCE of today. I suggest a combination of all of these elements went into the genesis of the creole. However my evidence in upcoming sections will illustrate that perhaps the intonation patterns of HCE could not be due to the LBH, but rather the influence of the Hawaiian language, which supports a more substratist approach to creole genesis.

### **3.7. Substratist Theories**

Substratists such as Siegel believe that substrate languages provide linguistic elements to the developing creole and this is what explains creole genesis. To a degree, I think that substrate languages play a role in creole genesis. Siegel (2007:66) provides examples to defend the substratist approach, giving syntactic evidence for Portuguese and Cantonese for some and also providing historical evidence that some constructions were actually attested in HPE (prior to HCE stabilization). In Section 3.3 I have provided some evidence that Hawaiian also provided substrate influence on HCE in terms of semantic and syntactic structure. Certainly, I support the Substratist this view when explaining the presence of Hawaiian intonation in HCE. I have posited that with regards to intonation patterns, it is Hawaiian phonology that has had the greater influence on HCE phonology and has made a lasting imprint. Below I will provide intonation

information for Portuguese and Chinese to illustrate the point that these two languages, which Siegel has considered the dominating contributors to HCE, do not have a falling question intonation and thus could not have influenced HCE question intonation.

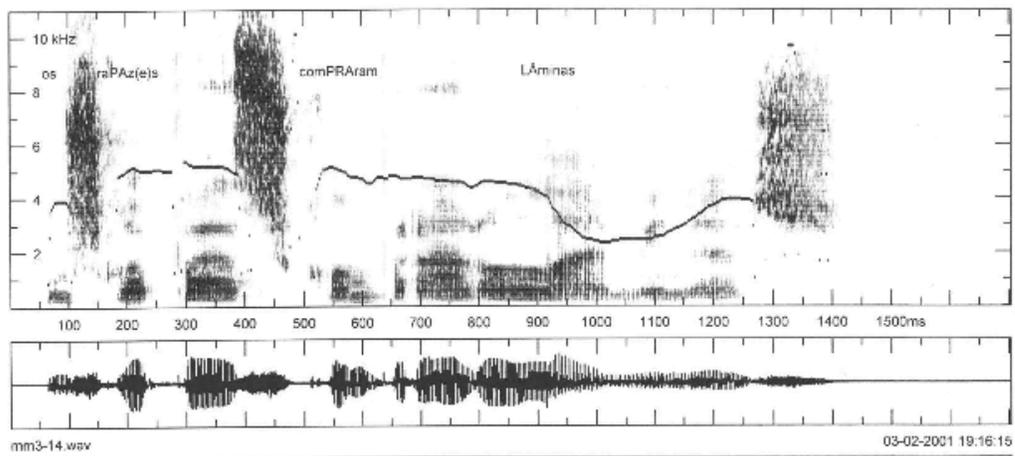
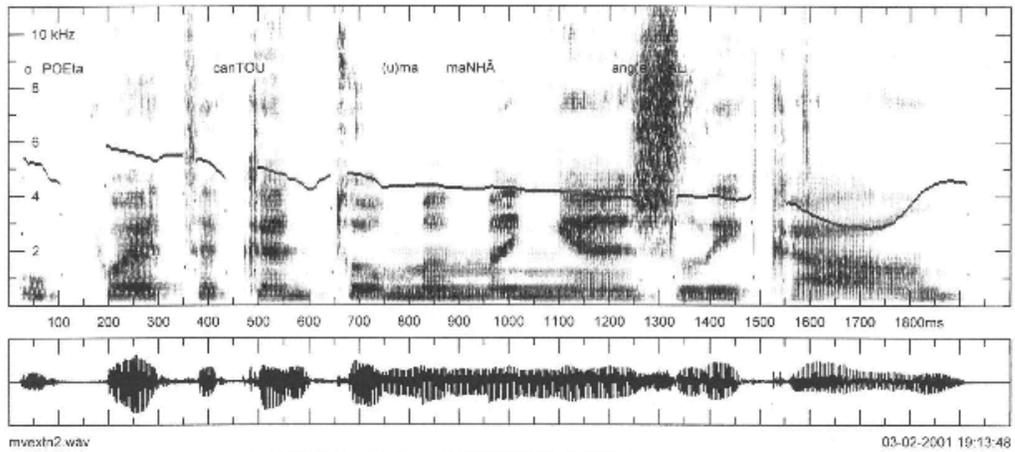
### **3.8. Substrate Language Major Contributors**

In line with Siegel's (2000, 2007) proposal that Cantonese and Portuguese were major contributors when HCE was stabilizing, I have provided intonation descriptions for both languages to rule out their role in the development of HCE's intonation patterns.

#### ***3.8.1. Portuguese Intonation***

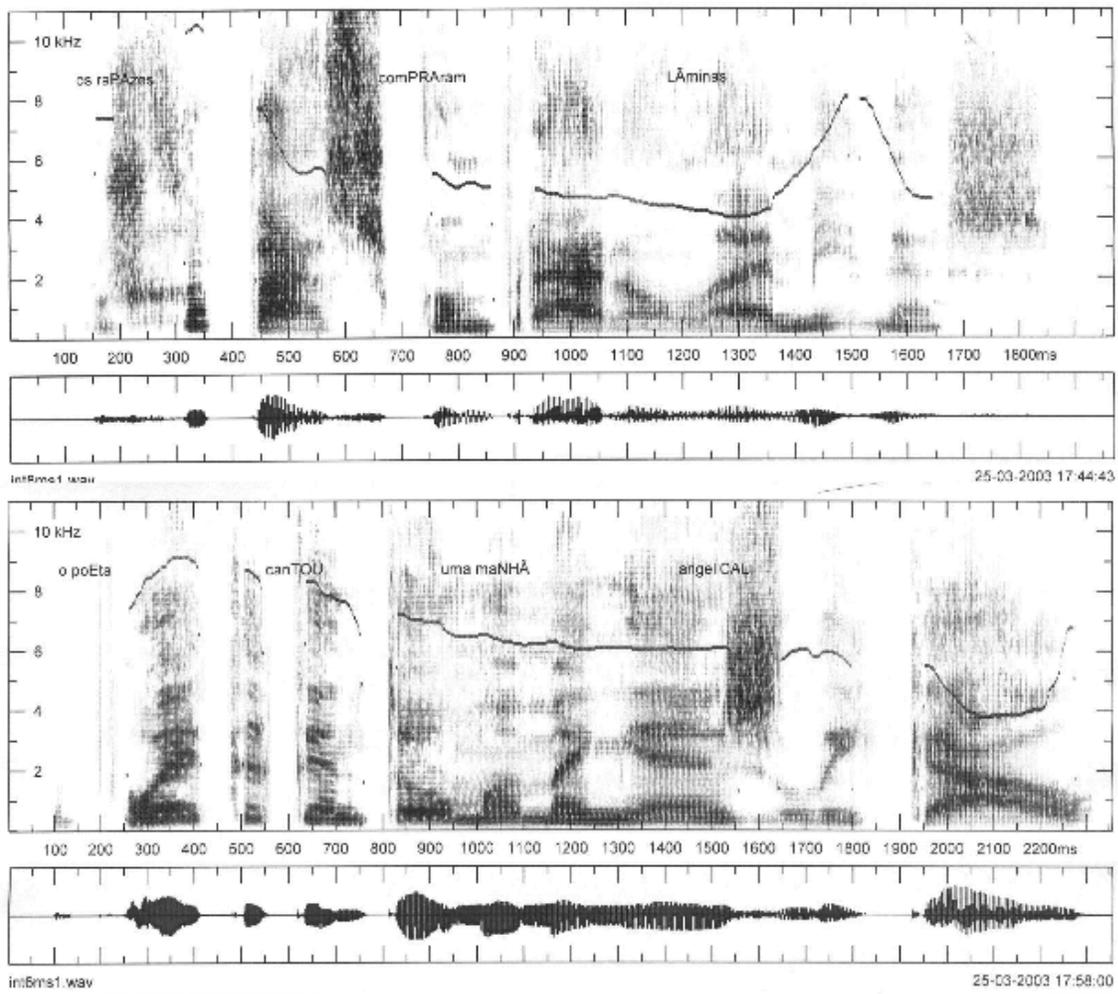
In a comparative study, Vigario and Frota (2003) analyze intonation contours of both Northern European Portuguese (NEP) and Standard European Portuguese (SEP). Their findings illustrate that the most common yes/no question intonation for both regions is that of an LH pattern (cf. Section 2.8.2), yet NEP does have a less commonly used option for a final fall in the yes/no pattern if there are enough syllables in the utterance to support it. However, the vast majority of Portuguese immigrants who were transported to Hawai'i were from the Azores, and being from the Azores would mean the people would have spoken a Southern variety of Portuguese. This pattern is L\* H L and is similar to other European question patterns. Immediately below are contours for SEP with contours for NEP immediately following those of SEP.

#### **Figure 3.1 SEP Contours for Yes/No Questions (Vigario and Frota 2003:11)**



In the top panel, yes/no question in SEP: “O poeta cantou uma manhã angelical?” “Did the poet sing an angelic morning?” This instrumental analysis indicates a final rise. In the bottom panel, yes/no question in SEP: “Os rapazes compraram lâminas?” “Did the boys buy slides?” This example also illustrates a final rise.

**Figure 3.2 NEP Contours for Yes/No Questions (Vigario and Frota 2003:12)**



In the top panel of Figure 3.2, yes-no question in NEP: “Os rapazes compraram lâminas?” “Did the boys buy slides?” This contour indicates a final rise. The bottom panel of Figure 3.2, “O poeta cantou uma manhã angelical?” “Did the poet sing an angelic morning?” also indicates a final rise. Since the Portuguese who immigrated to Hawai’i came from Portugal by way of the Azores islands and Madeira, the assumption here is that the contributing language to HCE was European Portuguese, of the Southern variety (SEP). The main point being made here is that the intonation pattern of HCE could not have come from European Portuguese (SEP)

because the SEP yes/no question intonation is more frequently a rising intonation pattern (cf. Figure 3.1) and does not follow the falling intonation pattern of HCE. As well, the intonation could not have come from NEP either, because of the final rise in yes/no questions as seen in Figure 3.2.

### **3.8.2. Chinese Intonation**

Chinese (Cantonese) poses a challenge for the study of intonation as Cantonese is a tonal language, meaning the language makes use of varying tones on words to signify lexical differences. In Cantonese, tone and intonation occur simultaneously and have an impact on each other. In the study by Ma, Ciocca, and Whitehill (2006), Cantonese global intonation was studied to examine Cantonese intonation patterns as well as how tone and intonation interact within Cantonese utterances. Results of the studies indicated that  $F_0$  in questions was raised for the utterance. Chinese, although having particles to signal questions, has been shown to demonstrate a global rise in intonation in questions.

Ma, Ciocca, and Whitehill (2006) found that although declination was found in the global pattern for both wh-questions and declaratives, speakers marked yes/no questions by raising the global (across the entire utterance)  $F_0$  level of the utterance as well as using a final rise in  $F_0$ . Another study by Xu and Mok (2012) proposes that Cantonese Chinese uses a rise at the end of questions and that this is the most salient to signal a question, and not global rise as indicated in the previous study I outlined. The purpose of Xu and Mok's (2012) study was to measure the perception of intonation in Mandarin and Cantonese speakers. In one experiment, the utterance was clipped shorter as to eliminate the final boundary tone, and thus clip the rising intonation in questions.

a high-rising and high register pitch contours were more often identified with questions, when some critical information like boundary tone was cut off. The identification of questions with low dipping tone (T3) in Mandarin was rather poor by Cantonese listeners. This further supports a general tendency for languages to exploit high and high rising pitch to convey questions.

Xu and Mok (2012:4)

Showing that it is important in Cantonese question intonation to have a high rise at the end to signal a question suggests that Cantonese intonation did not contribute to the falling intonation pattern in HCE. Xu and Mok (2012:4) also suggest that the Cantonese speakers did not do well when having to identify questions with a low dipping tone, but they did well identifying questions in an unfamiliar language with rising question intonation. This brings up an interesting point relating to language acquisition which I will discuss further in Chapter Eight.

### **3.9. Conclusion**

The importance of these studies is to demonstrate that Chinese (Cantonese) and Portuguese both have an overall rising pattern with regard to questions, which contrasts with the falling intonation pattern of HCE. The reason I selected Cantonese and Portuguese specifically is because the majority of immigrants to Hawai'i spoke Cantonese and Portuguese during the time of the stabilization of HCE (Siegel, 2000:211). Although many Japanese immigrants arrived in Hawai'i and Japanese words can be seen in HCE, the immigration numbers began to increase steadily starting around 1900, when HCE appeared to be a stable creole. As Reinecke (1969:93) mentions, regarding the immigrants in Hawaii, "The first large immigration of Japanese did not occur until 1888 when the Hawaiian, Chinese and Portuguese between them had pretty well fixed the form of the [English] 'pidgin' spoken on the plantations."

I have provided crucial information to rule out the possibility that Cantonese and Portuguese contributed to the intonation system of HCE. What makes HCE different than other creoles is that in the development of a language shared by many people from different linguistic backgrounds, the language started as a simplified version of Hawaiian, and then eventually with the greater exposure to English, was re-lexified to English. What this means is that initially Hawaiian was a superstrate and then was reduced to a substrate of HCE as English shifted to the superstrate. With this complex development in HCE brings a wealth of linguistic topics to investigate. Next, in Chapter 4, I will discuss the methodology of my research on the intonation of Hawaiian and HCE.

## **Chapter 4: Methodology**

### **4.1. Introduction**

In order to analyze the intonation strategies of both Hawaiian and HCE speakers, I needed to gain access to samples of natural speech where a combination of statements and questions existed. I needed natural conversation and natural exchange of messages between two people (having more than two people increases chances of multiple people talking at one time and then it is hard to identify individual intonation contours). The majority of my HCE examples are not direct recordings of mine; I gathered audio files, which I then used to examine intonation. Although I did elicit some data, I found that the more naturalistic exchanges produced a wider range of question types in both Hawaiian and HCE.

### **4.2. Spontaneous vs. Read Aloud**

One of the aspects of my data gathering that enriches the view of HCE is the fact that my data comes from speakers of many different generations, backgrounds, and from different geographic locations. The benefit of gathering data from a wide range of speakers is to clearly represent the essence of what it means to speak HCE. HCE was developed and continued by speakers from different linguistic backgrounds and although languages such as Hawaiian, Chinese, Portuguese, and Japanese, among others made contributions, one enduring aspect that has remained through time and through relexification is that of the intonation. In other words, although the sources that I analyzed in this next section have different linguistic backgrounds, creating a heterogeneous group of speakers for my data set, the feature in which this study focuses on is a feature that

remains the same for all speakers. Thus, such a heterogeneous data grouping provides such homogeneity in HCE that makes this study even that much more intriguing to study.

Another benefit of collecting sound files from varied sources is that it provides a more naturalistic representation of intonation, more so than if I were to set up an experiment using human subjects in a lab environment using forced conversational situations. While other researchers have observed that laboratory controlled, or even read speech intonation studies provide similar results to those of naturalistic ones (Koch, 2007:152), I think it does depend on what aspect is being measured in the prosody. For example, Lickey et al. (2005) examined the points at which the  $F_0$  turned in Dutch questions. In addition Lickey et al.'s (2005) study of Dutch questions and the alignment of postnuclear low turning points, they conducted a comparison of methodology using scripted read questions in laboratory type environment vs. using a corpus of naturalistic data. Lickey et al (2005) did not find any substantial difference between methodology and claim that scripted speech is a practical tool for investigation of phonetic and phonological aspects.

Koch (2007:183) also compared scripted to natural spontaneous speech in his dissertation on Salish focus marking and commented that, "Utterances taken from scripted conversation (role-playing dialogues), on the other hand, were found to differ primarily in being louder, having longer duration on rightmost stressed vowels, and for FE, higher  $F_0$  on stressed vowels. These results suggest that scripted role-playing conversation generates less natural-sounding intonation."

However, Koch (2007) also mentioned that microphone placement could have had an impact such that during read aloud speech, the speaker was looking down at the script to read and speaking much closer to the microphone and during spontaneous speech, the speaker was

looking outward and speaking away from the microphone located on the lapel of the speaker.

While the type of methodology may be of little difference for studies on focus, stress alignment, or pitch accent alignment, for an intonation study that relies on naturalistic height such as mine, it is imperative that the most naturalistic environment is observed. In other words, if a participant is merely reading a question or statement which I am recording, the naturalistic height used to cue questions might not come through in these narrated examples. While having an experiment in a controlled environment has its benefits for some research, I think that the best data for this particular study proved to be the most naturalistic.

### **4.3. Speech Registers**

Within this research is a representation of different speech registers. Speech register or style is a sociolinguistic term used to describe the discourse environment between speakers (cf. Meyerhoff, 2013). To expand, people who are comfortable, friendly, and familiar with each other speak in a casual manner. In contrast, in a situation where people are not familiar with each other, or the situation is such that a more formal manner of speaking is necessary, e.g. a job interview, the speech register is formal. Most of the Hawaiian data is of a more formal manner than casual or familiar manner found in the HCE data.

To touch on this contrast, the Hawaiian data from Clinton Kanahale (to be described in Section 4.6.2.) is not entirely strictly formal, nor is it completely casual, but rather somewhere in the middle. In addition, HCE is inherently casual in its style and thus, it is predictable that HCE represented here does not have a “formal” style that is missing from the data gathered for this study. As mentioned in Chapter 1, Hawaiian in its pidginized form was the precursor to HPE and then HCE, so that the simplified Hawaiian register was of the casual variety and not the

formal, given the environment in which it was acquired and spoken. The environment in which Pidgin was spoken was in fact, primarily on the plantations between the workers, lending itself to expression in a casual, familiar setting and not one of formality.

#### **4.4. Sources**

As mentioned, the documentation of the height difference was crucial in accurately representing the distinction between questions and statements. For my HCE research, I gathered audio files from a CD, Internet sources, such as podcasts, websites, and YouTube videos. I also had access to SOLIS, a database of HCE corpora as well as an interviews conducted by Katie Drager of the University of Hawaii with speakers who grew up in Hawaii. For my Hawaiian language research, I gathered audio files from the Clinton Kanahale Collection of Hawaiian language transcriptions and files, as well as online Hawaiian language lessons. I will provide additional information regarding these sources in this section

#### **HCE**

1. Full on Pidgin (archived)
2. Da Jesus Story (Bible translated into Pidgin)
3. AnyKine Kine Podcast
4. Lee Tonouchi and Kent Sakoda interviews
5. Guess Who game
6. Katie Drager Interviews and SOLIS corpora database
7. Ryan Higa Youtube videos
8. Bickerton Recordings

## **Hawaiian**

1. KSDL (Kamehameha Schools Online lessons)
2. Clinton Kanahale Collection through BYU library
3. Aloha Spirit, Ahonui Mims (YouTube Hawaiian lessons)
4. Online Hawaiian podcasts through University of Hilo
5. Oiwi TV by ‘Aha Pūnana Leo

### **4.5. HCE Sources**

#### **4.5.1. *Full On Pidgin***

The website Full On Pidgin, (Full On Pidgin, 2005) which is a sub-page of the website Extreme Hawaii Fun and is now only available if searching old archived web pages. On the site, the purpose is stated as follows:

FULL ON PIDGIN is dedicated to those who want to feel the essence of true Hawaii. Pidgin here in Hawaii is a sort of Hawaiian Slang-lish and not the Pidgin language spoken in the deep south Pacific Islands. A culture lies behind Hawaiian Pidgin. It seems to rub off on those who stay for any length of time. There are many, especially in the country areas and outer islands that only talk "da kine" true Hawaiian Pidgin. It is peppered with Hawaiian words. For a mainlander it can be a real challenge to understand, but for those who live here, it is a part of island life. Reading the printed Hawaiian Pidgin, there are many accents and a type of lilt or tone that are applied to most words. The spelling is meant to capture the pronunciation.

The Full On Pidgin website offered several examples of phrases commonly used in HCE. The website allowed the viewer to download a sample sound file that was presented by an HCE speaker. The viewer was also provided with the orthography in HCE and in Standard English. I gathered a few examples from this site which illustrate the typical falling intonation in questions.

#### **4.5.2. *Da Jesus Story***

“Da Jesus Story” is an audio CD; a supplement to *Da Jesus Book*. *Da Jesus Book* is the HCE version of the Bible and thus the CD, *Da Jesus Story* is the Bible read in HCE. The CD is not the complete Bible but rather selected readings of *Da Jesus Book*. The male speaker is David Lancaster, who is a professional radio announcer and a native Hawaiian speaker. He maintained HCE throughout the recordings and whenever needed, for the integrity of the recordings, retakes were done so that the HCE was consistent. The female speaker on the recordings who announces the sections of *Da Jesus Book* is LouAnn Kaaloo. She is also a native speaker and lives in an HCE-speaking community.

#### **4.5.3. *AnyKine Kine Podcast***

With the development of Apple’s portable digital media player, the iPod, the company has also developed a culture and a community. Apple created an outlet for people to create their own radio shows and distribute them over the Internet, to be downloaded to the iPod to be listened to at a later time. The term used for these broadcasts is “podcast”. The AnyKine Kine podcast is a weekly radio program from San Francisco recorded in HCE by two Hawaiian males, Sam (aka Blastyojaw) and Riordan (Danrio). The recordings used in this study were from podcasts dated between October 2005 and February 2006.

Sam is originally from Hawaii and he is approximately 33 years old. He attended high school in Kaneohe at Castle High School. He speaks Pidgin but says that he is able to switch easily to Standard English. He took Japanese language classes, but is unable to speak Japanese. He graduated from the University of Hawai'i at Manoa in Information and Computer Sciences. During his college years he created a college radio program on KTUH 90.3FM in Honolulu (for fun and love of music), called Uncle Murdles. He moved to San Francisco in June, 2005. He has since spent time in Africa with the Peace Corps and now resides in California.

Riordan Reyes or Ordie is a friend to Sam and also comes from O'ahu. Riordan grew up in Ewa Beach, which is a sugar cane town on the island of O'ahu. He switched high schools and attended Samuel FB Morse High School in San Diego. He attended college at San Jose State University in San Jose, California. He now lives in San Francisco and is co-creator of the AnyKine Kine podcast. His podcasting name is Danrio, which is a reversal of his name. Danrio is 40 years old and is second-generation Filipino. Ordie also took Japanese classes and he speaks Tagalog fluently.

The two friends created the podcast as a way to reminisce and speak HCE together. Both Sam and Ordie have a great interest in technology and in the alternative music scene. Thus the AnyKine Kine Podcast Show was born. The AnyKine Kine podcast features Sam and Ordie conversing about their recent activities and playing new music. A common topic in their conversations is what they have eaten recently or what music shows they have attended. All conversations are in natural settings and Sam and Danrio usually speak with a fast rate of speech, as is common when people are speaking of things they are excited about and to people with whom they are comfortable. In 2007, I interviewed Sam and Ordie to become more familiar with HCE and to start gathering footage for my documentary on HCE. I have stayed in contact

with Sam and have consulted him over the years when I have a Pidgin question and need a Pidgin speaker's intuition or judgment on an utterance. When talking to them in 2007, they mentioned that I should contact Lee Tonouchi, "Da Pidgin Guerilla", which I did the following year.

#### **4.5.4. *Lee Tonouchi, HPU students, and Kent Sakoda***

In 2008, I interviewed Lee Tonouchi in what I was going to use for the beginnings of a documentary about HCE. I filmed him reciting his poetry as well as using typical HCE words and phrases. In 2011, I met with Lee and his students in his Pidgin Literature class at Hawai'i Pacific University to have them play the game Guess Who? Also in attendance was Kent Sakoda, co-writer of the *Pidgin Grammar*.

#### **4.5.5. *Guess Who? Game***

The Guess Who? Game is a game used for question elicitation and was suggested by communication with Karsten Koch (p.c. Koch). This game was effective in eliciting yes/no questions between two people and overall was a good way to break the ice and make people feel comfortable. Each participant receives a game board with small pictures of many different faces. Some people have glasses, some have dark hair, some have light hair, and some wear hats. There is a mixture of both male and female faces and every card on the board shows a person who has attributes that can be easily identified. The players then each take a picture from a pile of cards that they alone get to see. Each card has a name at the bottom. The object of the game is to guess who the other player has selected before they guess who you have selected. The game begins when the first player asks a yes/no question of the other player regarding the card the other player selected. The game is a way to play a 20 question type game, where the players

are only allowed to ask yes/no questions. Sample questions would be, “Is your person wearing a hat?” or “Is your person wearing glasses?” If the first player asks, “Is your person female?” and then the second player may respond, “No.” Then the first player can turn over all of their cards on their board that have a female face on it to narrow down who the other player has in their possession. I recorded three sets of people playing this game and was able to use some of the data. In general, this was an excellent way to gather yes/no questions and participants ended up joking and having fun, which in turn made the interaction more natural.

#### ***4.5.6. Katie Drager Interviews and SOLIS Database***

Natalie and Jamin, a brother and sister who spent most of their whole lives in O‘ahu, were interviewed by Katie Drager of the University of Hawaii. Natalie is 47 years old and Jamin is 42 years old. Both speakers are from Kalihi Valley on O‘ahu. Katie also interviewed another pair of speakers, however; I have only presented Jeremy’s data because he spoke more Pidgin than his wife. Jeremy is 26 years old and is from Pearl City and Mililani. The interviews were conducted in a home setting and Katie was the only interviewer speaking to the participants. For the most part the speakers shared stories of growing up in Hawai‘i . Once in a while Katie would ask a question that would spark a conversation between the two speakers. The interviews recorded are naturalistic and all speakers appear to be quite comfortable. The benefit of analyzing these interviews was that being very spontaneous, the intonation used by the speakers was natural and not contrived providing accurate height represented as well as variety of purposes. In both interviews, the female speakers spoke a more standard Mainland variety of English. This is fact is commented on by Wolfram (1969) in that females adhere to the standard English norm more than males do, however, environment also plays a role in the production of

Pidgin, and under certain circumstances, or in certain peer environments, gender may not play a role in separating speech registers.

#### **4.5.7. *Ryan Higa YouTube Videos***

Ryan Higa posted two videos of his great grandmother, Mary. On Ryan's YouTube video post he describes the video:

This is a video recording of my Puerto Rican great grandma Mary in Kohala (her parents immigrated into Hawaii from Puerto Rico to work on sugarcane plantations in the early 1900's). I wanted to document her strong pidgin dialog which is becoming a rarity even on the Big Island. She grew up raising children at a very young age and never learned how to read or write. Her pidgin is well preserved from the old sugarcane plantation camp days. We went to visit her during Christmas 2007. She asked my dad to help replace her light bulbs throughout her apartment. She refers to light bulbs as "globes". Just a note on what I've observed in pidgin dialects in various places in Hawaii. Kohala is considered a rural community on the Big Island (country-like). Kohala natives use the word "been" in place of the more commonly-used word "when" to indicate past tense. Example (He went): "He been go" would be used instead of "He when go".

Ryan's father is talking to her as they walk through the apartment, helping with her light bulbs. In these two videos you can hear not only Ryan's great-grandmother's Pidgin, but also Ryan's father's Pidgin, equally impressive. This video shows two different generations of Pidgin use.

#### **4.5.8. *Bickerton Recordings***

The recordings that Derek Bickerton made of Pidgin speakers in Hawai'i are housed and accessed through a Digital Archive, called Scholar Space at the University of Hawaii. This site does not have public access however, I was given special permission to access the site.

## **4.6. Hawaiian Sources**

### ***4.6.1. Kulaiwi (Kamahameha Schools Distance Learning KSDL)***

Kamehameha Schools developed several online Hawaiian lessons and distributed them through their Distance Learning website. The distance learning Hawaiian language program is called Kulaiwi, which means, “native land” or “homeland” in Hawaiian. These lessons were presented in a streaming video lecture series and are still publically accessible. The lessons for Kulaiwi were taped in 1996. The instructor is a female native speaker of Hawaiian. Her name is Ekela Kaniaupio-Crozier and she lived on the island of O'ahu during the time of the taping.

### ***4.6.2. Clinton Kanahale Collection, Brigham Young University***

The Clinton Kanahale Collection accessible via the Brigham Young University in Laie, Hawaii is a collection of 20 interviews conducted by Clinton Kanahale with native Hawaiian speakers. All interviews were conducted in 1970 between June and September and all participants were born and raised in the Hawaiian Islands and spoke Hawaiian as their first language. The participants were all born approximately in the 1890s, which made their age at the time of the recordings around 80 years of age. This is important to note as the Hawaiian spoken in these interviews represents the Hawaiian language before the revitalization efforts, which started in the 1970's. It has been noted (NeSmith, 2005:8) that the Hawaiian after the revitalization differs than that of earlier Hawaiian.

### ***4.6.3. Ahonui Mims, Living the Aloha Spirit (Youtube Hawaiian Lessons)***

Ahonui Mims studied two years of Hawaiian in high school and then studied four years of Hawaiian at the University of Hawaii, Hilo. She then entered the Indigenous Hawaiian teaching

program where all of the courses were taught in Hawaiian. She has also worked at ‘Aha Pūnana Leo. She considers herself to be fluent in Hawaiian and has been using Hawaiian daily since 2008. At this point, she has over forty Hawaiian language videos available on YouTube.

#### ***4.6.4. University of Hilo Podcasts***

The beginner level Hawaiian lessons offered by the University of Hilo via podcasts available through iTunes provide an introduction to the Hawaiian language. The instructor is Kainani Kahaunaele, who is also a Hawaiian instructor at the Hilo campus. Her grandparents raised her in the town of Anahola, Kaua‘i, which is a rural community. Her love for Hawaiian music started an early age, playing ‘ukulele and singing with her family. Kainani is a gem in Hawai‘i as a local musician and promotes the culture and language of Hawaii with her instruction at the University of Hilo. She earned her B.A in Hawaiian Studies with an emphasis in Hawaiian language at UH Hilo. As a developer of Hawaiian language curriculum for ‘Aha Pūnana Leo (a pioneering Hawaiian language revitalization program) she also encouraged and promoted the documentation of Hawaiian history.

#### ***4.6.5. ‘Aha Pūnana Leo Hawaiian Lessons on ‘Ōiwi TV***

‘Ōiwi TV released streaming Hawaiian language lessons produced by ‘Aha Pūnana Leo. These lessons consist of the language instructor and two students. Every lesson begins with a quick review of the previous lesson. After the language lesson is completed, a musical component is presented to also teach Hawaiian culture. While teaching Hawaiian, the instructor also makes use of local Pidgin knowledge by making parallels between Pidgin and Hawaiian while teaching Hawaiian language concepts.

## **4.7. Technology**

### **4.7.1. Hardware**

The equipment that I used consisted of a Macbook Pro, 15 inch as well as a Sony Vaio, 13 inch. I mainly used the Macbook Pro for analysis, recordings, and gathering data. I used the Sony Vaio to complete transcriptions for the SOLIS database as well as for analyzing data and recording. I also used a recording device, a digital microphone made by ZOOM, with an SD card for memory as well as a USB connector to plug directly into a computer to transfer audio files.

### **4.7.2. Software**

Praat (Boersma and Weenink 2012) was used to analyze pitch tracks. All samples were recorded at 44000 bit rate. Transcriber, a software used to align text to sound was used for Katie Drager's interview with Jamin. The benefit of transcribing the audio files is that it makes it that much easier to pin point examples of statements and questions and refer to them later.

## **4.8. Characteristics: Pidgin or Hawaii Local English Accent?**

To reiterate, linguistically speaking, a pidgin is a rudimentary, simplified language used by people who do not speak a common language (cf. Chapter 1). However, when using the term Pidgin (and not pidgin), it means Hawaii Creole English, as I have mentioned previously. Not all people speak Pidgin in Hawaii, yet people who claim they do not speak Pidgin may also often speak a local variety of English, or Hawai'i Local English (Cook 2011) and use the local intonation pattern so common in Pidgin.

#### ***4.8.1. What is the difference between Pidgin and Hawaii English?***

Although the people who have been recorded may have varying degrees of how ‘thick’ their Pidgin is or perhaps their local accent is, the same intonation is found across all varieties. I have been told that the Pidgin of Kauai is more Portuguese sounding and the Pidgin of the North Shore sounds more California-like due to all the surfers from California who move there. However, what I understand and have found is that these varieties differ in stress or vowel quality, or lexical ways, but not in the specific intonation patterns which I have identified.

The intonation represented here and analyzed is consistent across male and female speakers from different parts of O‘ahu as well as across the Hawaiian Islands, whether they are speaking Pidgin or Hawai‘i English. The Pidgin or HCE data I provide is not of the Hawai‘i English variety but more of what is representative of HCE. In Chapter Five, I will provide a description of Hawaiian intonation, followed by a description of HCE intonation in Chapter Six.

## Chapter 5: Hawaiian Intonation

### 5.1. Introduction

A comparison between Hawaiian and HCE question intonation made on the Instant Immersion Hawaiian web help site (to accompany audio CDs) states: “What makes the Hawaiian especially nice is the fact that you don’t need to change any of “Pidgin” English from Hawaiian, then you will already know how the question intonation should sound, since it is used in Pidgin also.”

The same is mentioned in a beginning Hawaiian language learning book, *Ka Lei Ha'Aheo: Beginning Hawaiian* by Alberta Pualani Hopkins, “ To ask a question using the pattern you have learned in this lesson, all you need to do is make your voice go up and down in the Hawaiian question inflection, which is the same as in pidgin English. If you don’t speak the dialect of English, your teacher will model for you” (Hopkins 1992:10). Unlike English, the word order for questions and statements of this kind stays the same in Hawaiian. Native speakers of Hawaiian and HCE have acknowledged this similarity, but it has been the purpose of my research to provide a formal study. First, I will introduce Hawaiian intonation in this chapter and in Chapter Six I will examine HCE.

### 5.2. Description of Hawaiian Intonation

According to Hawaiian 101 developed by University of Hawaii, Hilo. There are two main types of questions in Hawaiian, yes/no questions, or “ho oia ho‘aole” and wh- questions or “ho‘o piha ike”.

The wh-question uses wh- question words (*hea, pehea, ehia* etc.) and can be formal or informal. Formal wh- questions start at a moderately high pitch and remain at that level until the

last word or two where the pitch rises somewhat. Informal wh- questions have the same intonation as statements. In this chapter, I will provide intonation descriptions from utterance types including statements, yes/no questions, wh-questions, listing/continuation, echo questions, and tag questions. Below I provide questions and statements for comparison from several different Hawaiian sources, the first being that of Clinton Kanahele.

### **5.3. Clinton Kanahele Collection**

As mentioned in Chapter 4, Clinton Kanahele conducted a number of interviews in 1970 with native Hawaiian speakers. Clinton himself, born in 1902, was in his late 60s when he conducted the interviews. He was an educator and served as a principal for several schools on the Windward side of O‘ahu, including Kaneohe, Kailua, and Laie. The following examples are taken from various interviews that Clinton conducted with native Hawaiian speakers from several different islands.

#### ***5.3.1. Paul and Carrie Eli Interview***

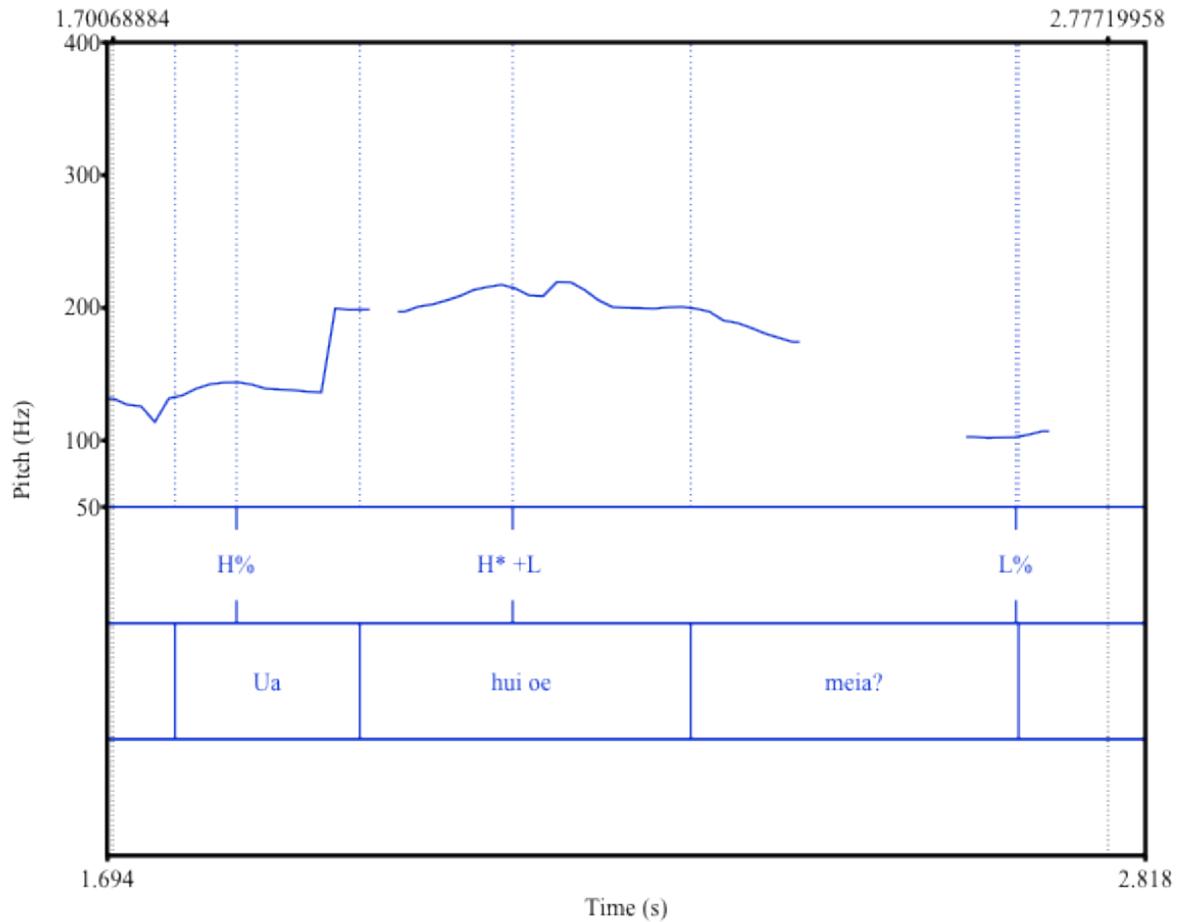
The example below is taken from the Paul and Carrie Eli Interview, 1970. Paul was born in Maui, in 1889 and at the time of this interview, he was 79 years old. Clinton was 68 years old, and was born in 1902. In this example, Clinton is asking if Paul Eli had met George G. Cannon in 1900 when he came to Hawai‘i. Paul replied that he never met him (p. 11 of transcript).

Clinton Kanehele:

CK: Ua hui oe meia?

“Did you meet him?”

Figure 5.1 Clinton Kanahale “Ua hui oe meia?”

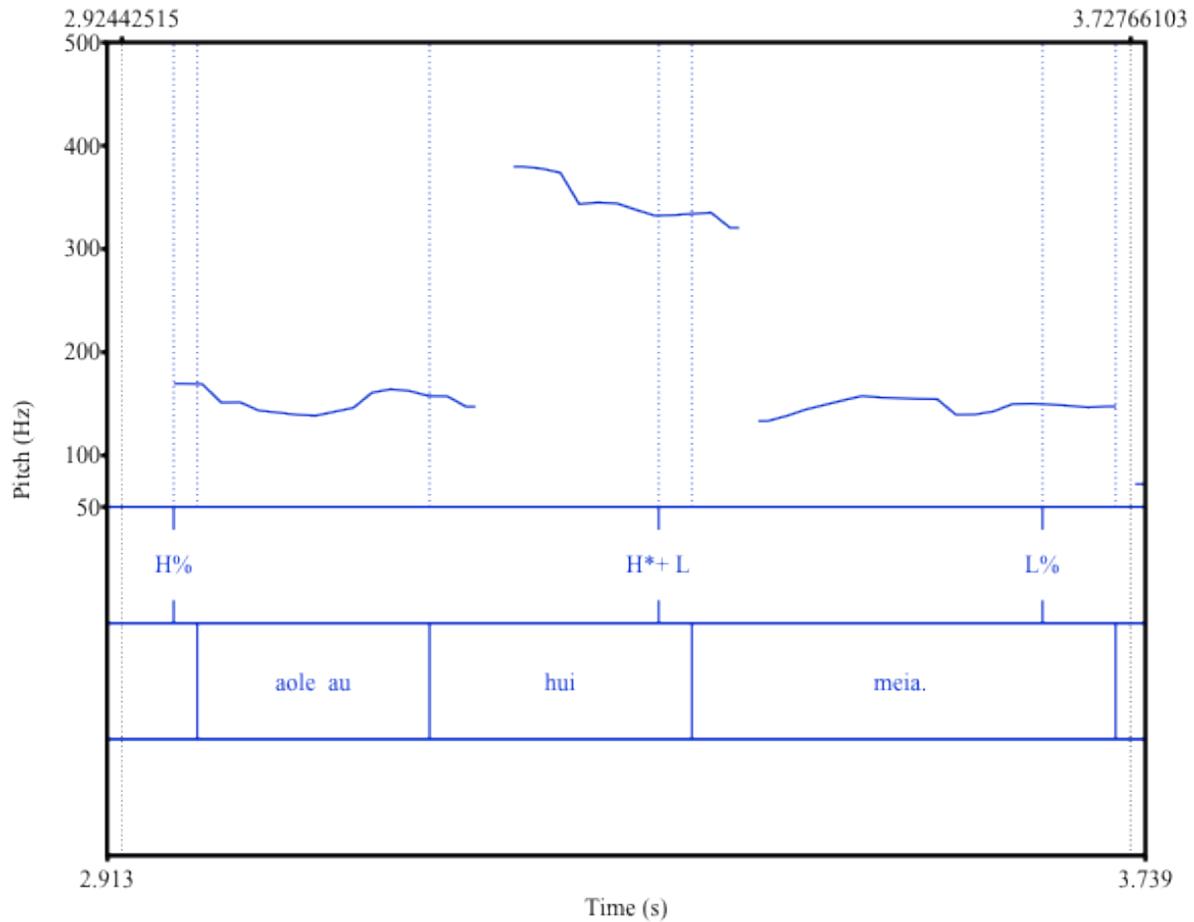


The yes/no question in Figure 5.1 starts high at the onset of the utterance, measured at the beginning of *ua* at 435 Hz with a small decline to 394 Hz. Then jumping back up to about 433 Hz, is the last peak on *hui*. The rest of the utterance falls and finally ends at a low 103 Hz. The response by Paul, shown in Figure 5.2 is quite a bit flatter in comparison.

Paul: Aole au hui meia.

“No I didn’t meet him.”

**Figure 5.2 Paul Eli “Aole au hui meia”**



The onset of Paul’s response begins at 169 Hz and maintains a flat plateau until the last peak of *hui* where it then rises to 340 Hz and then falls on MEIA at 147 Hz. Note that both the question and statement peak on *hui*, the nuclear tone (H\*) and both fall on *meia*. This is an example of a yes/no question in Hawaiian and a response.

### 5.3.2. *Levi Kapahulehua*

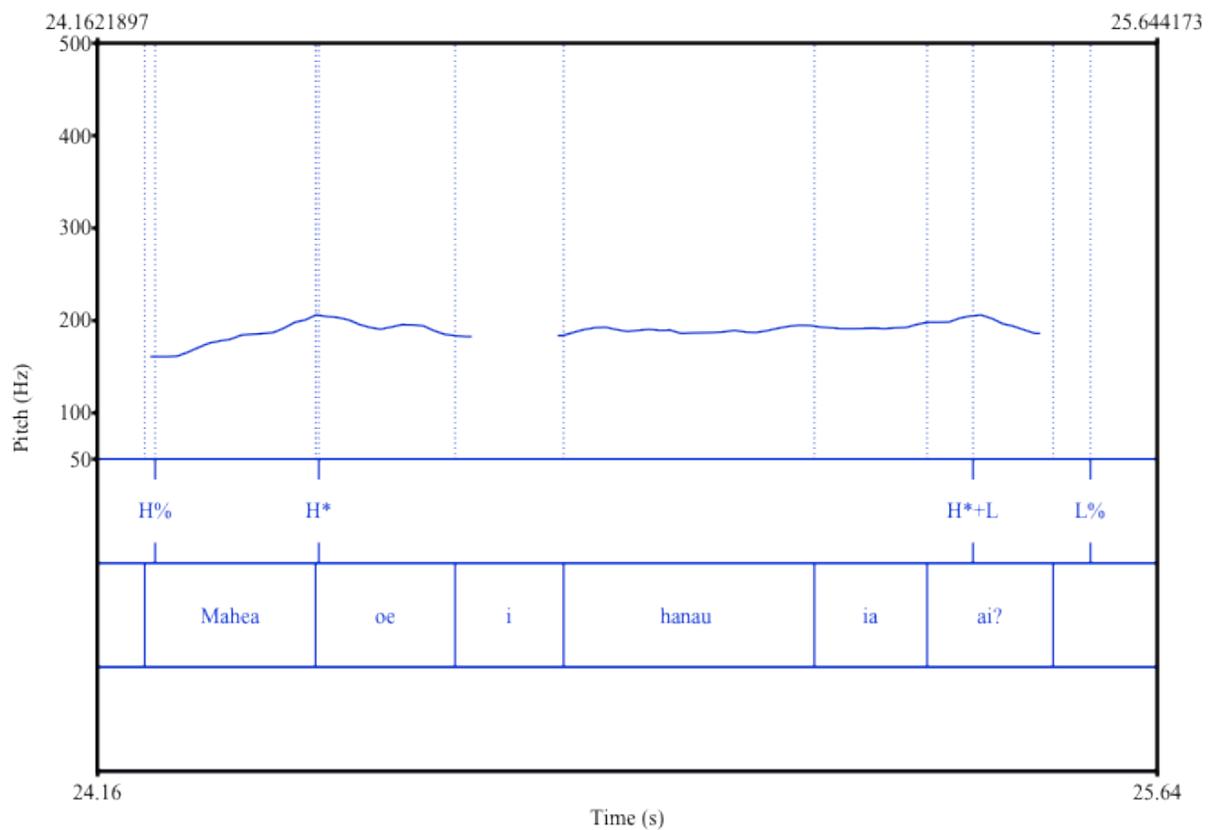
Levi Kapahulehua was born on the Big Island, but moved to Ni‘ihau when he was two years old. The year of birth for Levi is not mentioned in the interview, but the interview was conducted in July, 1970. As previously mentioned, the island of Ni‘ihau is a privately owned island where

residents still speak Hawaiian as their first language. The following example is taken from p. 1 of the transcript.

CK: Mahea oe i hanau ia ai?

“Where were you born?”

**Figure 5.3 Clinton Kanahale “Mahea oe i hanau ia ai?”**

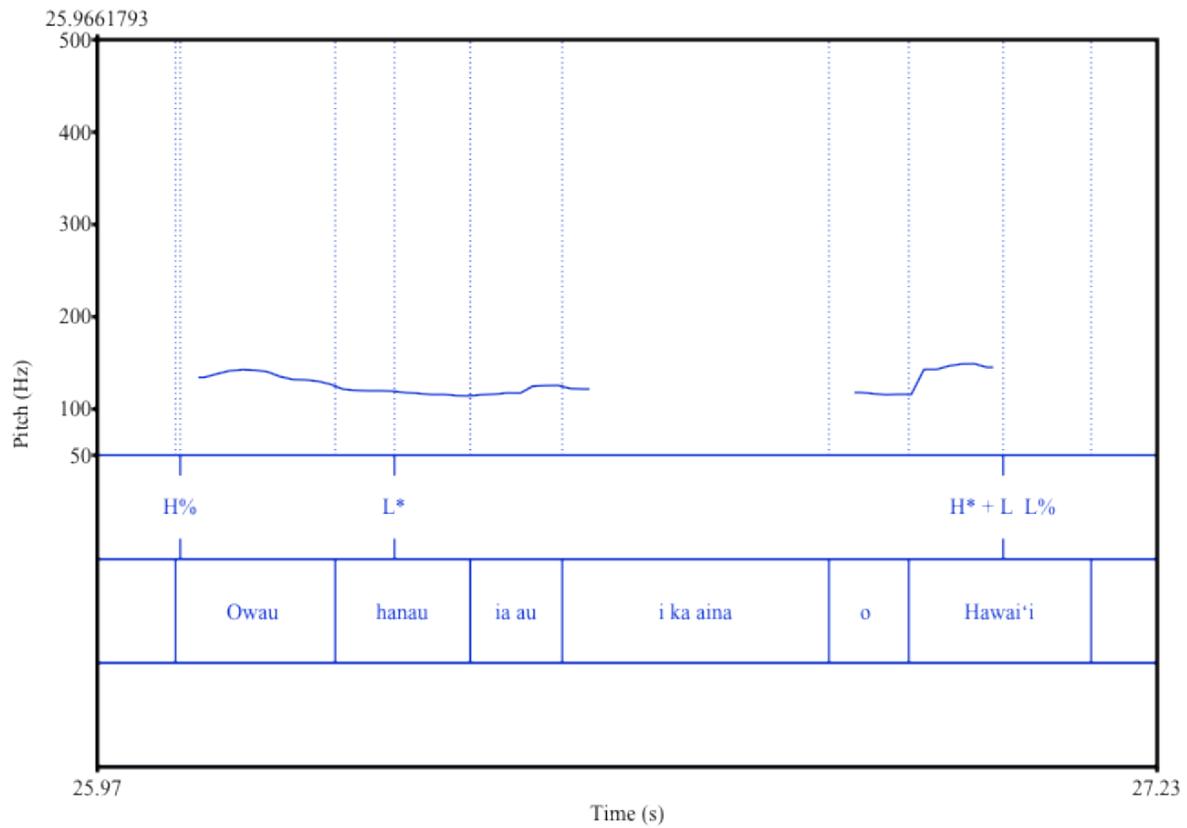


While the question in Figure 5.3 appears to be very flat, its flatness can mainly be attributed to this particular zoomed-out view in PRAAT. As compared to other utterances, this question stands out as being quite high. Next, consider the response by Levi, in Figure 5.4.

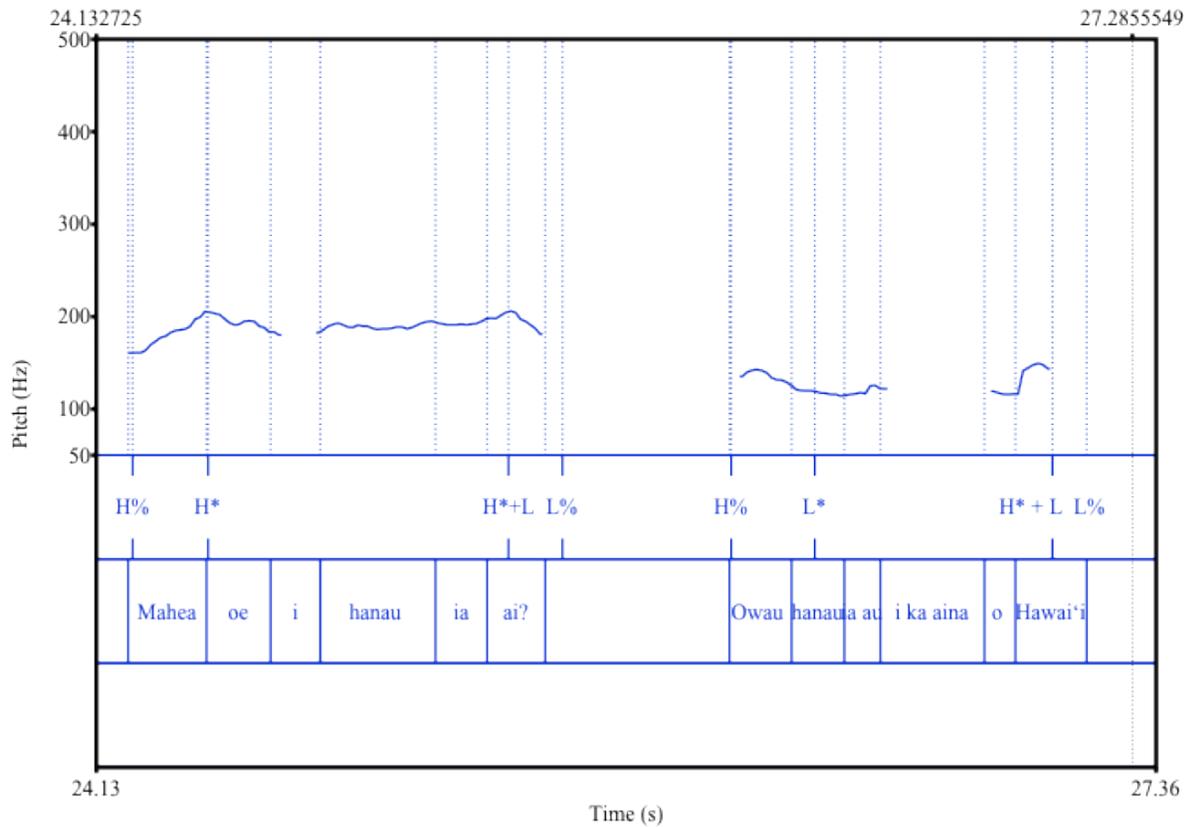
Levi: Owau hanau ia au i ka aina o Hawai'i.

“Me, I was born on the land of Hawai‘i.

**Figure 5.4** Levi “Owau hanau ia au i ka aina o Hawai‘i”



**Figure 5.5 Clinton and Levi Comparison**

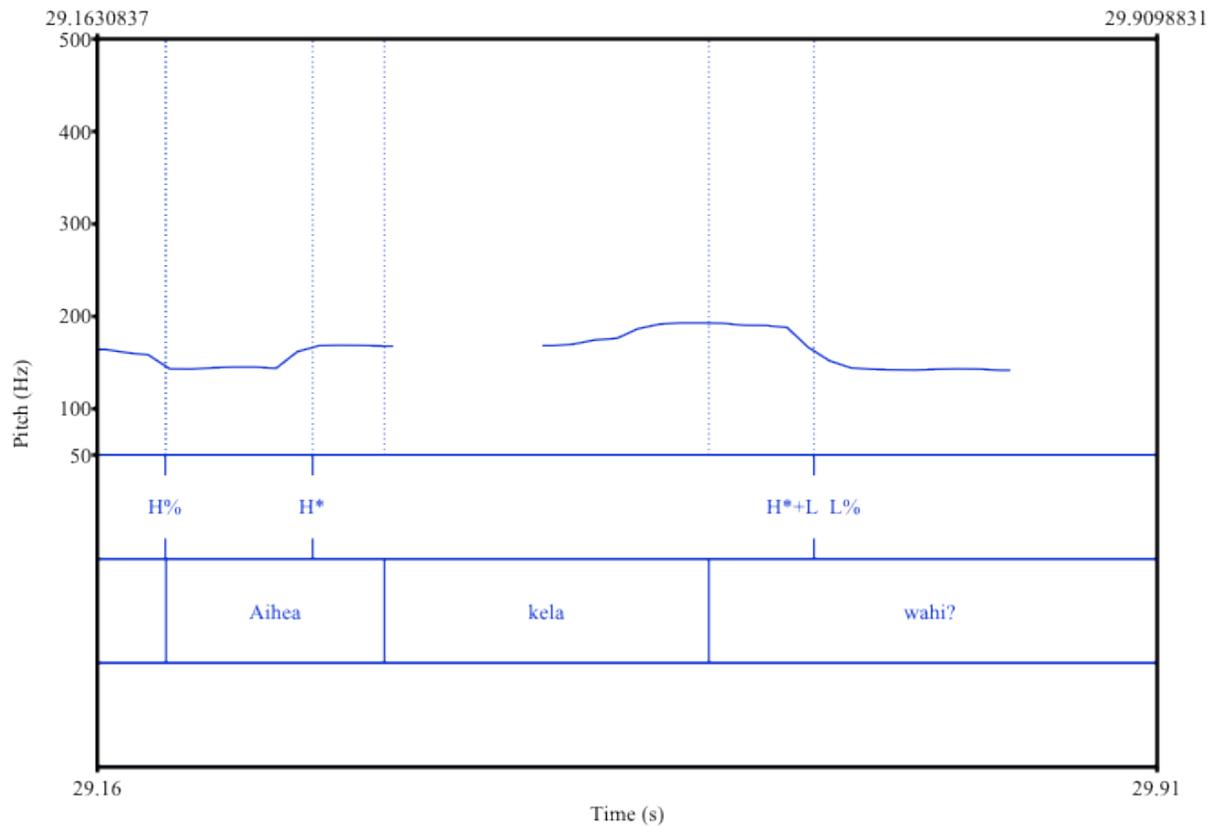


When comparing Clinton's question with Levi's statement, the difference in height is noticeable. Clinton's question starts at 160 Hz and then climbs to the first peak to 205 Hz at the first stressed syllable. The plateau remains high averaging 197 Hz where it then peaks last on *ai* to 205 Hz, and slightly to 183 Hz. The response, which starts at a much lower F<sub>0</sub>, 117 Hz, then reaches the first peak at 141 Hz, is markedly lower. This is followed by a low level plateau averaging around 118 Hz and then falling at the end with a lower Hz, trailing off at the end and not measurable with PRAAT. Figure 5.5 shows another example of a wh-question from Clinton Kanahele.

CK: Aihea kela wahi

“Where is that locality?”

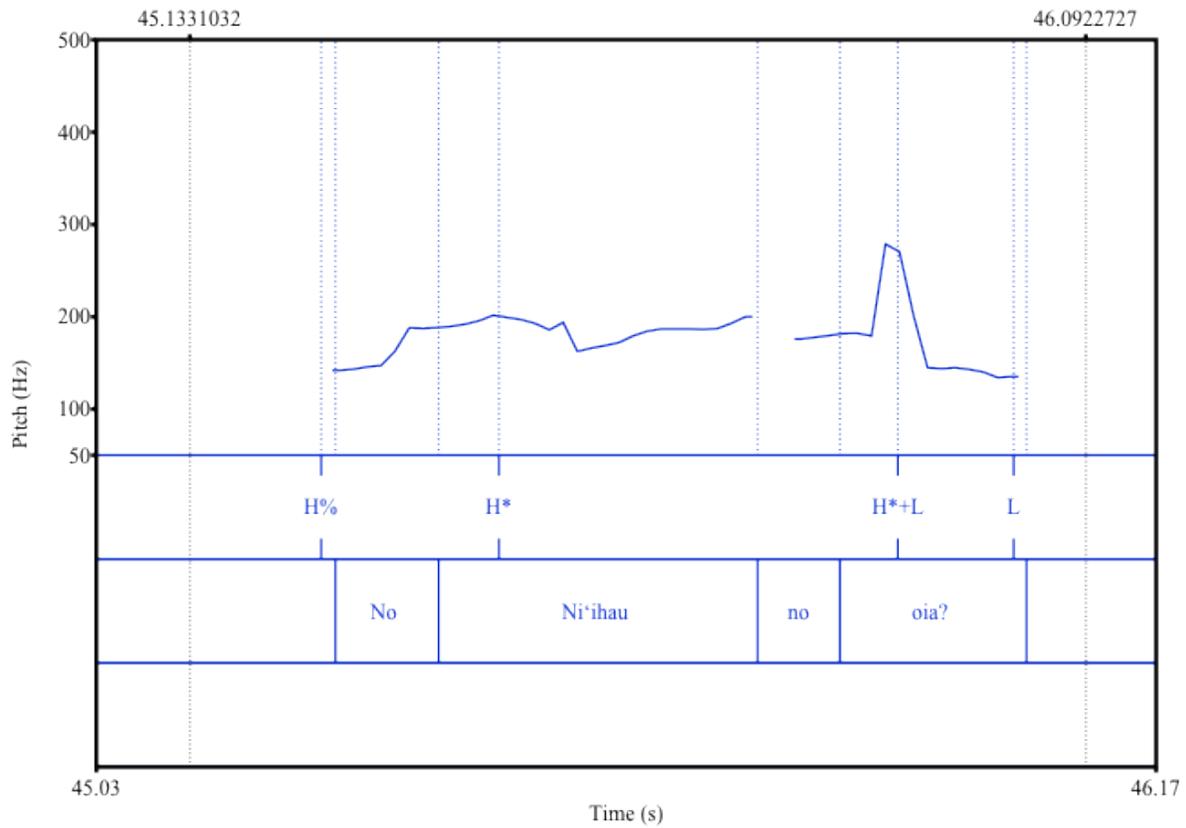
Figure 5.6 Clinton Kanahale “Aihea kela wahi?”



This wh-question in Figure 5.6 starts at 155 Hz and rises to a last peak of 192 Hz on *kela*, with stress on the second syllable and then falls to 142 Hz on *wahi* (which in fast speech sounds like “why”).

In Figure 5.7 Clinton asks Levi, if his uncle is from Ni‘ihau.

**Figure 5.7 Clinton Kanahahele “No Niihau no oia?”**



CK: No Ni'ihau no oia?

“Is he from Ni'ihau?”

As previously mentioned in Chapter One, Hawaiian yes/no questions and statements have the same sentence structure, however, intonation is different. This example of a yes/no question and statement vis-à-vis presents this fact clearly.

**Figure 5.8 Clinton and Levi “No Ni‘ihau no oia” Comparison**

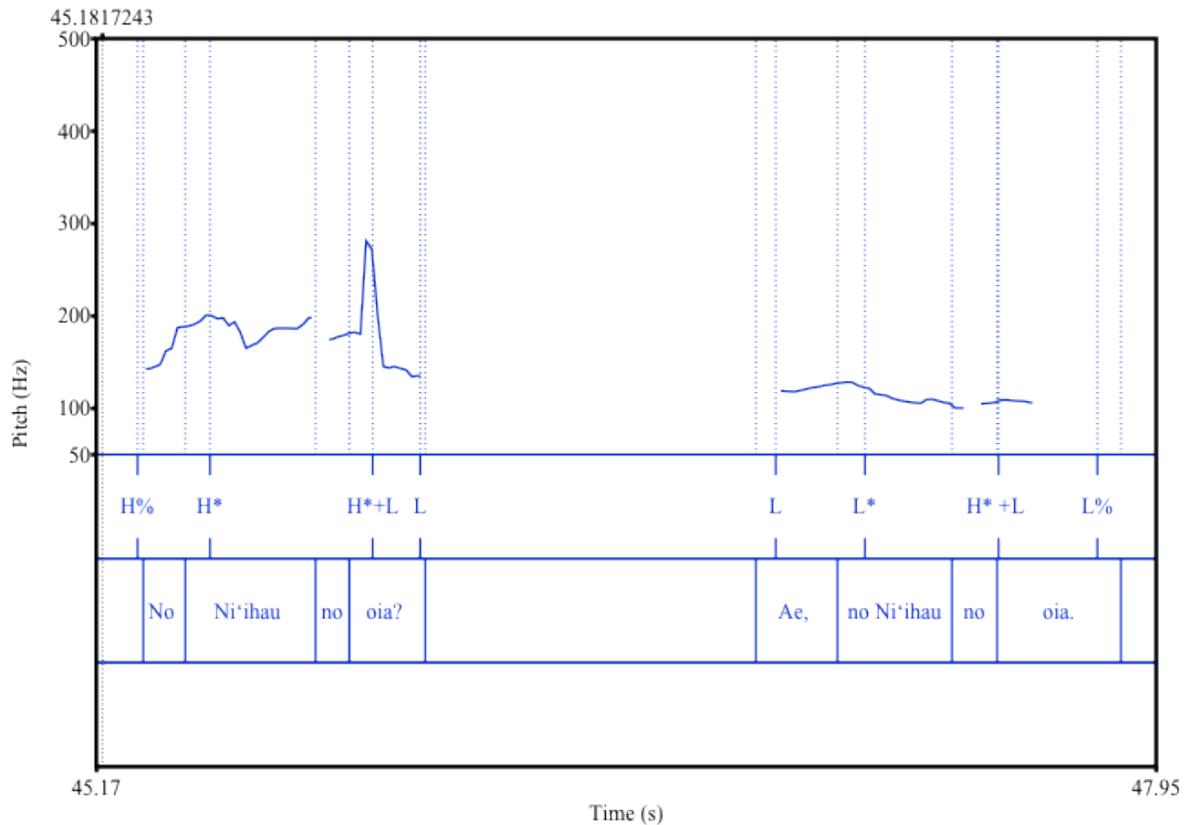


Figure 5.8 shows the yes/no question posed by Clinton next to Levi’s response.

Clinton then asks about things that are permitted on the island of Niihau. Levi explains to Clinton that drinking and smoking are not permitted on the island as per the Robinson family. In Figure 5.9, Clinton responds to this by saying, “No smoking?” This is an example of an echo question, whereby the listener repeats part or all of the statement in an interrogative manner. In Hawaiian, echo questions have falling intonation. (p. 10 of the transcript) .

CK: Aole, puhi paka?

“No smoking?”

**Figure 5.9 Hawaiian Echo Question Clinton Kanahele**

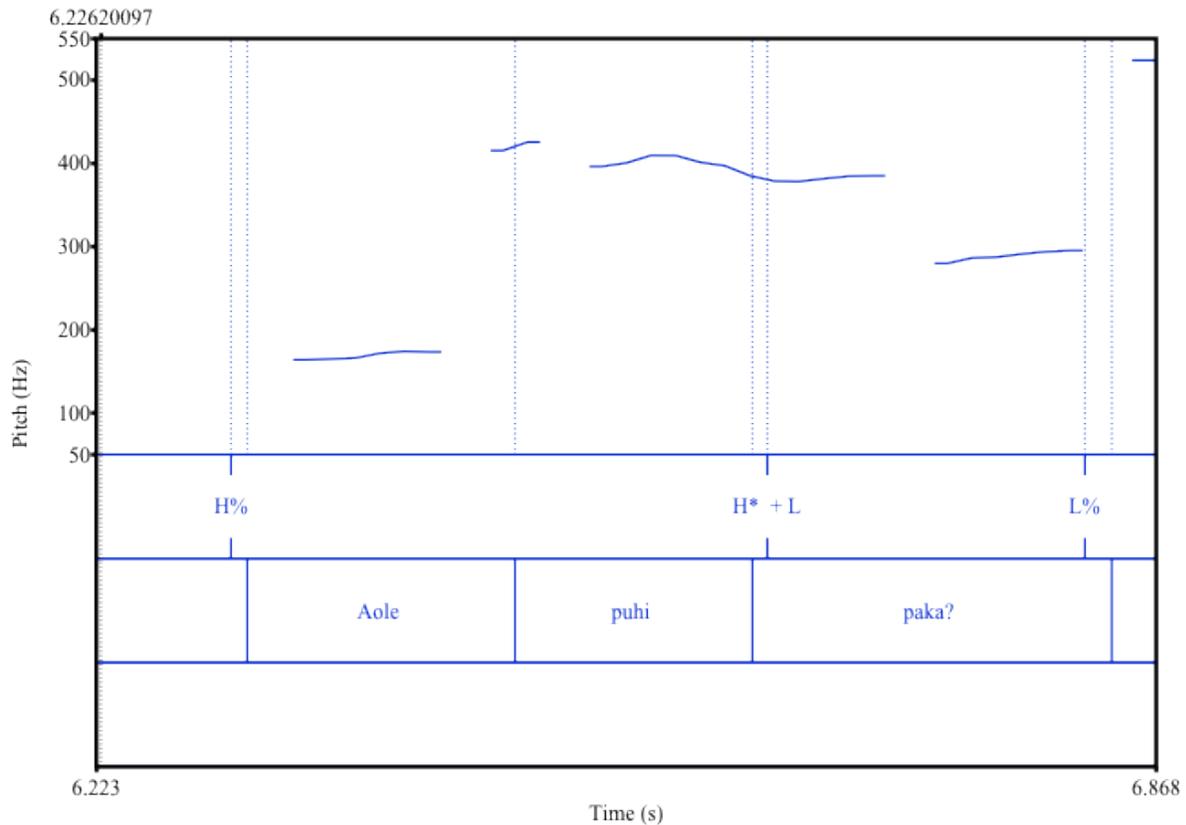
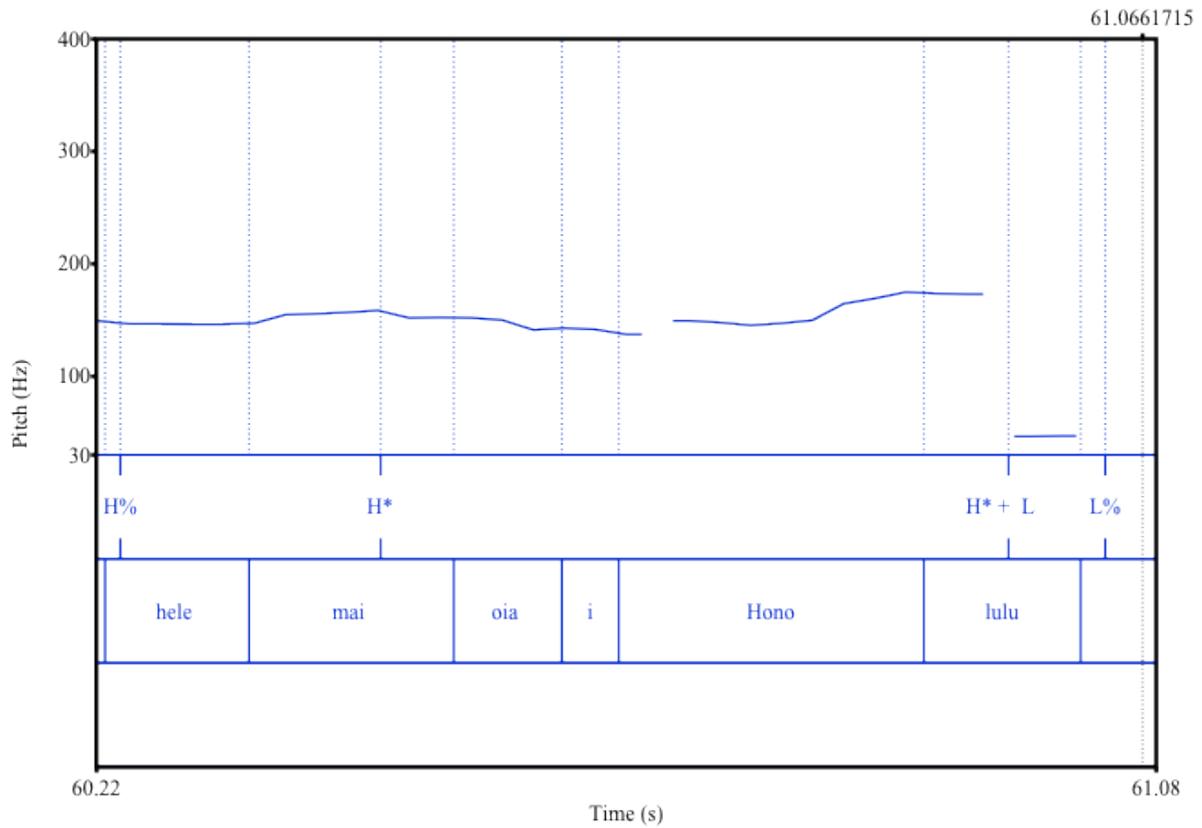


Figure 5.10 shows a statement in Hawaiian. In this example, Clinton Kanahele has asked Levi if he knew the man who killed the Japanese pilot who crashed on Ni‘ihau, December 7, 1941. Clinton adds that he remembers meeting him as he came to Honolulu when Clinton was young. He says, “He, Kanahele, came to Honolulu.” Coincidentally, the man he refers to also has the last name Kanahele.

CK: Hele mai oia i Honolulu.

“He (Kanahele) came to Honolulu.”

**Figure 5.10 Clinton Kanahale “hele mai oia i Honolulu”**

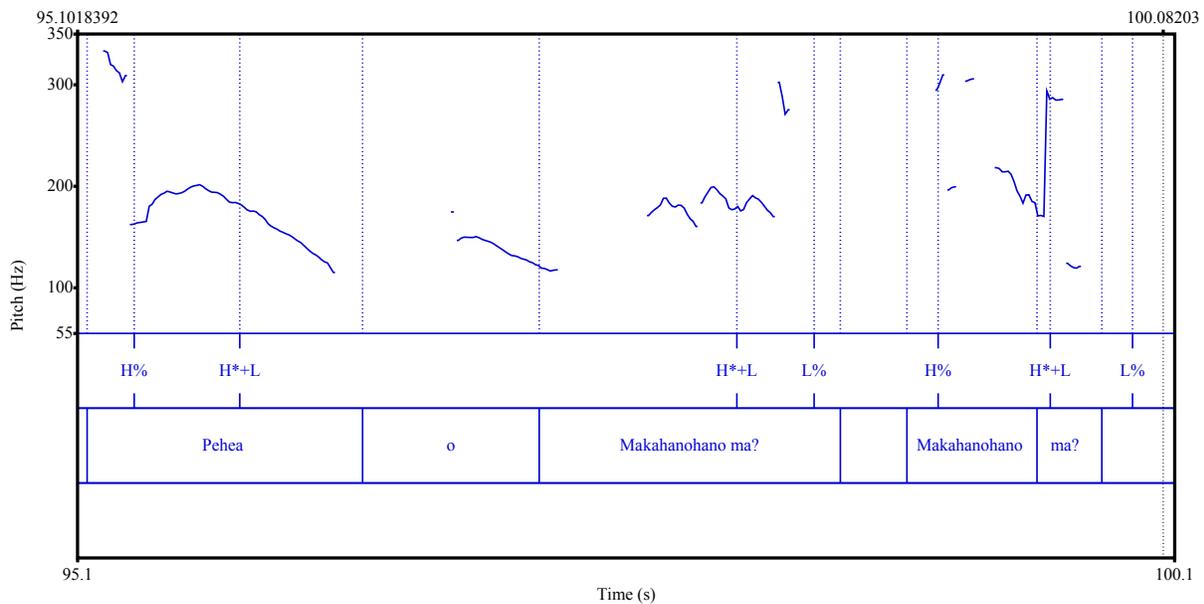


Note that the statement in Figure 5.10 is rather flat with a peak on the last stressed syllable and a low pitch fall. This example is typical of a statement in Hawaiian.

### 5.3.3. Gus Kaleohano

Figure 5.11 is an example of an echo question from an interview with Gus Kaleohano. In this example, Clinton Kanahale asks, “What about the Makahanohano family?” Gus Kaleahano replies with an echo question “The Makahanohanos?” (p. 6 from the transcript).

**Figure 5.11 Clinton Kanahale “Pehea o Makahanohano ma?”**



CK: Pehea o Makahanohano ma?

“What about the Makahanohanos?”

Gus: Makahanohano ma?

“The Makahanohanos?”

Notice the falling intonation on the wh-question word *Pehea*. Falling intonation is also on *Makahanoano ma* as well; however, there is indication on the pitch plot above of some extra sound spiking the wave, which makes it appear there is a sharp rise, which is not actually

the case. Regardless of this outside interference, both Clinton’s question and the echo question response by Gus have falling intonation.

Figure 5.12 is a yes/no question asked by Clinton Kanahele to Gus with regard to the accessibility of fresh water (p. 4 of the transcript).

CK: he wai puna no?

“from the springs?”

**Figure 5.12 Clinton Kanahele “he wai puna no?”**

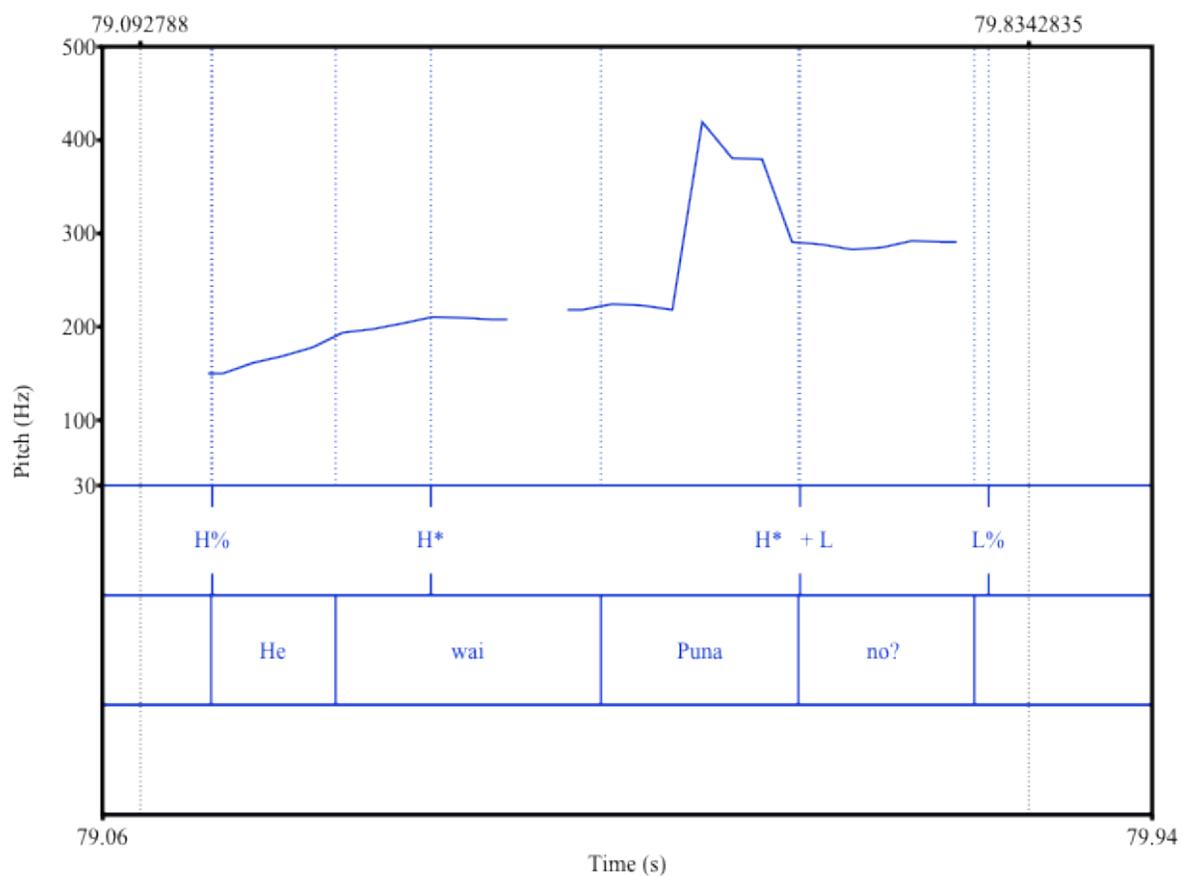


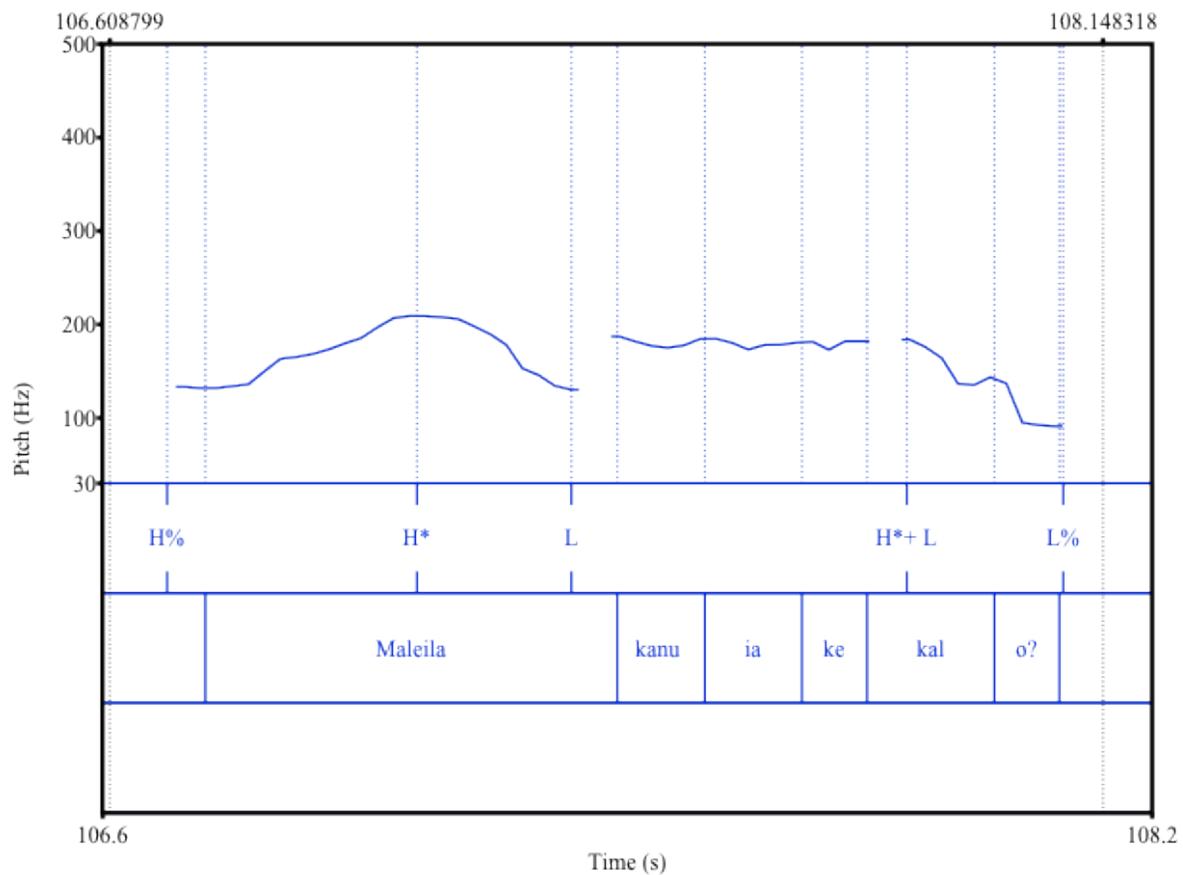
Figure 5.12 is another example of falling intonation in yes/no questions in Hawaiian. From gathering many examples of yes/no questions, a trend emerges allowing us to see the

predictable rising/falling pattern in Hawaiian question intonation. In the following wh- question example, Clinton asks Gus about taro being planted for food (p. 5 of transcript).

CK: Maleila kanu ia ke kalo?

“Was taro planted there?”

**Figure 5.13 Clinton Kanahela “Maleila kanu ia ke kalo?”**



Clinton’s question makes use of higher pitch, with a higher plateau, ending on a fall on the word, *kalo* (taro). In Figure 5.14, Gus answers the question.

Gus: Kanu ia ke kalo.

“Taro was planted.”

**Figure 5.14 Gus “Kanu ia ke kalo”**

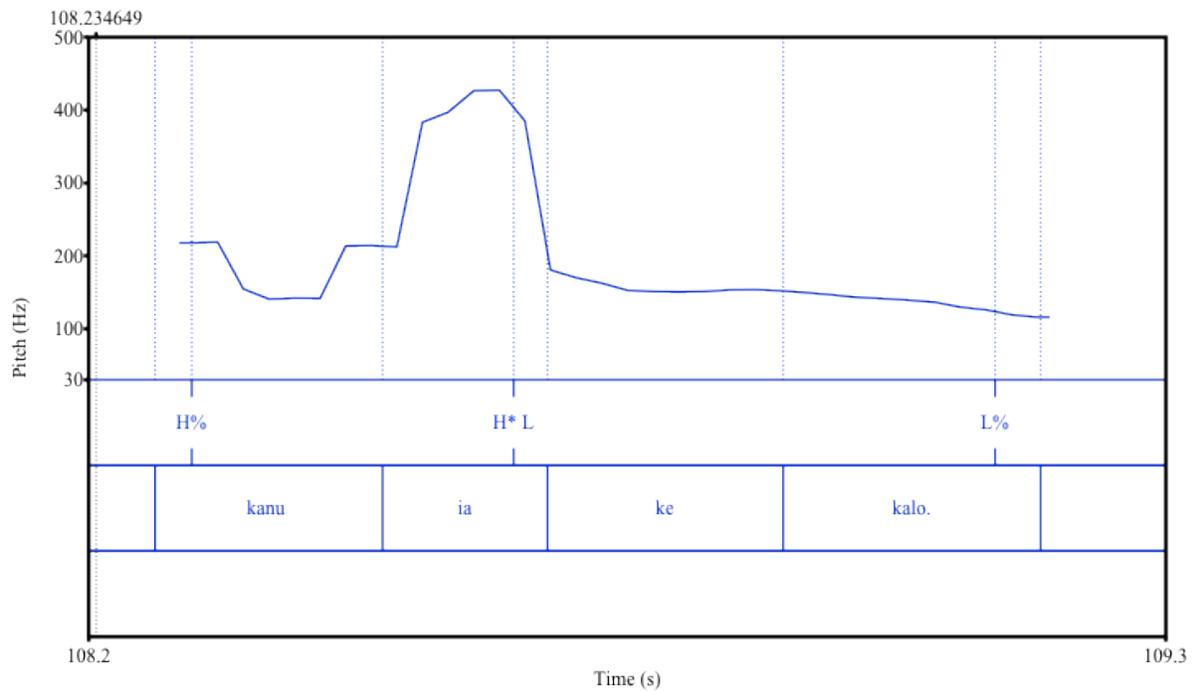


Figure 5.15 is an example of a tag question (p. 23 of the transcript). This occurs when Gus and Clinton are talking about what their ancestors did before the planting of crops. Take note of the falling intonation.

CK: Aale anei i pule lakou?

English gloss: Didn't they pray?

**Figure 5.15 Clinton Kanahale “Aale anei i pule lakou?”**

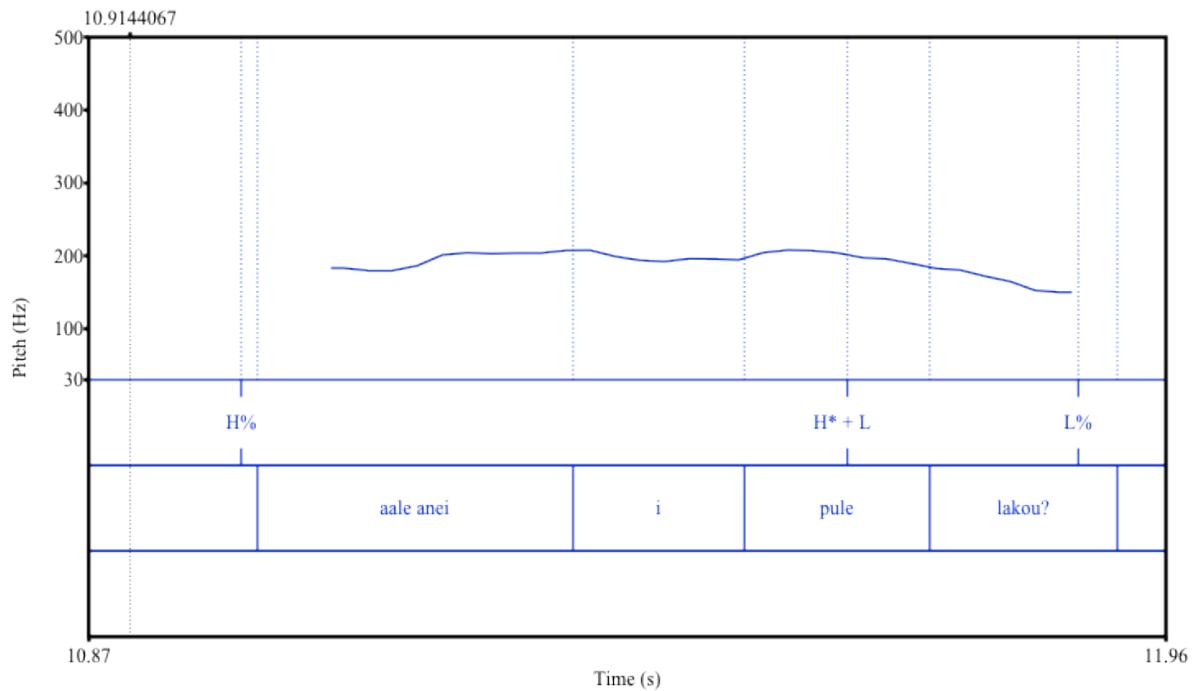


Figure 5.16 shows the tag question, “aale anei?”

Clinton: Say, I want to record a custom of the people, a custom of old Hawaii.

Gus: What is it?

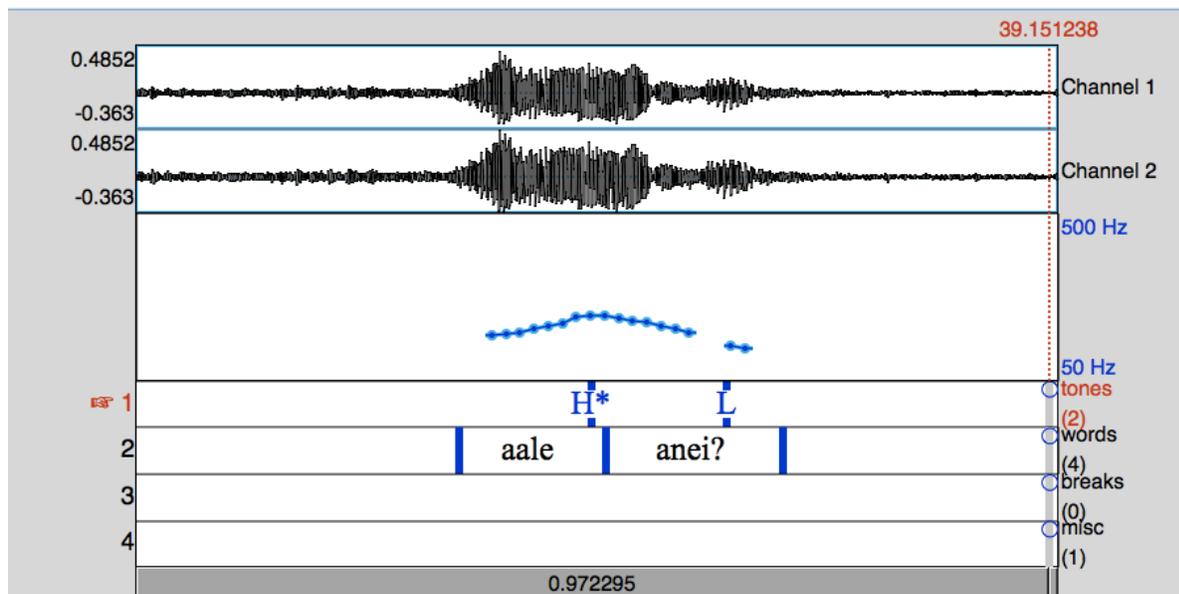
Clinton: If a person rejoined another and if they were women, they would begin to wail, wasn't that so? (tag question)

Gus: It was so

CK: Aale anei?

“Wasn't it so?”

Figure 5.16 Tag Question in Hawaiian



In Figure 5.16, *aale anei?* (“wasn’t that so”), the measurements are consistent with other questions. The utterance starts at around 172 Hz. The pitch rises to the height at 225 Hz at the stressed syllable and then falls to around 139 Hz at the end of the utterance.

### 5.3.4. *Solomon Kupihea*

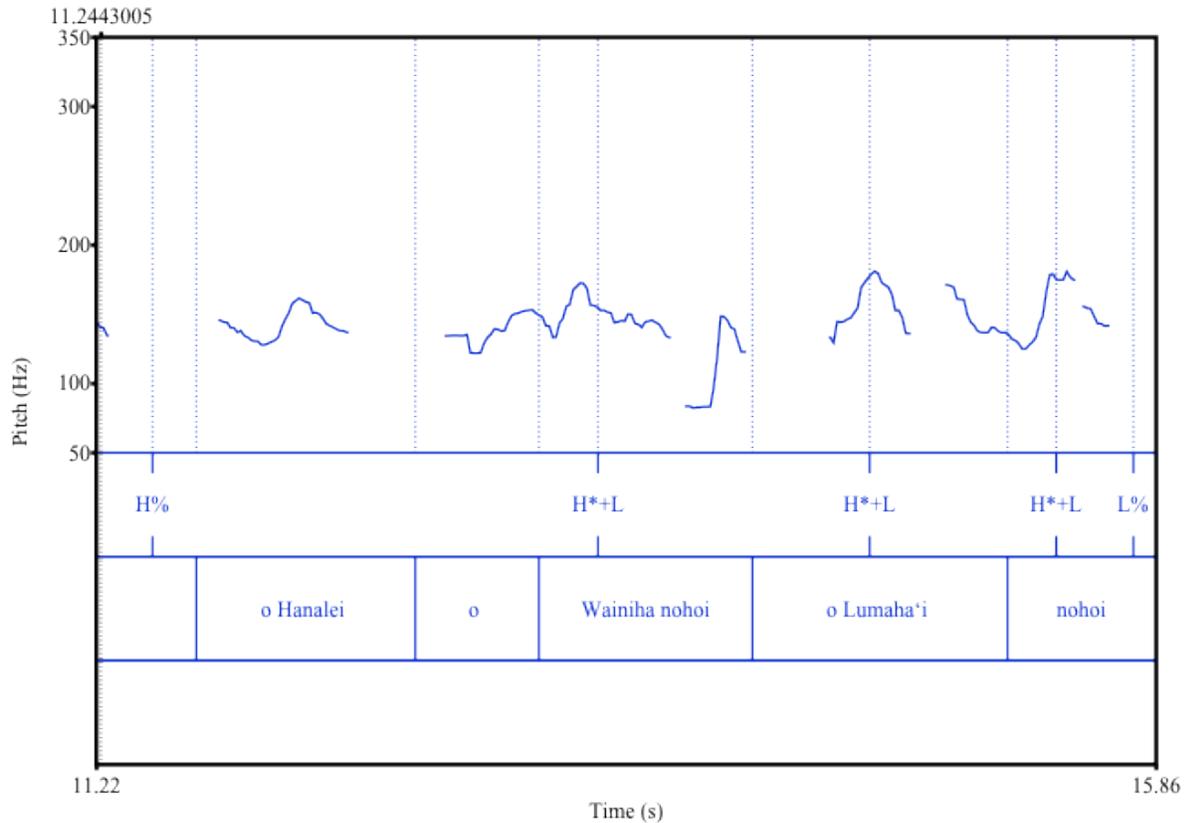
Figure 5.17 shows Hawaiian listing/continuation intonation and is taken from the interview with Solomon Kupihea. The dialogue between Clinton and Solomon Kupihea (p. 4 of the transcript) is as follows:

Clinton: That was how it was everywhere on Kauai. There is much water on this land of Kauai. There are many streams, and are very wide.

Solomon: Here indeed are our streams: Hanalei, also Wainiha, also Lumaha’i, Wailua, also Hanapepe, Waimea. Many streams

When Solomon lists the streams, the Hawaiian listing intonation can be seen. This intonation is falling after each name of stream.

**Figure 5.17 Hawaiian Listing Intonation**



As can be seen, for each stream mentioned falling intonation is used. The word *nohoi* after the stream names means “also” in Hawaiian. Downdrift, (which results in a lowering of each high tone immediately after a low tone) is not apparent in this example (cf. Connell, 2001:2). It appears, from the analysis, as if the speaker is resetting to a high tone after each chunk of utterance. As well, each high tone is not lowered by the preceding low tone.

All of the utterances in this chapter were taken from the Clinton Kanahele interviews which are archived on the Brigham Young University site (publicly accessible). The additional Hawaiian examples from other sources can be found in the Appendix.

#### **5.4. Conclusion**

This chapter's purpose was to describe the intonation of several different utterance types. The main data source for this research was the Clinton Kanahele archived interviews. One reason for this was that the style of Hawaiian spoken in these interviews has been identified as traditional Hawaiian (cf. NeSmith, 2005). In order to document the intonation patterns in a standard version of Hawaiian it was necessary to access audio files of older speakers of Hawaiian. From the data gathered from these files, I have provided an overall description of a variety of utterance types: statements, yes/no questions, wh-questions, echo questions, tag questions, and continuation/listing. Of these utterance types, I make the observation that all have falling intonation. As mentioned in Chapter 2, languages that have very similar intonation patterns in multiple utterance types (i.e. Belfast English) may use height distinctions to differentiate statements from questions. In Chapter Seven, I will identify the methods Hawaiian and HCE use to make this distinction, however, in the table below I offer some phonological generalizations of Hawaiian intonation.

**Table 5.1 Hawaiian Intonation Contour Inventory by Utterance Type**

TYPE	Falling/Rising	H and L Pattern
Statement	<b>Falling</b>	<b>H% H* + L- L%</b>
Yes/No Question	<b>Falling</b>	<b>H% H* + L- L%</b>
Wh-Question	<b>Falling</b>	<b>H% H* + L- L%</b>
Echo Question	<b>Falling</b>	<b>H% H* + L- L%</b>
Tag Question	<b>Falling</b>	<b>H% H* + L- L%</b>
Continuation	<b>Falling</b>	<b>H% H* + L- L%</b>

As is quite noticeable, the general pattern transcribed using the AM system, is consistent across all utterance types. These identical contours no doubt have phonetic realizations that offer the listener cues to avoid confusion. The challenge to using the AM system in Hawaiian is that the latitudinal distinction would require special symbols to express phonological distinctions. In a sense, the addition of such symbols would represent the phonetic space used in Hawaiian to distinguish questions from statements. At this point of the dissertation, I do not present a resolution to this challenge; however, I will discuss this further in Chapter 8. As well, Chapter Seven will provide analysis of how Hawaiian phonetically implements these patterns in order to offer cues of distinction.

## Chapter 6: HCE Intonation

### 6.1. Introduction

In this chapter I present the analysis of sound files of HCE that I have gathered, concentrating specifically on two sources; interviews by Katie Drager from SOLIS database and the Anykine Kine podcast. The other sources and data I gathered can be found in the Appendix. This section is organized by source and within each source I provide examples of the various utterance types, i.e. statements and questions.

### 6.2. HCE Intonation from Katie Drager Interviews and SOLIS

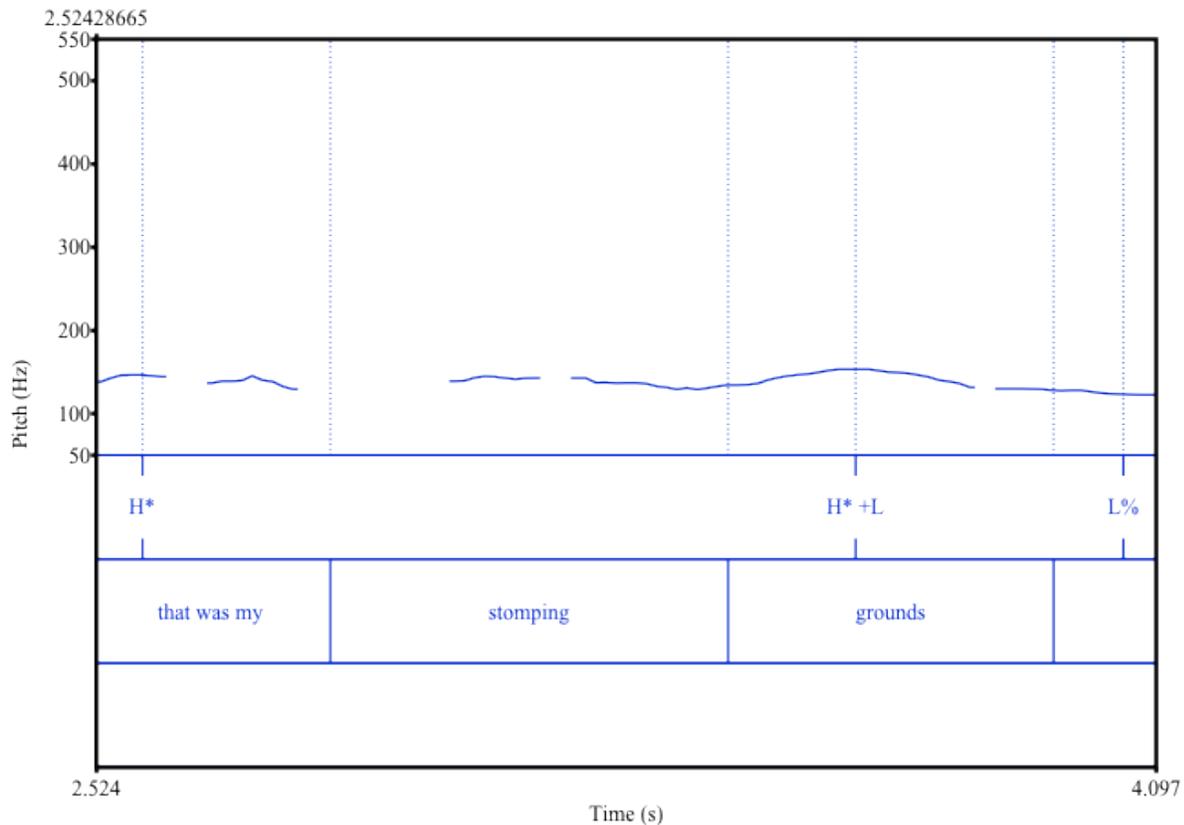
My main source for data from Katie Drager interviews comes from two interviews she conducted. Each interview was with a male and a female and in both cases the male speaker spoke Pidgin and the female in each interview spoke more Standard English. The next several examples come from a male speaker, known as Jamin who is in his 40's and was born and raised on O'ahu.

#### 6.2.1. Jamin

In the following example, Jamin is talking about his childhood, reminiscing with his sister and describing the neighborhood where he would spend time. Jamin says, “and I used to hang around over there too, that was my stomping grounds” when speaking of a specific area of the city where he grew up.

The statement in Figure 6.1 is fairly flat and level with a peak on the word *grounds*.

**Figure 6.1 Jamin “Stomping Grounds”**

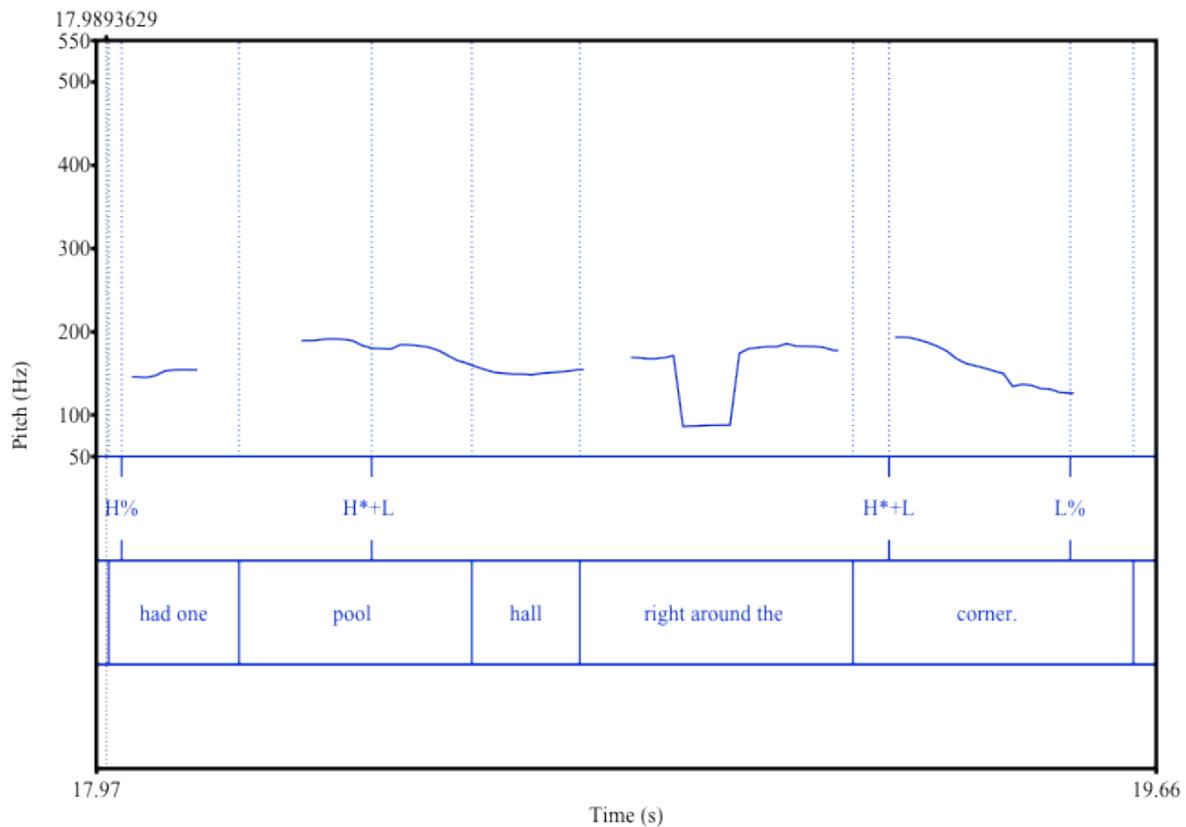


Based on measurements in Hz, the onset in the statement starts at 130 Hz with *that*. *Stomping* starts at 144 Hz. *Grounds* peaks at 153 Hz and falls to 130 Hz. These measurements will become more relevant as the data is presented in this chapter. However, to mention as a preview, the measurements of this statement tend to be a standard baseline measurement representative of statements for this speaker. In this statement, Jamin maintains the intonation rule in HCE that places the fall on the last stressed syllable, in this case HCE places the stress on *grounds*. As mentioned in the description of HCE in Chapter 2, HCE places word level stress differently compared to Mainland English. Mainland English would place the stress on *stomping*, however,

since HCE places word stress differently to Mainland English, the stress lands on *ground* and so the fall begins on the last stressed syllable of the utterance.

Jamin continues with the story of his youth and how he would frequent a pool hall near his grandmother's store.

**Figure 6.2 Jamin “had one pool hall right around the corner”**



Jamin continues with, “Had all these like killer looking Filipinos, used to drink beer and play pool in there.”

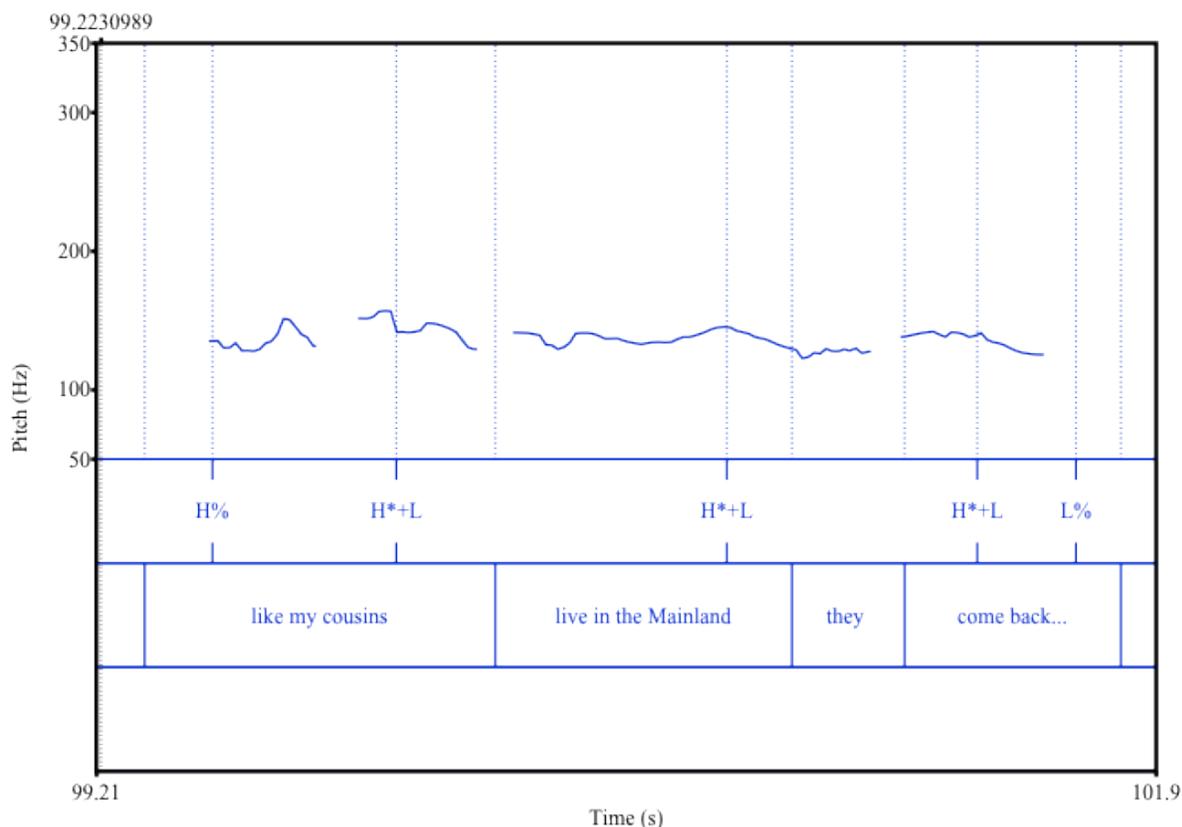
The measurements of the  $F_0$  in the statement in Figure 6.2 are as follows: onset of this statement starts with 145 Hz, followed by the first peak on *pool* at 189 Hz, the statement dips slightly on the word *right* at 149 Hz but then gradually rises as it reaches the peak at *corner*. The

peak is on the stressed syllable in *CORner* at 196 Hz and drops to 121 Hz. In comparison to the prior statement, the measurements in Hz are fairly similar in onset peak and ending. I will address these measurements in greater detail once I have presented all of the utterance types.

In the example shown in example 6.3, Jamin is beginning to talk about his cousins who grew up in California. He says, “Like my cousins live in the Mainland, they come back...and they haolefied already.”

In the first chunk of the utterance, Jamin ends with *come back*, and as he is not finished with his statement, he provides a continuation type of intonation, providing the listener with information that he has not finished speaking. In HCE, continuation or listing intonation is falling, whereas in Mainland English, it is a rising intonation pattern. For example, if someone in the Mainland States is speaking, takes a pause, but the complete statement is not quite finished, the intonation will rise, indicating that the speaker has not finished their turn. Falling intonation would then indicate finality of the statement incorporating the Frequency code (cf. Gussenhoven 2002). However, HCE uses falling intonation even in situations where speakers has not finished their speech turn and have more to say. In Hertz measurements, this statement doesn't rise over 156 Hz. The word *Cousins* (H\*) is the highest pitch at 156 Hz, followed by the next peak on the word *Mainland*, with the H\* at 144 Hz and the L at 123 Hz. The next peak and fall starts with the words *come* (H\*) at 140 Hz, and *back* (L) at 125 Hz.

**Figure 6.3 Jamin “like my cousins live...”**

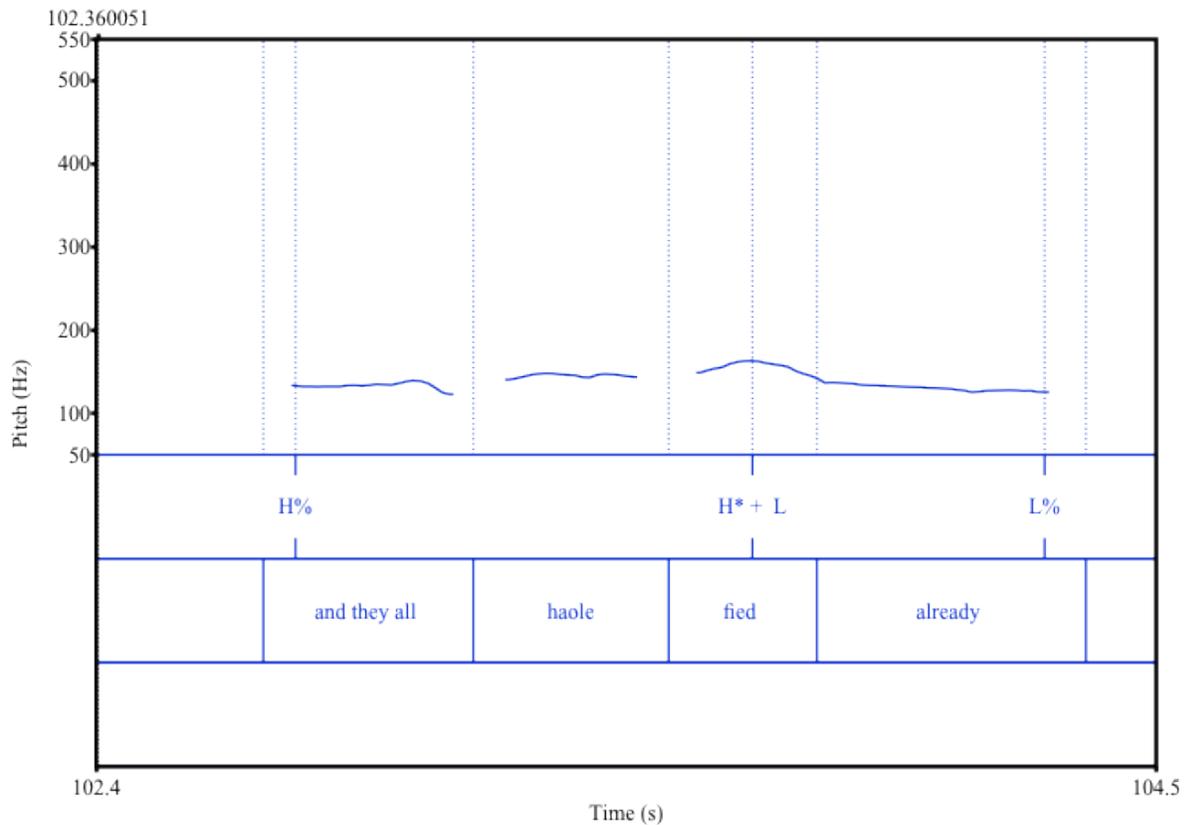


This statement is an excellent example of what was also seen from Vanderslice and Pierson (1967) (cf. Chapter 2) regarding the staccato quality of the HCE utterance. With a series of ups and downs, stress placement punctuates these utterances.

In keeping with the rule of the falling intonation occurring on the final stressed syllable, we can see that in the next part of the utterance, *and they all haolefied already*, the placement of the stress is on the second syllable of *haoleFIED* instead of on the first where Mainland English would normally place it. Hertz measurements of the  $F_0$  for *haolefied* shows the dramatic fall from the peak to the low tone on *already*.

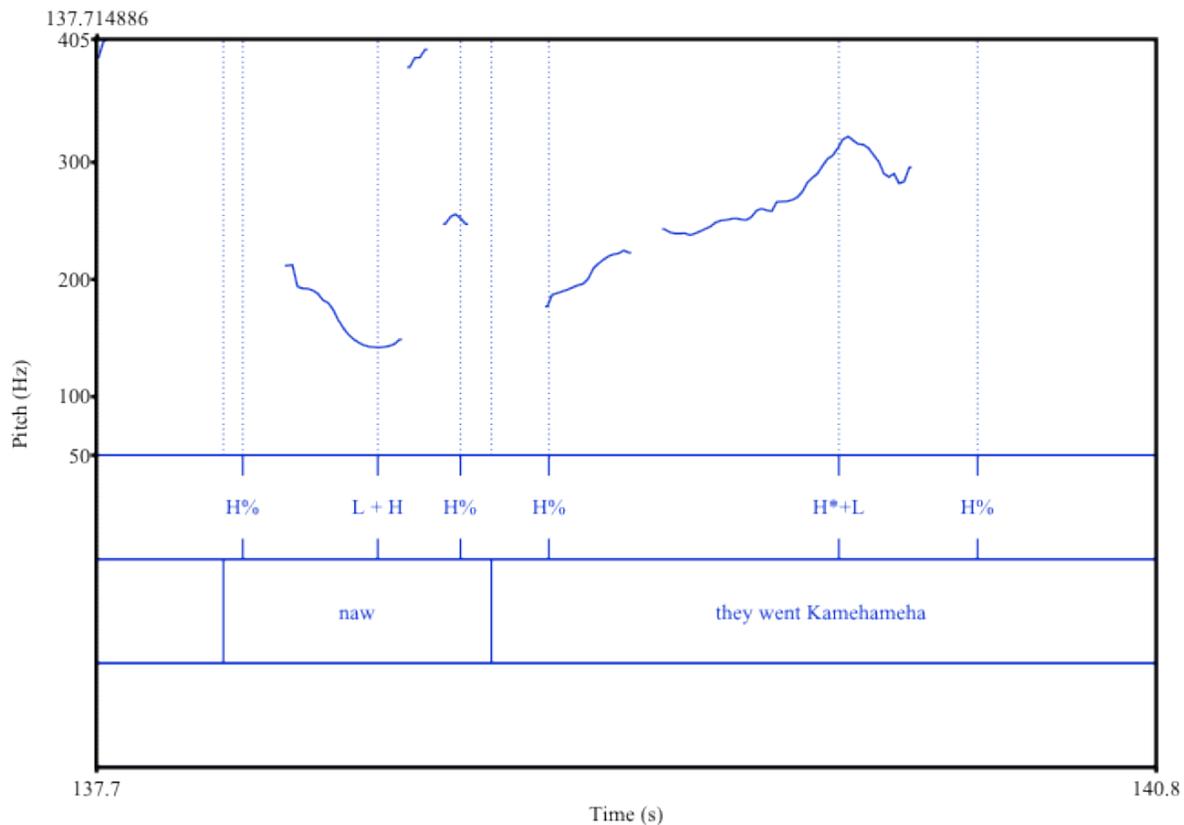
The onset of *haole* starts at 145 and then peaks on *fied* at 162 on the H\*, then falls to 125 Hz on *already*. See the example below, in Figure 6.4 for the pitch plot.

**Figure 6.4 Jamin “Haolefied Already”**



In Figure 6.5, when Jamin’s sister tells him that his cousins grew up in California, he responds saying, “ no, they went Kamehameha.” This intonation is higher than previous statements, but in showing emotion, Jamin is emphatic about this statement and what it conveys, telling his sister in a way to make sure she knows that the cousins went to Kamehameha Schools.

**Figure 6.5 Jamin “They Went Kamehameha”**

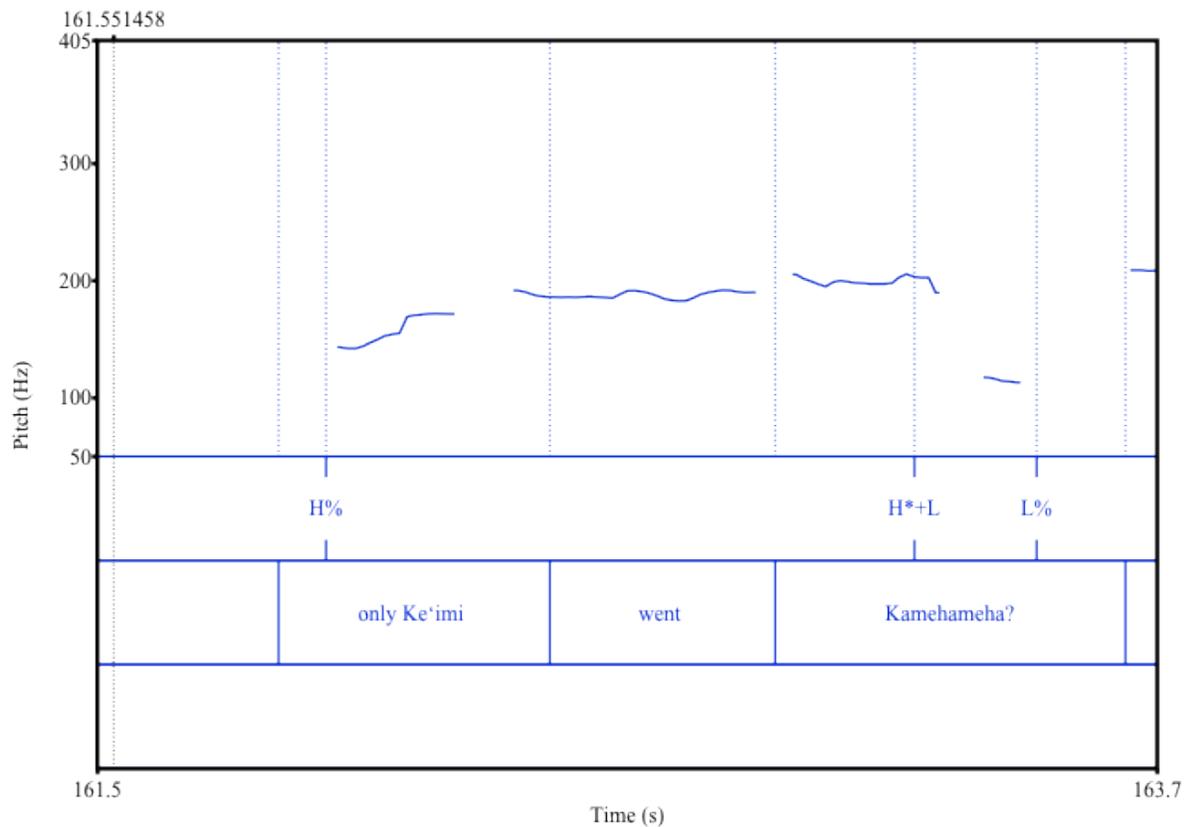


I would like to point out a difference between the intonation of Jamin’s response and the comparable intonation of Mainland English intonation. There is a point in which the pitch would dip on the final word, *Kamehameha* in Mainland English; however, very typical in HCE intonation, a steady rise to a final peak followed by an abrupt fall is observed. This characteristic is widely represented in HCE statements and questions and I will provide more examples of this striking difference as I progress through the data. In this particular example, in Figure 6.5, the pitch rises steadily, much more than it typically would in a regular statement. Also, following the fall, the pitch scoops at the end of the utterance, ending with a H%, phrase boundary. In context,

this utterance Jamin appears to be emphasizing the fact and seeking confirmation that what he is saying is true.

In Figure 6.6, the conversation continues and Jamin asks a yes/no question, “Only Ke‘imi went Kamehameha?”

**Figure 6.6 Jamin “Only Ke‘imi went Kamehameha?”**



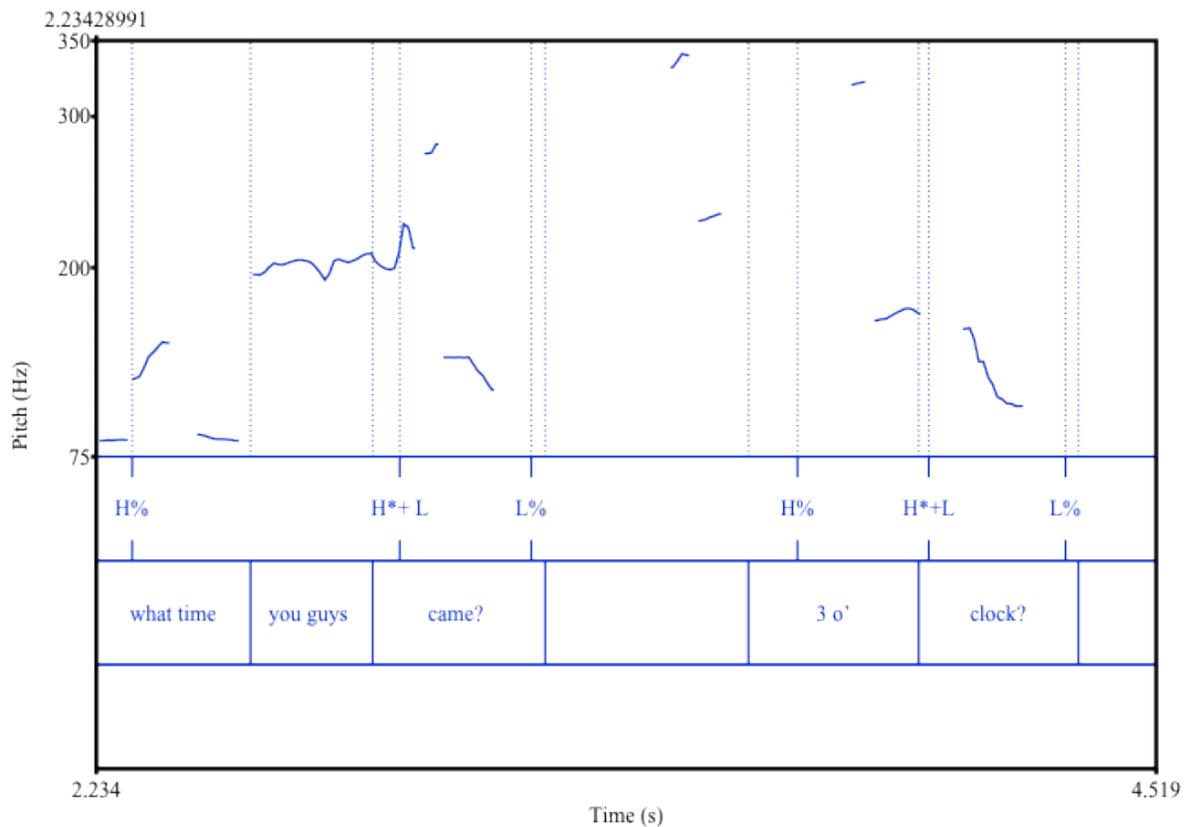
The yes/no question in Figure 6.6 starts higher than the previous examples of statements. The onset starts at 143 Hz at the very beginning of the utterance, at the point in which Jamin starts with *only*. Then the pitch rises to *Ke'imi* at 191 Hz with the plateau gradually rising to the final peak at 203 Hz, with a dramatic fall to 114 Hz at the end of the utterance. Overall, this

yes/no question is higher than that of the statements already described, with a much more dramatic drop in Hz at the end of the question.

In following wh-and yes/no question shown in Figure 6.7 Jamin is asking what time the interviewer (and perhaps others, it is unclear) came to the house. Jamin wanted to make sure they didn't have to wait too long.

Jamin asks, “What time you guys came?”

**Figure 6.7 Jamin “what time you guys came?”**

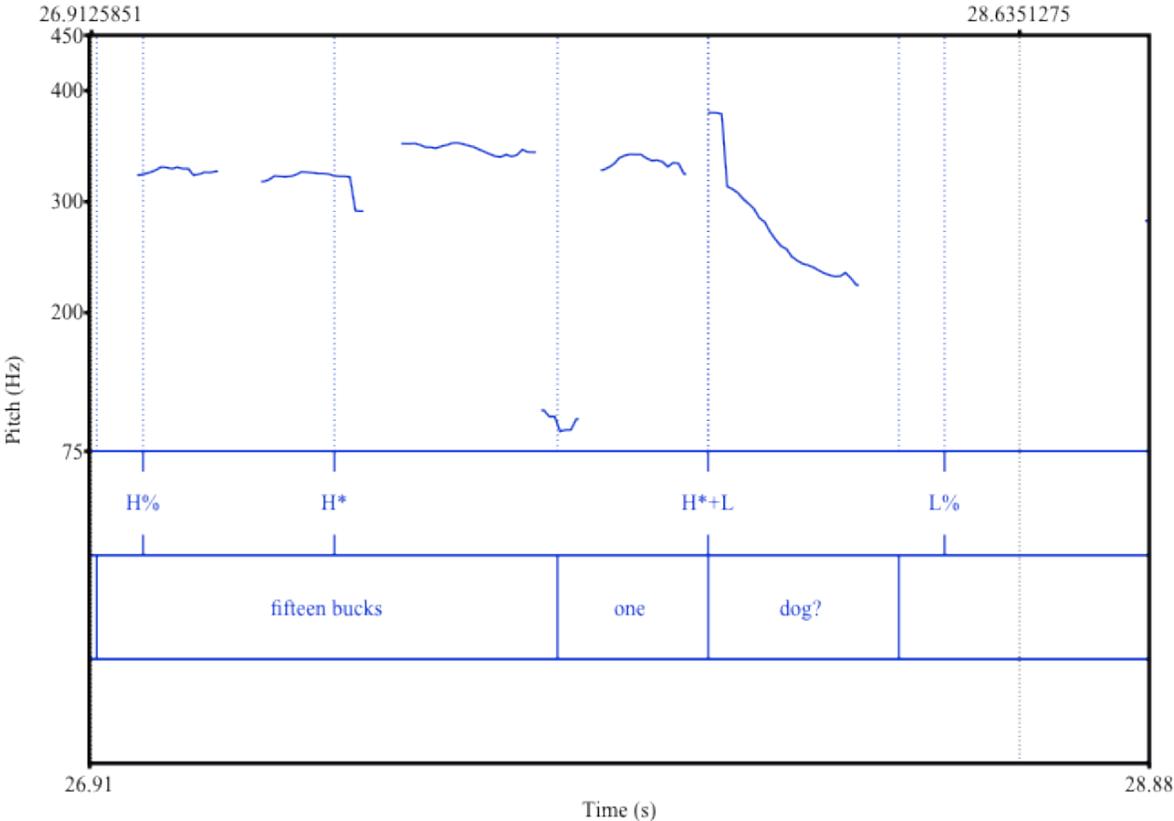


Even though the falling intonation in the wh-question does not seem strikingly different (Mainland English also has falling intonation in wh-questions), nonetheless, the two are different. In this contour, much like the yes/no question contour, the onset is higher than

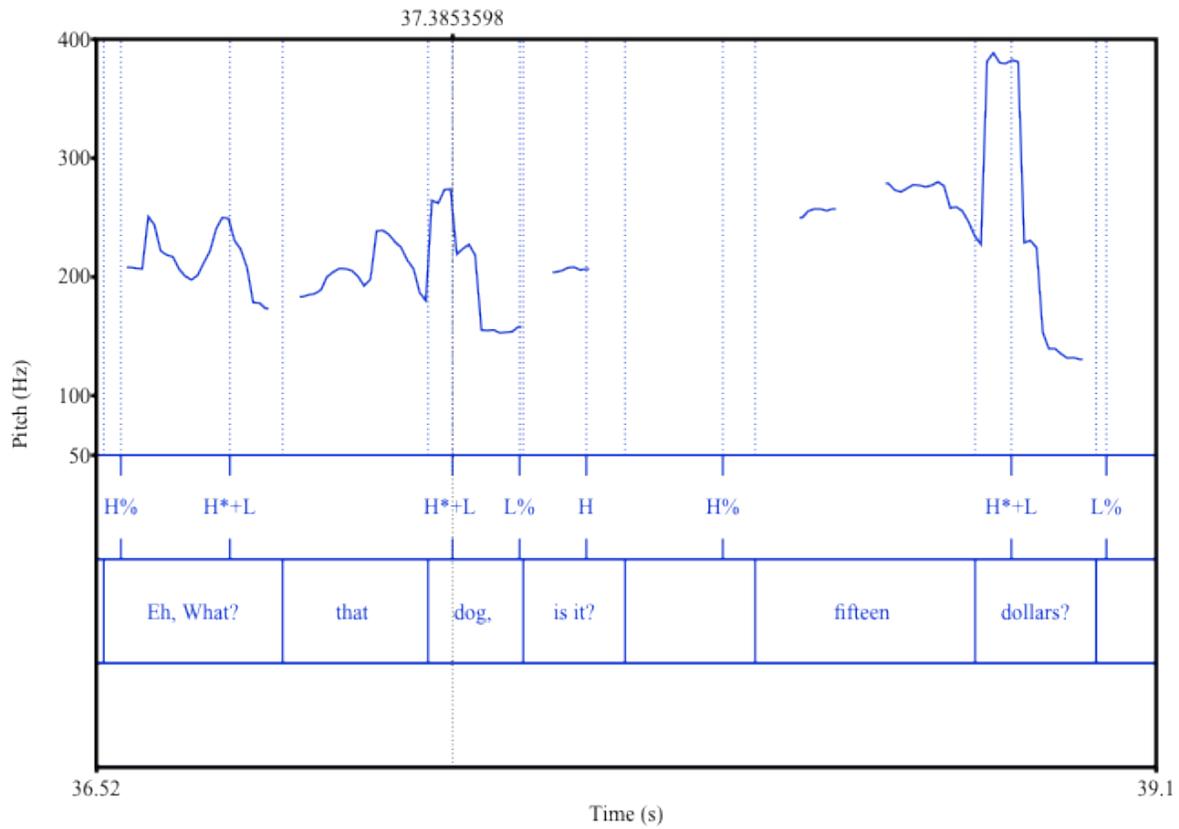
statements and the plateau reaches a high tone and gradually rises to reach the final high peak, with an abrupt fall. In this case, the peak and fall all occur on one word, *came*. In Mainland English, intonation diverges at the point in which HCE rises. The Mainland English pattern falls slightly lower, peaks and then falls. HCE continually rises to a high peak which makes the fall even more dramatic and noticeably so than in Mainland English. Also notice the yes/no question immediately following, “What time you guys came?”. The yes/no question “3 o’clock?” also has falling question intonation.

In Figure 6.8, Jamin is talking about seeing a dog for sale at a local feed/pet store. His son tells him the dog is \$15 and Jamin reacts in disbelief and asks/exclaims- “Fifteen bucks one dog?!” and then asks the store owner, “Eh, what? That dog. Is it, 15 dollars?” to which the store owner replies, “No, its 150 bucks.”

Figure 6.8 Jamin “Fifteen bucks one dog?”



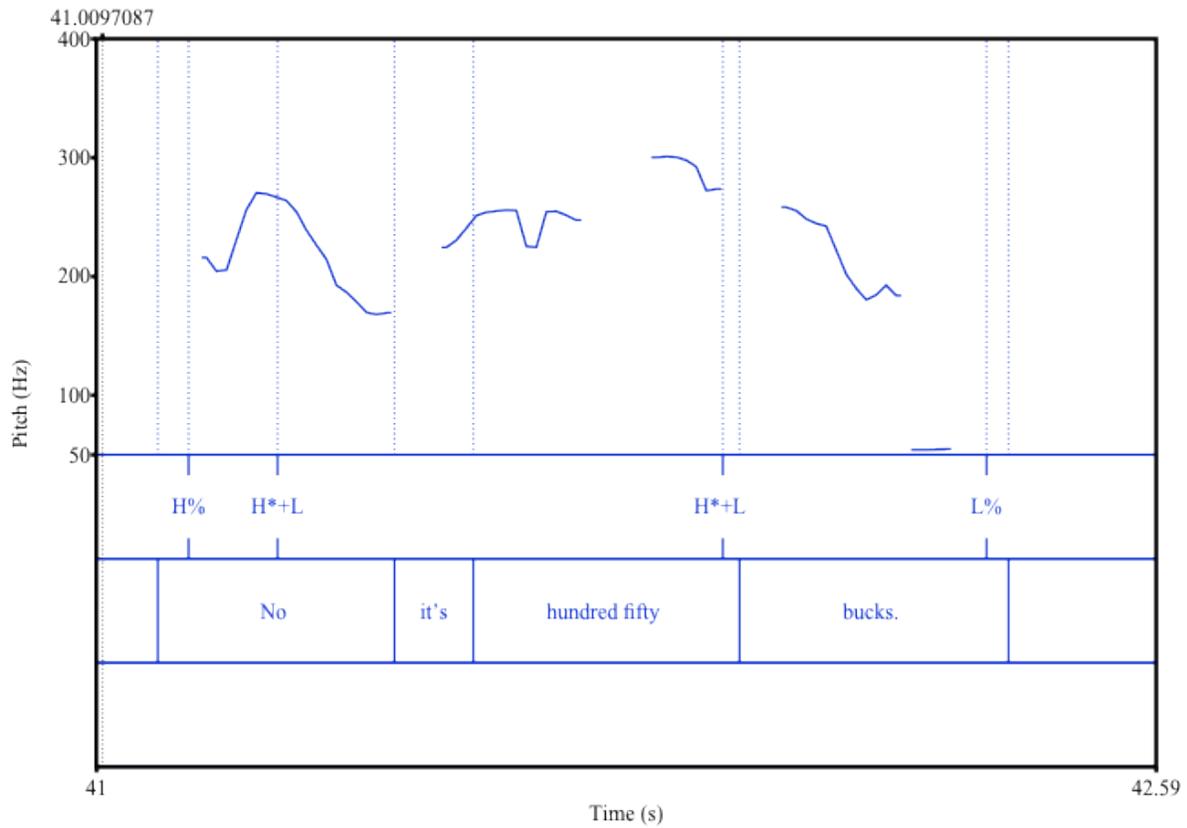
**Figure 6.9 Jamin “Eh, What?”**



Jamin continues to tell his story and the response of the store owner.

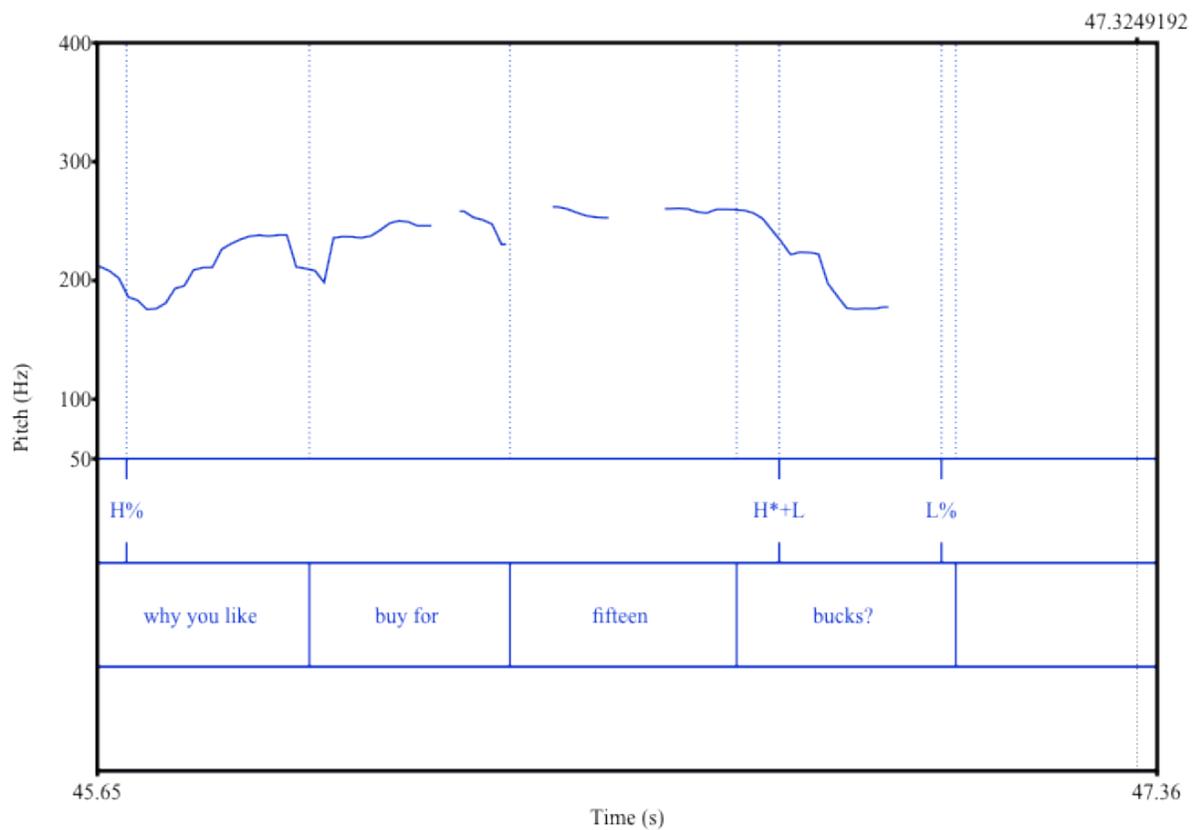
The first falling intonation is on, *eh, what?*. Following this, note the height of the start of the next question with *Is it*. The final fall comes on *dollars*.

Figure 6.10 Jamin “No, it’s 150 bucks”



To this Jamin responds that he (no can) can't buy the dog and then Jamin tells us that the store owner replies, "what? You like buy for fifteen bucks?" (would you like to buy the dog for fifteen bucks?)

**Figure 6.11 Jamin “What, you like buy for 15 bucks?”**



Notice the falling intonation in his yes/no question in Figure 6.11 as well as the fall in intonation in the statement he provides when he gives the store owner’s response. Both question and statement look the same, although the question starts higher.

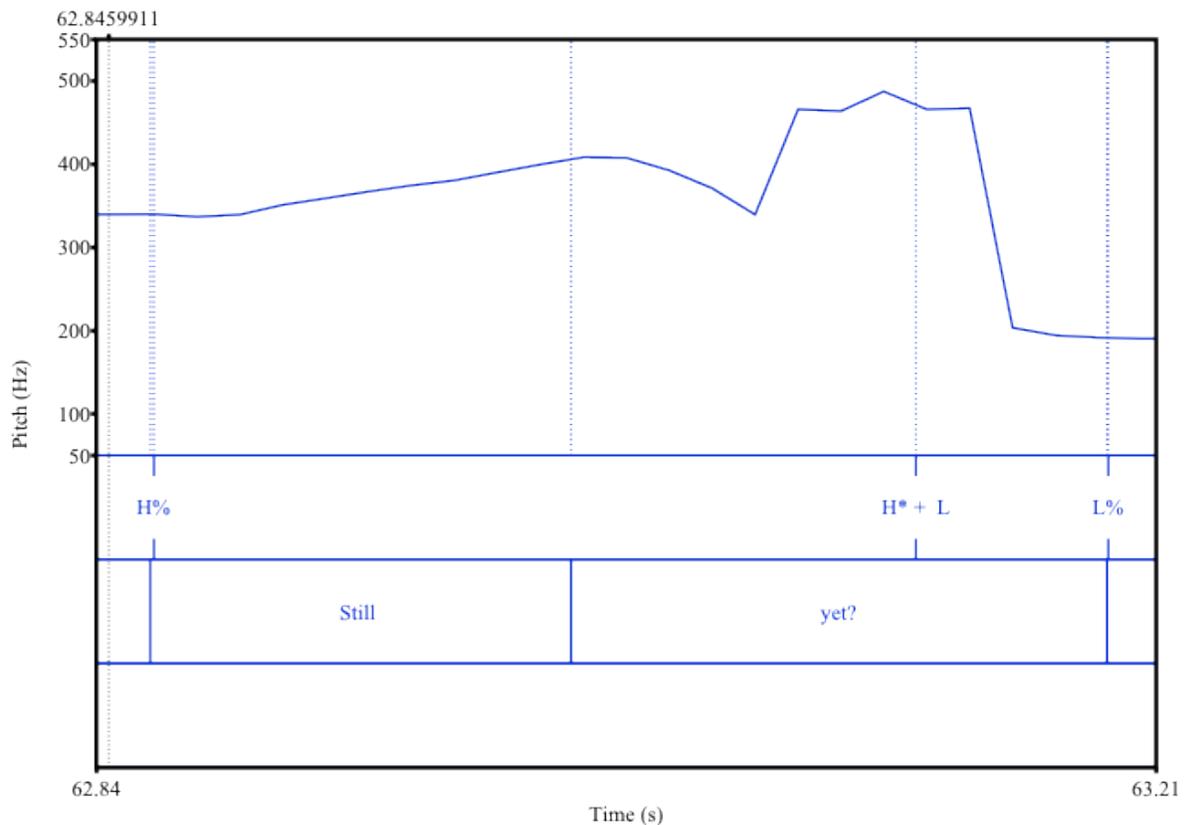
### 6.3. Short Questions

Falling occurs on the last stressed syllable of the sentence. If the last word is two syllables long, the stressed syllable gets the H\* and the unstressed syllable gets the L. If the word is one syllable- the H\*+L encompasses the entire word. An example of shorter questions are provided below for comparison.

Figure 6.12 is an example from Jamin’s sister. The context of this question is that she is asking him about tenants of theirs who have not paid their rent, and she asks, “Still yet?”

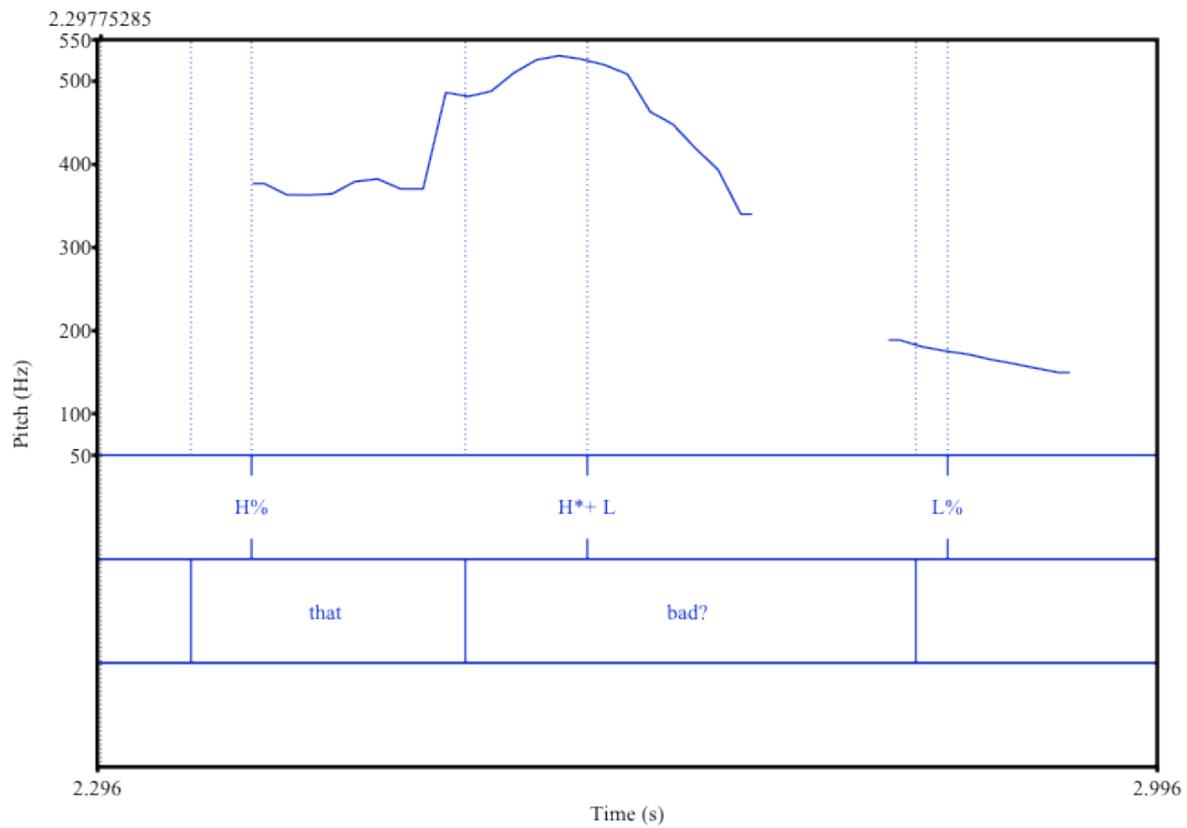
Notice the steep peak and fall on this short question.

**Figure 6.12 Natalie “Still yet?”**



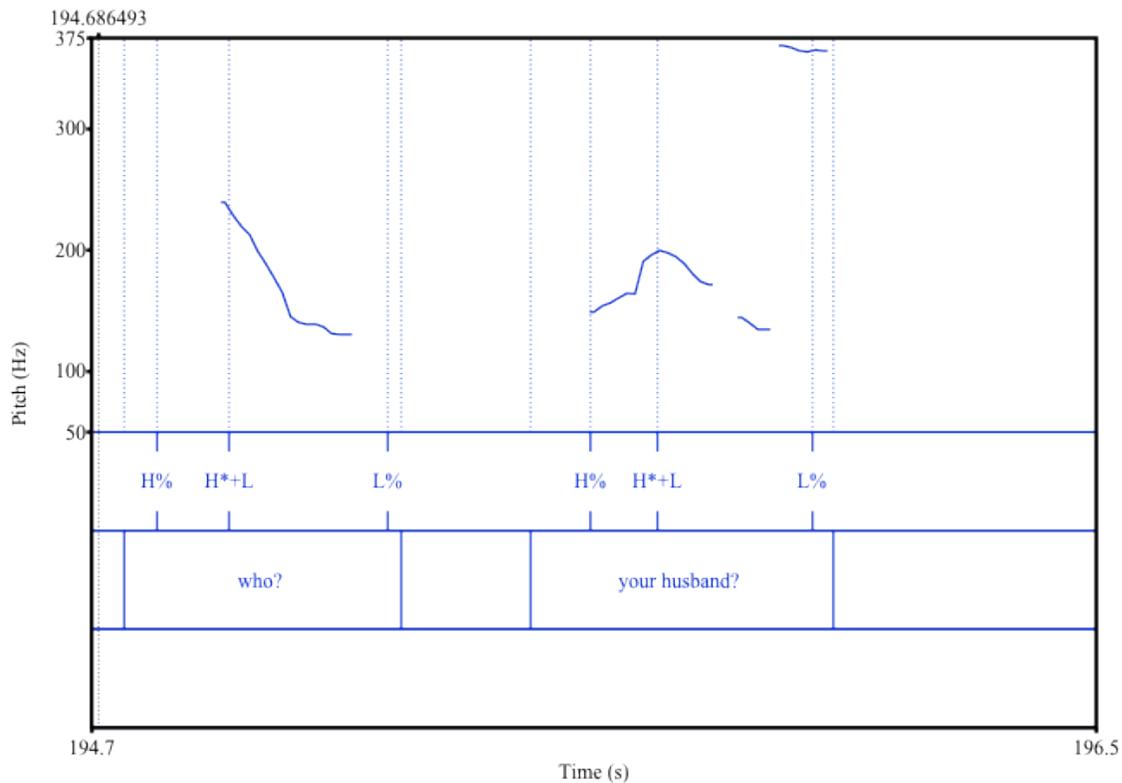
The shorter question in Figure 6.13 is also from Natalie directed at Jamin.

**Figure 6.13** Natalie “That bad?”



In Figure 6.13, Jamin mentions that he needs his glasses, and his sister responds, “That bad?”

**Figure 6.14 Jamin “Who? Your husband?”**



The example shown in Figure 6.14, Jamin is asking the interviewer a wh-question, followed by a yes/no question. Both questions are falling. The wh- question, *Who?* Starts quite high, and drops dramatically. Starting around 400 Hz, dropping to around 130 Hz.

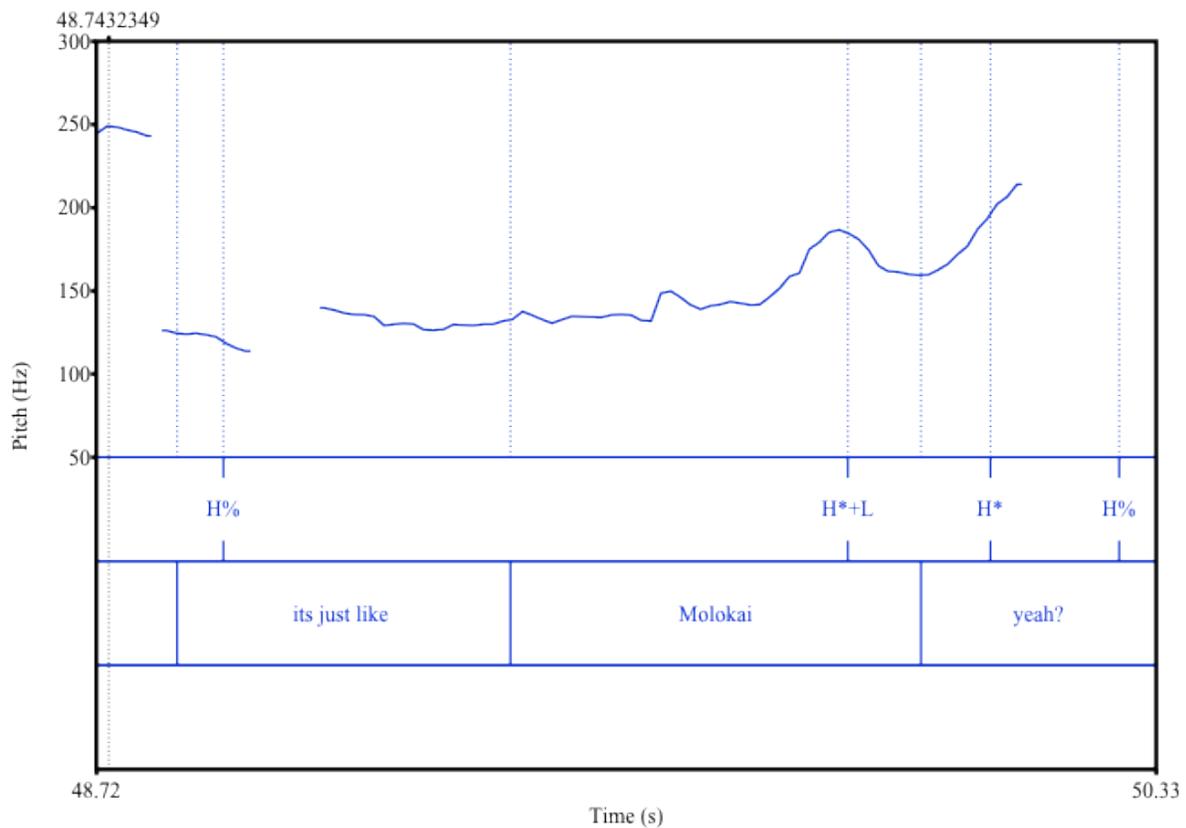
The next question, *Your husband?* starting around 149 Hz, peaking at 199, then dropping to 130 Hz. Both questions have dramatic falls, however, the one word wh-question *Who?* has an even more dramatic fall. Notice the full representation of the H\*L in this one syllable question.

#### 6.4. Tag Questions

Tag questions, as mentioned in Chapter Five, are normally statements turned question with the use of question-type tags attached. From, *Pidgin Grammar* (Siegel and Sakoda, 2003:30)

“Questions ending with the tags *ye* (yeah), *e* (eh), and *no* (no) are very common in Pidgin, and these usually have high pitch. Another tag is also used: *o wat* (or what).” However, the *o wat* tag always has a low pitch at the end of the utterance. The following example of a tag question is from a conversation Jamin was having with his sister and the interviewer about Molokai (one of the Hawaiian Islands). Molokai is considered rural compared to other locations among the islands, e.g. O‘ahu. Jamin says, “It’s like Molokai, yeah?” seeking confirmation for what he shared.

**Figure 6.15 Jamin “Molokai”**



Mainland English speakers would put the stress on the first syllable of Molokai. Jamin puts it on the last syllable here and adding the tag, “yeah?”, which as Siegel and Sakoda (2003:30) indicate, has rising intonation.

#### **6.4.1. *O Wat Question Tag***

Siegel and Sakoda have documented the following intonation pattern associated with the *o wat* tag as example 10 shows:

(10)

<sup>2</sup>Yu laik go <sup>3</sup>Maui <sup>1</sup>o wat?

(Do you want to go to Maui or what?)

(Siegel and Sakoda, 2003:30)

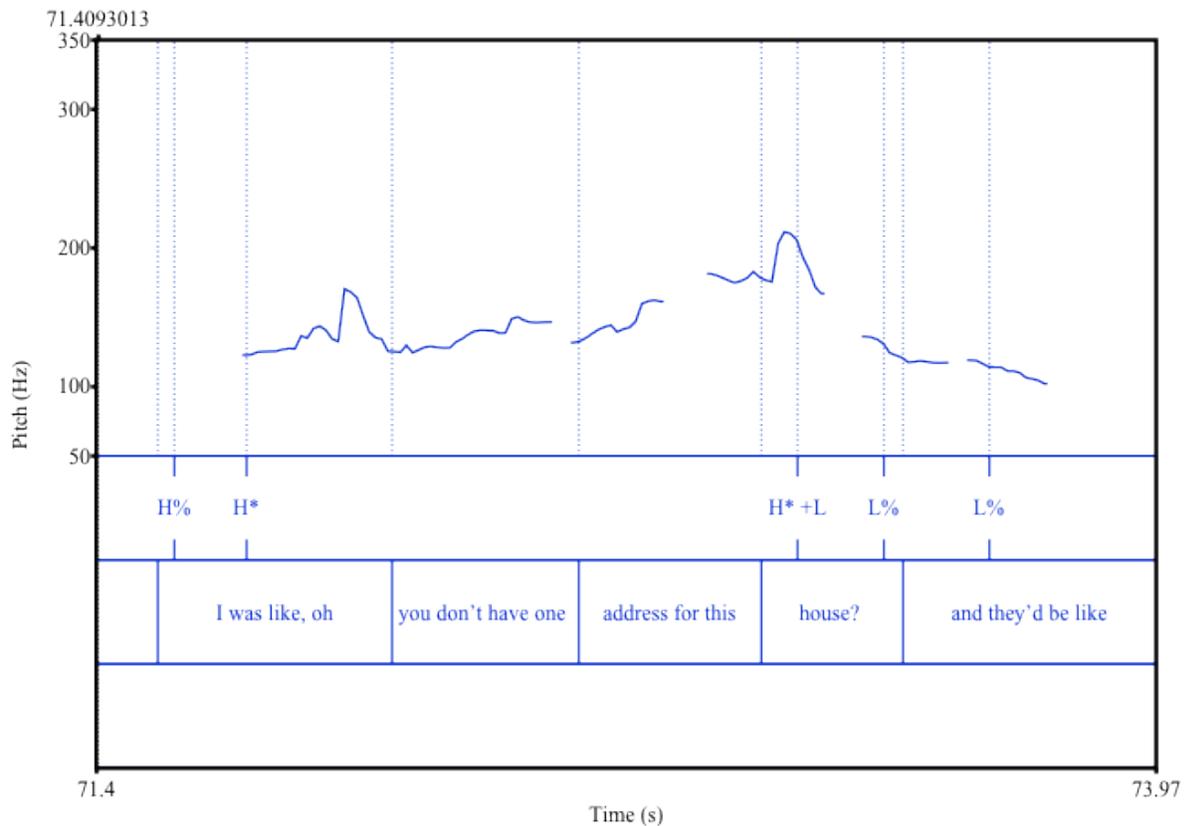
The numbers in this example correspond to different pitch levels. The onset is indicated at being at a Level 2, mid-range. The peak occurs on *Maui* at a higher pitch, indicating a peak, with a fall occurring on *o wat*. For an additional example, see Chapter 2.

#### **6.4.2. *Jeremy***

The second interview from Katie Drager was also with male and female speakers. The male speaker spoke more Pidgin, while the female spoke a more standard Mainland English variety. In the following example of a declarative question, Jeremy is talking about doing census work and finding out that some people don't know their address, or rather their house did not have a street number. As previously mentioned in Chapter 2, a declarative question is a question that resembles a statement but is posed as a question. The example below, the Jeremy is telling the story and quoting himself, “I was like, oh, you don't have a address for the house? And they'd be

like...” In Figure 6.16, the declarative question portion is higher than the following, “they’d be like..” When Jeremy asks the question, the highest peak happens at around 211 Hz, and drops to around 180 Hz. After this peak and fall on the word, *house*, the speaker changes register to represent another speaker in the story. The statement portion, *they’d be like* drops to 119 Hz. This portion is much lower than the set up of the declarative question just prior. What is interesting about this example is the chance to see the flow from question to statement. Jeremy is engaged in telling a story and is speaking rather fast, switching registers as he goes from narrator to recounting how he spoke as well as how others spoke in the dialogue.

**Figure 6.16** Jeremy “I was like oh you don’t have one address for the house?”

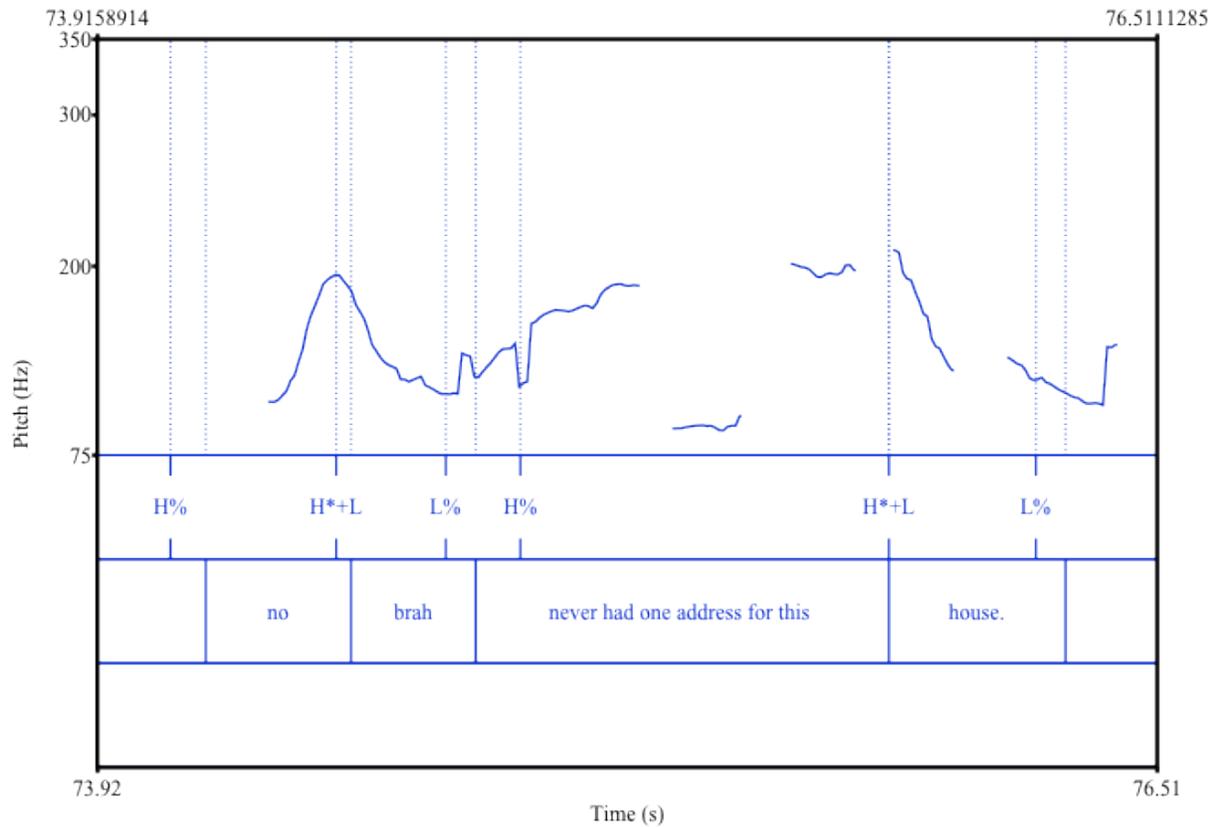


As mentioned in Chapters 2 as well as Chapter 5, Hawaiian maintains the same structure in statements and yes/no questions. HCE also tends to drop typical lexical question markers in yes/no questions which makes the question resemble a statement, much like what occurs in Hawaiian. While declarative questions also have the same structure as statements, there is a slight difference in context in this situation. The question in this situation is statement somewhat posed as a question to look for verification of something that the speaker is surprised about, rather than asking a question requiring information. As discussed in Chapter 2, according to the Functional Hypothesis, declarative questions lack all question markings so that the intonation

must do the work to express interrogativity. Measuring the  $F_0$  for the onset shows a start of 128 Hz, which is not particularly high, but the intonation gradually rises to the highest peak at 212 Hz, which higher than previous statements in this chapter. The fall then lands at 134 Hz. The fall from 212 Hz to 134 is a wide range, showing a steep, dramatic fall on the single syllable of the final word of the utterance, *house*. The point being made here is that indeed, the frequencies measured suggest a higher contour than that of statements. I will discuss this more in the next chapter during my discussion and analysis of my results.

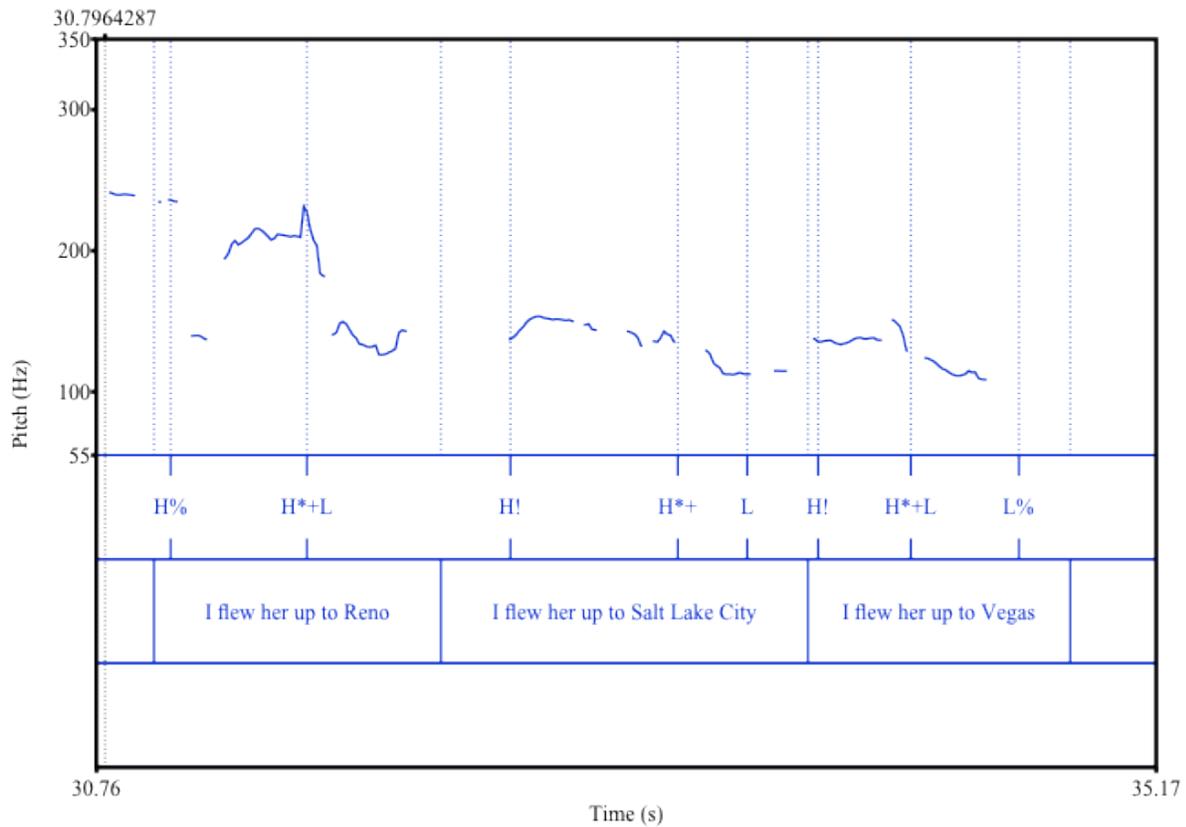
Jeremy then provides the reply, from the other speaker, “No brah, I never had one address for this house.” As Figure 6.17 shows, his register appears higher, although he is not asking a question, but rather he is quoting another speaker and by doing so, creates a different pitch register to separate speakers in his dialogue.

**Figure 6.17** Jeremy “No, Brah”



The next example in Figure 6.18, is an example of continuation/listing intonation. Jeremy is listing the cities where he bought airplane tickets for his wife to travel to see her favorite singer. Falling listing intonation can be seen after each city’s name. Jeremy lists, “I flew her up to Reno, I flew her up to Salt Lake City. I flew her up to Vegas.”

**Figure 6.18 Jeremy “I flew her up to Reno”**



After each name, the low tone seems to have an impact on the next high tone, producing a slightly lower high tone. This is an example of downdrift in HCE within this listing intonation.

### 6.5. Anykine Kine Podcast

The AnyKine Kine Podcast is an hour long (approximately) podcast published by two Pidgin speakers from Hawai‘i who transplanted to San Francisco. The data from the two main speakers on the show, Danrio and Sam (Blastyojaw) are presented below.

### 6.5.1. *Sam*

The following was taken from the description of the #46 podcast, which was posted in January 2007.

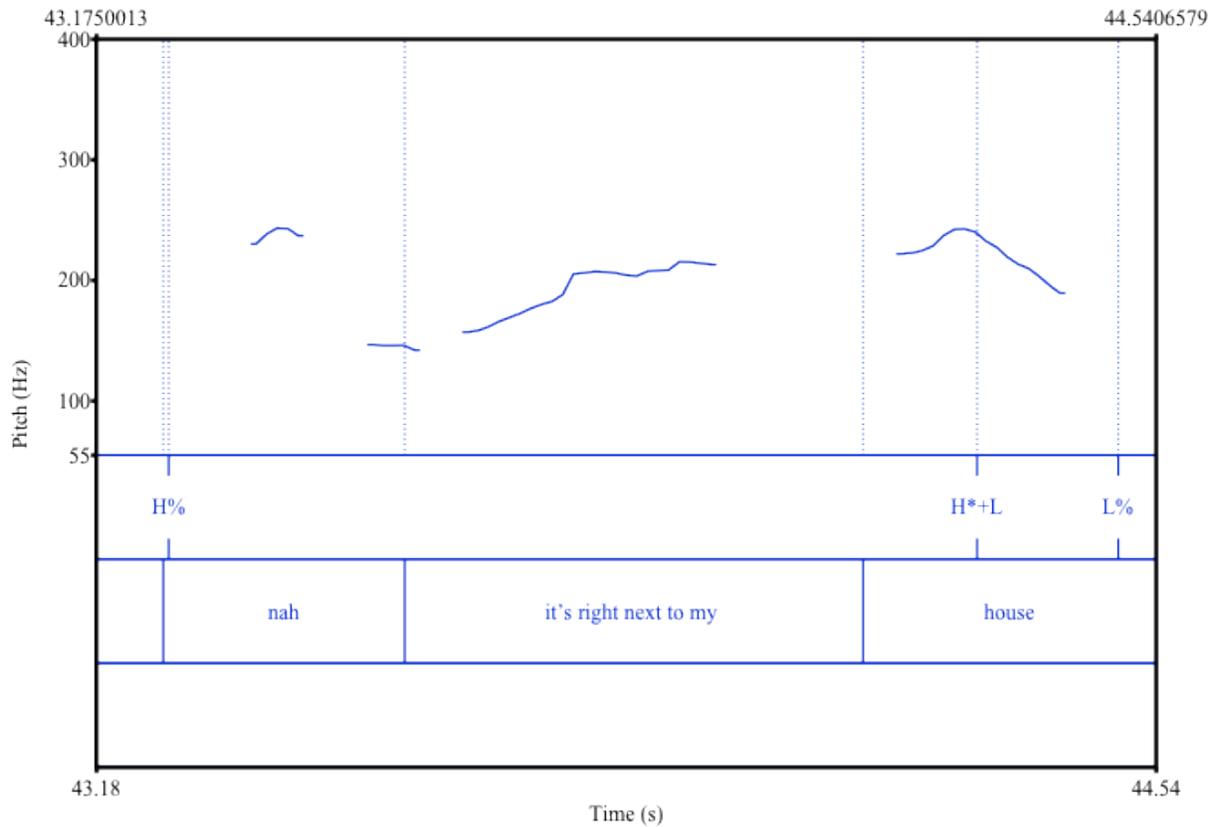
#### **AnyKine Kine Podcast:**

Tuesday January 2007 Podcast #46: Happy New Year

*Yes! We is back! Happy new year everybody, hope you guys wen go party hard da ada day. New musics, more bubbles and banter, poo poo, and brok kine stuffs again. Contact us fo free stuffs breh.*

In Figure 6.19, Sam (Blastyojaw) is talking about how the sushi restaurant where he goes to eat is near his house. Danrio asks, “it’s just down the street yeah?” (tag question) and Sam says, “No, it’s right next to my house, they wen opened one in Chinatown.” Danrio replies with “yeah, yeah, yeah” a common acknowledging repetitive response in HCE.

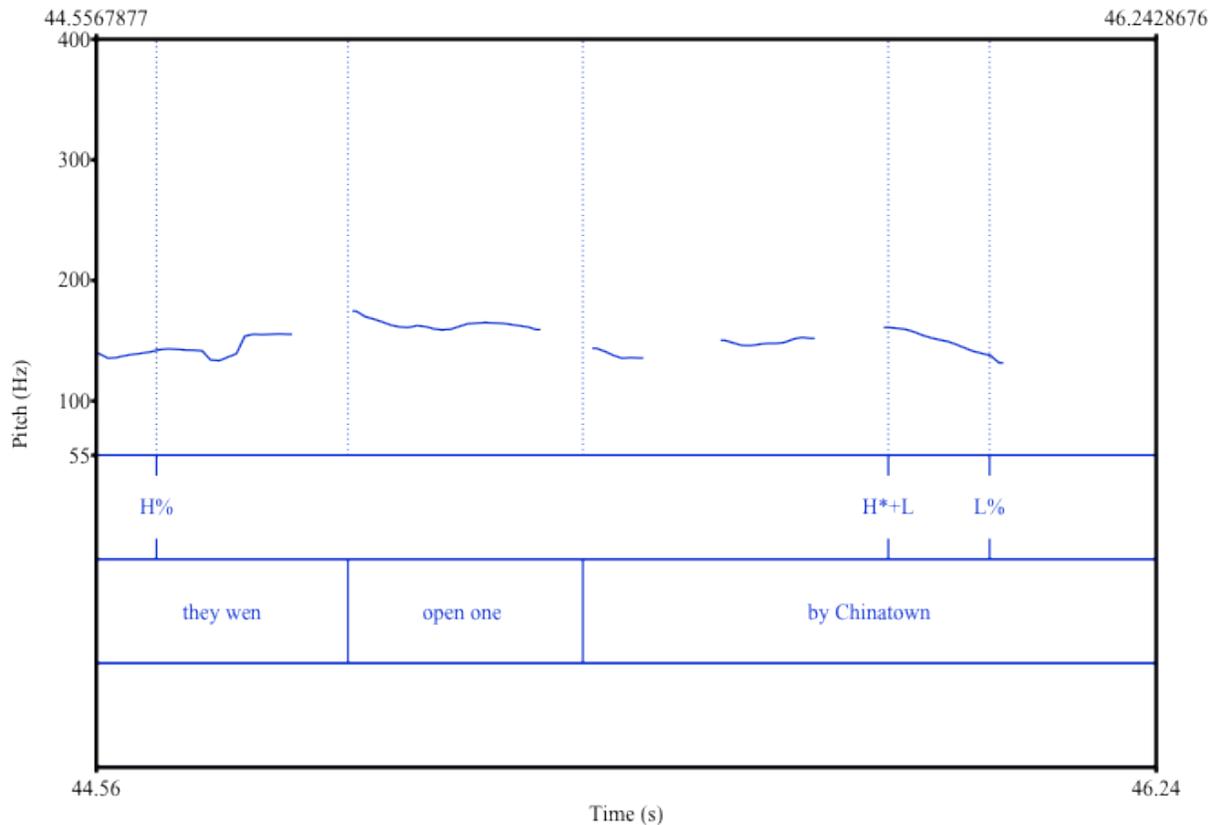
**Figure 6.19 Sam “Naw, it’s right next to my house”**



The onset of the statement starts with a high pitch for *naw* at 237 Hz. On the word *right* is where the pitch starts to rise at 160 Hz and steadily climbs to 200 Hz. It is then followed with *house* making the highest peak at 242 Hz and dropping down to about 192 Hz.

In this situation, the pitch is higher than a normal statement perhaps due to the more emphatic nature of the response. While the measurements are consistent with a more question type frequency, Sam is not asking a question, but the display of higher pitch is used to emphasize the information to the listener.

**Figure 6.20 Sam “They wen open one by Chinatown”**



Blastyjaw starts at a low pitch, around 138 Hz, with “THEY”

The pitch starts to rise to around 165 Hz to reach a peak at “ONE”

Then dips to 136 Hz for “BY”

And then starts to rise again, with “CHINA” (149- 153 Hz) to then peak at *town*

*Town* has the next high peak at 160 Hz and falling finally around 117 Hz. The last nigh peak on

TOWN is not as high as ONE, but this is to be expected as this is a statement and not a question.

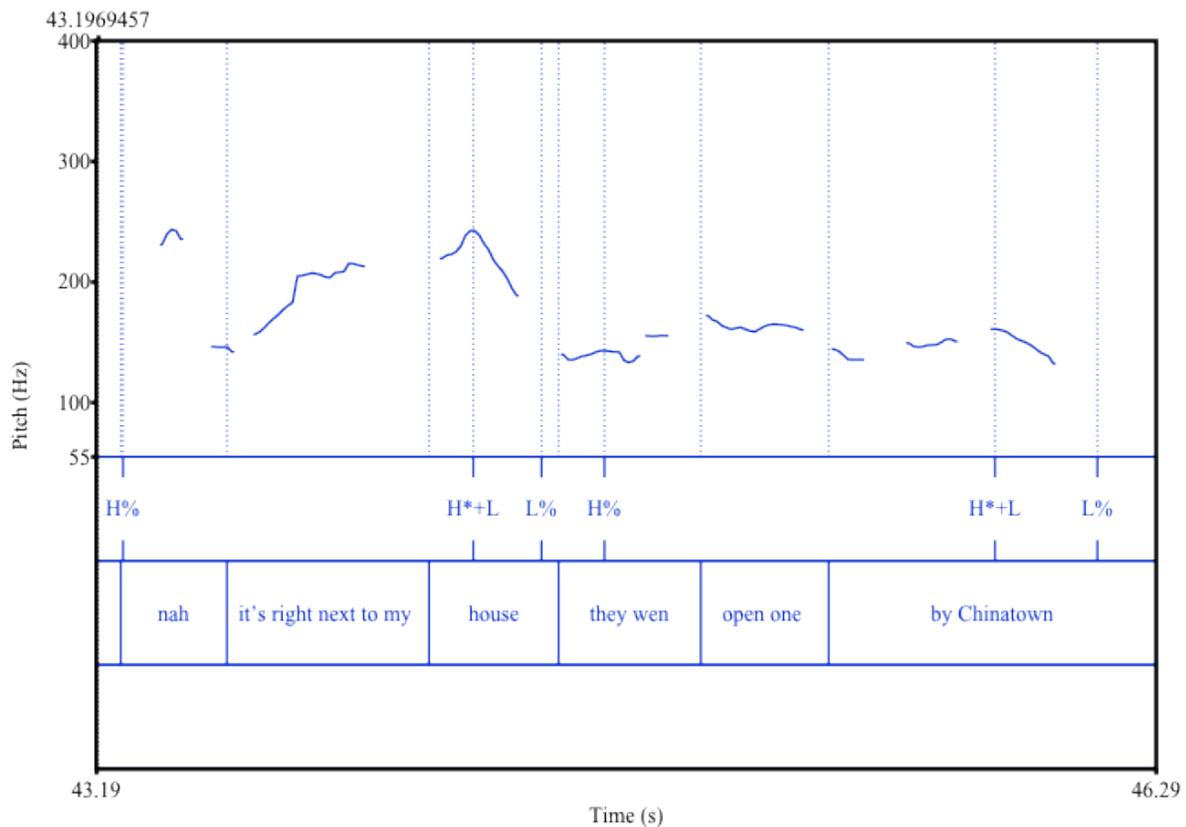
If this were to be a question, the last peak would be higher.

In the following example I show the two side by side. Also interesting to note is the stress difference with Chinatown. A more standard stress pattern in Mainland English would but

more stress on the first syllable of Chinatown. Blastyojaw, in keeping with the rules of intonation, places the stress on TOWN, where the final peak and fall need to occur. Also notice the use of “wen” as commonly used in Pidgin syntax.

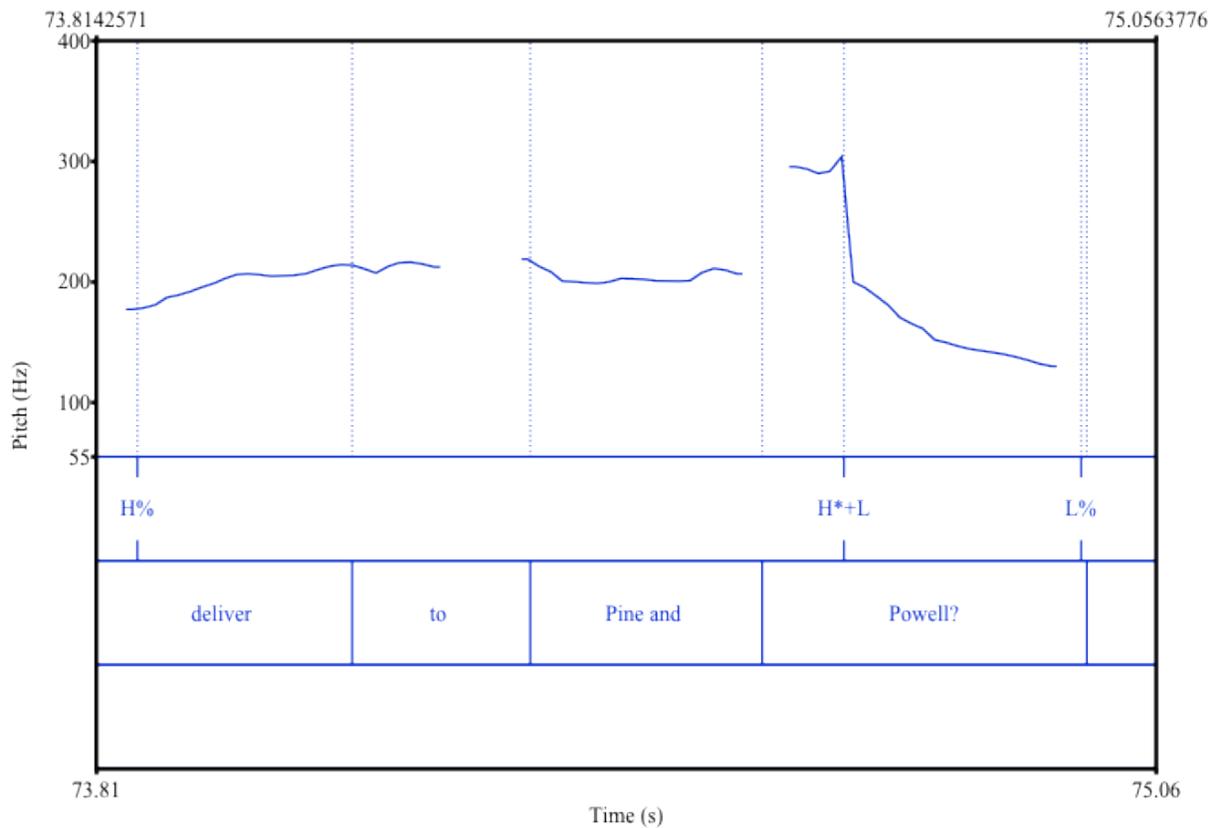
By showing both examples together, it is easier to see the drop in pitch when Blastyojaw resumes a less emphatic tone and regular statement type intonation pattern. There is a noticeable spike in the intonation when he indicates “Naw, it’s right next to my house”. He is emphasizing a location in response to Danrio’s comment that it’s right down the street. Sa is correcting him, and then goes on to provide more information about the sushi restaurant.

**Figure 6.21 Sam “Naw, it’s right next to my house”**



In Figure 6.22, Sam is talking to a guest on the show who also works at a cheese steak restaurant. The two are discussing the delivery area and Sam is asking, in this example, if the restaurant delivers to his cross streets of Pine and Powell Street.

**Figure 6.22 Sam “Deliver to Pine and Powell?”**



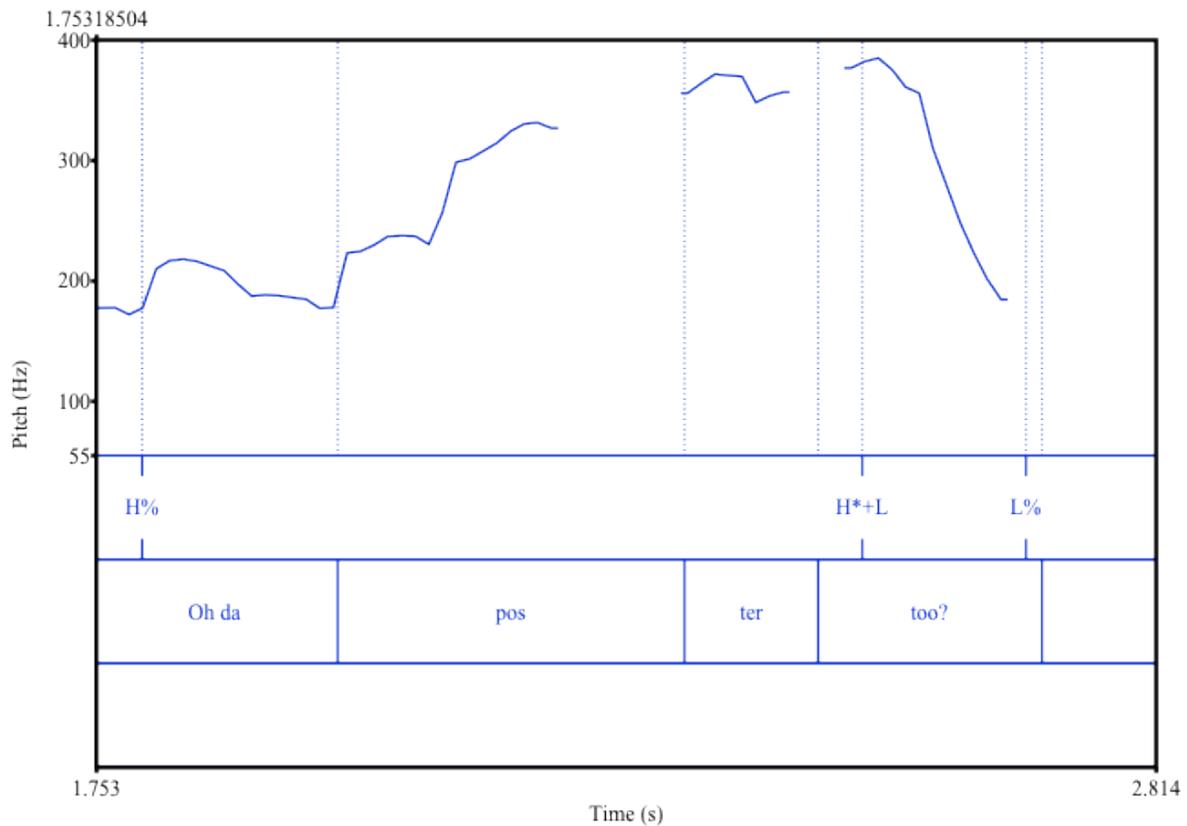
. While this is an example of a yes/no question it is also an example of an echo question as well as a declarative question. Prior to this utterance, the friend Sam is talking to told him that his restaurant delivers to his area. He says, “You live on Pine and Powel? We deliver to Pine and Powell.” Sam responds in surprise, verifying the statement via this declarative question, but also repeating what the friend had just said, posing it as a declarative question.

### 6.5.2. Danrio

In this next example, Danrio asks, in an echo- type question, “Oh, da poster too?” In response to Sam talking about items that he will give out to listeners should they call into the show. In this yes/no question example, the presequence also has a fall, which is abrupt just as the final fall of the utterance. The final word *too* is dragged out for enough to carry both the H\* tone as well as abrupt fall of the L tone.

Danrio asks, “Oh, da poster too?”

**Figure 6.23 Danrio “Oh, da poster too?”**



Note the dramatic fall that can be seen in the instrumental representation. In Mainland English, the opposite would occur. In the presequence, *Oh*, the pattern would rise as well as the rest of the utterance, *the poster too?*

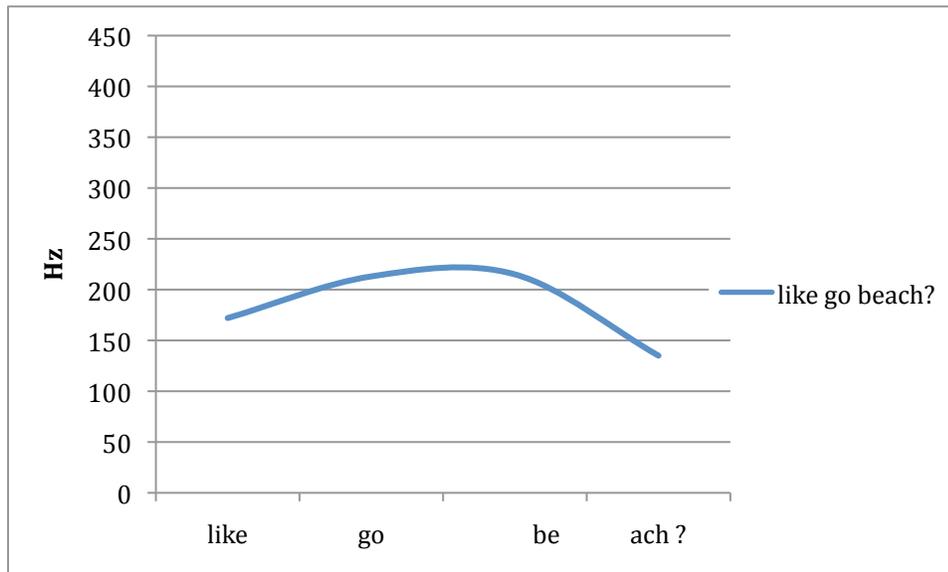
## **6.6. Final Fall and *Brah* and *Or What?***

At this point I would like to pay special attention to two tags, that of ‘brah’ and ‘o wat’. These two attachments are commonly used in Pidgin and have special contributions to the H\* L contour in HCE. I will discuss ‘brah’ in a more in depth manner here, however, having already somewhat addressed ‘o wat’, I will limit my discussion here.

### **6.6.1. *Brah***

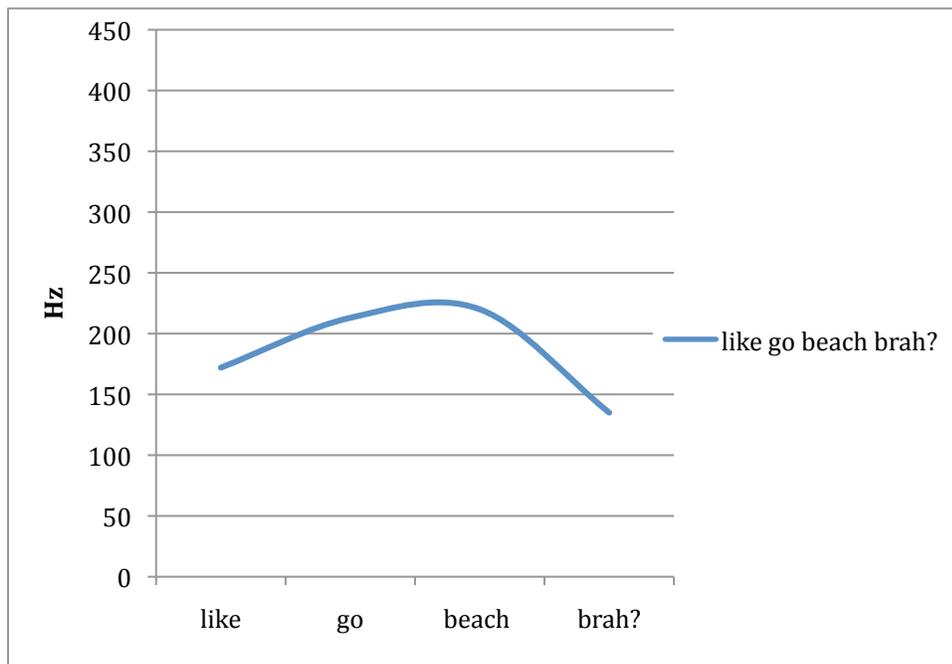
‘Brah’, which is derived from *brother* and then pidginized to *braddah*, is more commonly shortened to ‘*brah*’. This pragmatic particle is common in HCE as an end of sentence tag and is used as a term to demonstrate familiarity and empathy. Brah can be used both before and after utterances and contributes to and maintains the H\* L contour at the end of declaratives and questions. Take for example the hypothetical contour below. The final word, *beach* would carry the H\* L contour.

**Figure 6.24 HCE Contour “Like go beach?”**



If the sample sentence had *brah* added to the end as a discourse particle, the resulting contour would then shift, and the H\* would align with the word *beach*, and the L tone would then be placed on *brah*.

**Figure 6.25 HCE Contour “Like go beach brah?”**



It's interesting how the use of end tags interact with the stress and last peak of utterances in HCE as seen in the example above.

'*Or what*' can also replace '*brah*'. For example, 'like go beach o wat?'. While it doesn't have the same meaning as '*brah*', 'or what' is also always aligned with the L tone at the end of the utterance.

Sakoda and Siegel also discuss this in *Pidgin Grammar* (Siegel and Sakoda, 2003:30)

**Figure 6.26 Sam “Brah, gotta turn up the mics brah”**

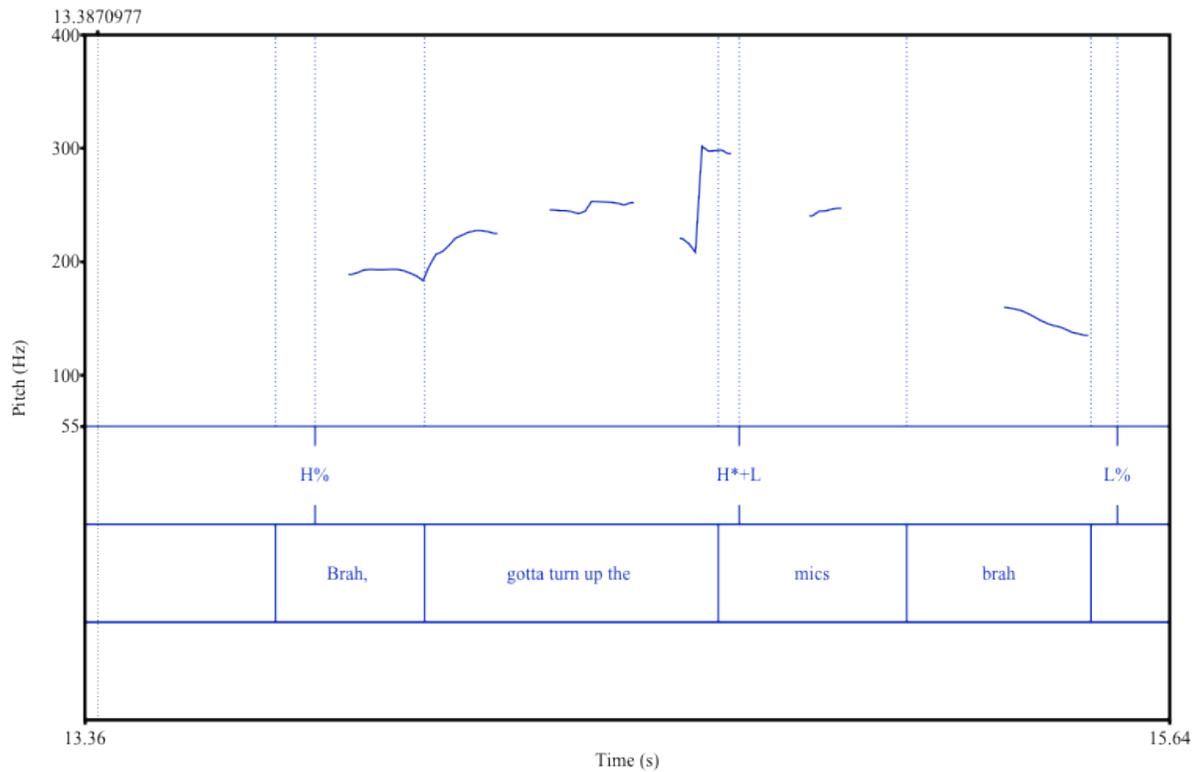


Figure 6.26 shows an example where Sam is telling Danrio that he has to turn up the mic for the broadcasting of the podcast. This utterance has *brah* at the beginning and at the end. In this utterance, the peak is on MICS (H\*) and the L aligns with BRAH.

**Figure 6.27 Sam “Play One Song, Brah”**

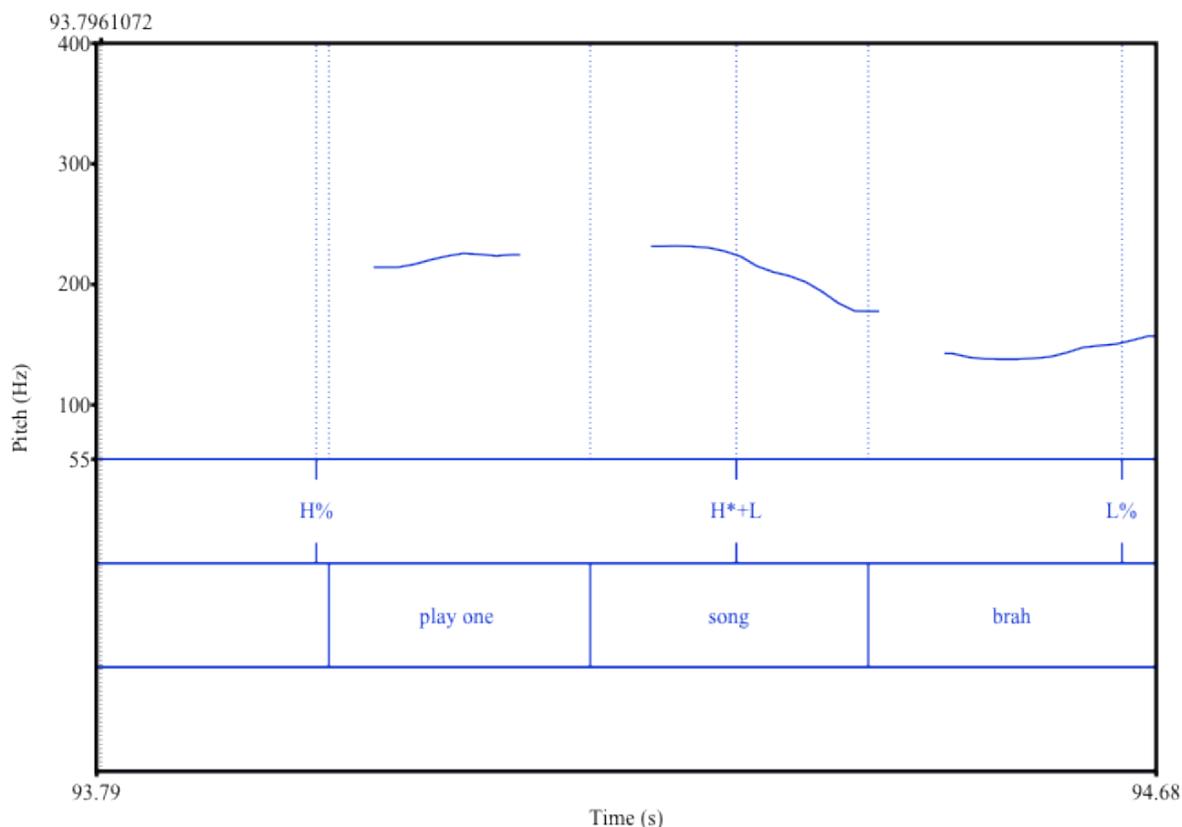


Figure 6. 27 shows another example of the use of “brah”. In this example, like the previous examples, *brah* is aligned with the L tone.

### 6.6.2. O Wat

As previously mentioned, the tag at the end of yes/no questions, ‘o wat’ (or what) is treated intonationally the same as ‘brah’, with both words aligned with the low pitch. (cf. Siegel and Sakoda (2003:30). For example, it would not be grammatical to have rising intonation on ‘o wat’, just as it would not be grammatical to have falling intonation on the tag ‘yeah?’ found in yes/no tag questions. These tags have been grammaticalized to carry these specific High or Low tones. Also refer to Chapter 2 (see Vanderslice and Pierson 1967: 165)

## 6.7. Conclusion

The intonation descriptions provided in this chapter document the contours of various utterance types in HCE. Based on the data and descriptions, the overall prevailing contour is a falling one, however, it is apparent that a latitudinal distinction is made differentiating statements from questions, the extent of such will be discussed in the following chapter. Also, to be discussed is the results of the analysis of both Hawaiian and HCE speakers identifying and highlighting this latitudinal distinction. In general, much like Hawaiian, HCE statements, questions, and continuation/listing intonation patterns follow the same peak and fall on last stressed syllable. With the shortening of utterances or addition of words to the end of a sentence, such as tags, the contour shifts and accommodates the additions, remaining faithful to the H\*L contour, rather than truncating them.

I have provided the phonological generalizations described in this chapter in the table below. As mentioned, there is a prevalence of falling intonation contours. In languages which have the same contours in multiple utterance types, such as HCE and Hawaiian, it appears that distinction appears in the phonetic space between the utterance types. As mentioned in the previous chapter, there is a challenge representing the phonetic distinction with the AM/TOBI binary system of H and L tones as there is no distinct tone, which can represent the higher H tone present in question intonation. I will discuss this further in Chapters 8 and 9.

**Table 6.1 HCE Inventory of Intonation Contours by Utterance Type**

TYPE	Falling/Rising	Contour
Statement	<b>Falling</b>	<b>H% H* + L- L%</b>
Yes/No Question	<b>Falling</b>	<b>H% H*+ L -L%</b>
Wh-Question	<b>Falling</b>	<b>H% H*+ L-L%</b>
Echo Question	<b>Falling</b>	<b>H% H* + L-L%</b>
Tag Question	<b>Rising</b>	<b>H% H* +L- H%</b>
Continuation	<b>Falling</b>	<b>H% H* +L-L%</b>
Declarative question	<b>Falling</b>	<b>H% H* +L -L%</b>

## Chapter 7: Results

### 7.1. Introduction

In this section I provide the results of the analysis of the Hawaiian and HCE data. My results show similarities between Hawaiian and HCE which supports my initial theories (also expressed by anecdotal evidence and speaker intuition). I also discovered, through analysis and comparison, that although Hawaiian and HCE are very similar, there is one difference between them that merits closer examination.

Results show a trend that is consistent across HCE speakers as well in my Hawaiian examples in that it appears that regardless of which island or age group, male or female, Hawai'i English, Pidgin, or Hawaiian, the same falling contour occurs. My data collection yielded a wide range of speakers and utterances to analyze. For example, geographically speaking, I gathered examples of speakers from five of the eight Hawaiian Islands. I also gathered examples from both male and female speakers including speakers from different generations. Examples gathered also represented a variety of "levels" of Pidgin. Within this chapter, I discuss the following questions that I set out to answer:

1. What makes HCE sound so different?
2. How does HCE fit into Universal Question criteria?
3. How does HCE compare to Hawaiian?
4. What key factors differ questions and statements in HCE and Hawaiian?

In keeping with the of the islands, I would like to make an analogy, if I may. What I discovered, visually from the PRAAT analysis was that in questions, much like the big waves on the North Shore, you can see the swell building, and then the wave crashes on the last stressed

syllable. I know this is a simplified aesthetic observation, but this visual is quite representative of the dramatic intonation movement found in both Hawaiian and HCE.

Even in statements, continuation or listing, and questions, the wave gradually rises to a peak on the last stressed syllable. The fall comes, great or small, but it comes very predictably at the same place.

When reading the examples from Chapter 6, it may appear that some look very much like Mainland English. The question could be asked, “is this really a creole?” The answer according to creolists (Bickerton and Siegel to name a few) is, yes. HCE is a creole and not just a variety of English. As detailed in Chapter 1, HCE is phonologically different, syntactically different (in most cases) and is lexically different from Mainland English. While it can appear in a more acrolectal form to be more like Mainland English, the fact is that in all forms of this creole, whether it is at the most basilectal level or acrolectal level, closer to Mainland English, the intonation is the same. This contour found in Hawai‘i, is quite different from the English spoken in the Mainland, and it is what cues your ear to something different happening. The point which one will notice is the beginning of the rise. At the plateau, there can be a gradual rise to the last peak. This gradual rise of the high plateau as well as the dramatic fall is what makes HCE different from Mainland English, in a very general descriptions.

## **7.2. Measurements**

In this section I will provide visuals to highlight the key findings from my data collections. The first speaker I examine is Sam from the AnyKine Kine podcasts. Sam grew up in O‘ahu near and around Kaneohe, which is more on the east side of the island known for having more Pidgin speakers. He considers his Pidgin level to be at a medium level.

The line chart represents 10 questions and 10 statements of Sam's taken from various Anykine Kine podcasts in Figure 7.2 that I collected and analyzed.

The blue line in 7.2 represents the declaratives or statements and the red line represents the questions. I took measurements in Hertz from four target areas: onset, plateau, last peak and last fall.

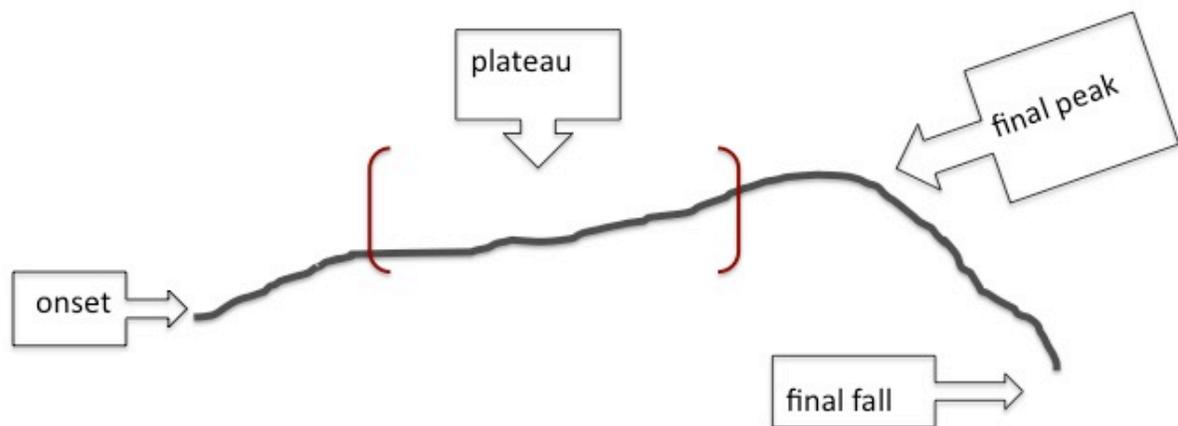
ONSET: the reason I want to measure and compare the onset is because of the noticeable height difference I found in PRAAT analysis. I wanted to measure in Hertz, how high the start of the utterance was because this key position appears to vary from questions to statements. I was aware of this difference, but by providing a statistical comparison of both, I was able to provide an overall average picture between a variety of statements and questions per speaker. The onset measurement started at the beginning of the utterance, as shown in the example below.

PLATEAU: the reason I wanted to measure the average hertz of the plateau of each utterance is that I was also aware that there was a difference in height in statements and questions and I wanted to be able to measure this difference by taking the average overall hertz measurement and compare this average between a variety of statements and questions per speaker.

LAST or FINAL PEAK: the reason I wanted to measure the last peak is that the last peak in the utterance is prominent in all utterances no matter if it is a statement or question. I also noticed in PRAAT analysis that if the question has a higher plateau, the last peak will also be higher. I wanted to compare the last peak or the last stressed syllable height in hertz between questions and statements to provide an overall comparison between a variety of statements and questions per speaker.

LAST or FINAL FALL: the reason to measure the last fall is that the actual distance in hertz between the last peak height and the last fall is different in questions and statements and I wanted to compare this difference.

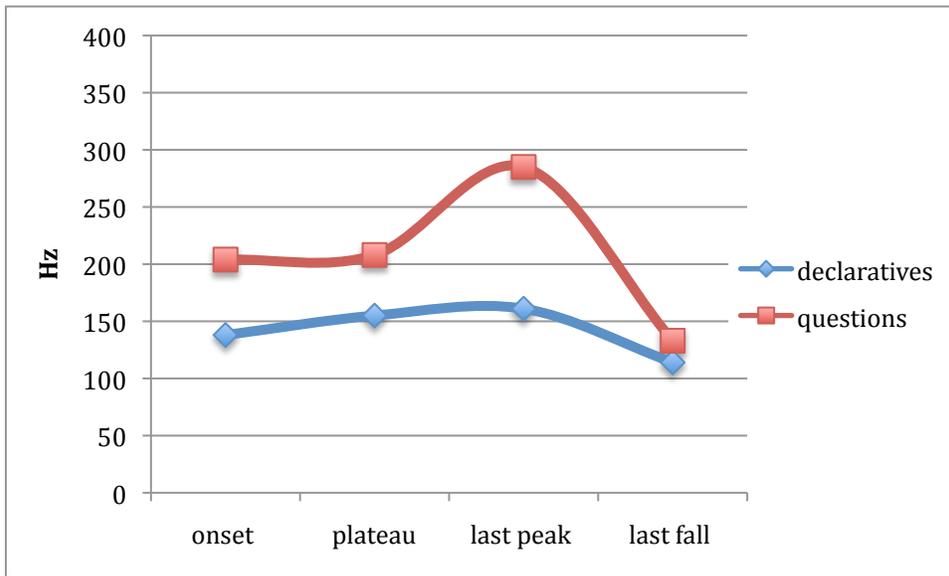
**Figure 7.1 Four Target Areas Measured**



### 7.3. Sam from AnyKine Kine Podcast

Figure 7.2 represents measurements for 10 statements and 10 questions from samples of Sam's speech from the AnyKine Kine podcast.

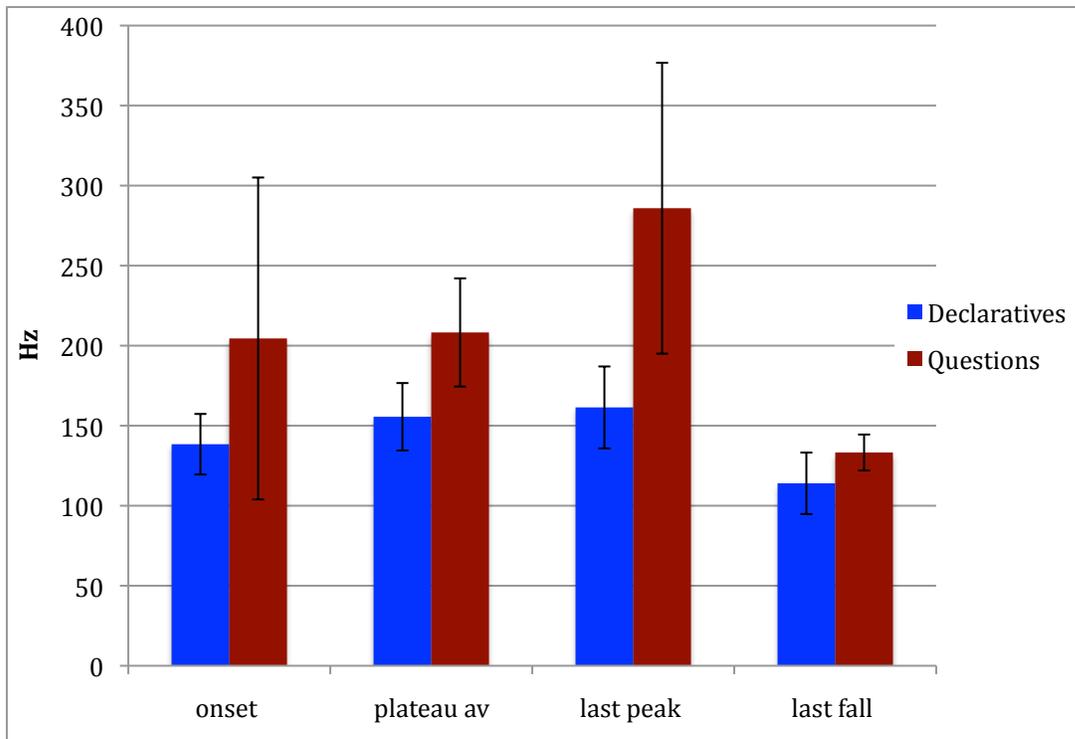
**Figure 7.2 Sam's Questions and Statements**



By using the four target areas (onset, plateau, last peak and last fall), I was able to gather an overall picture or an abstract representation of the pitch contours in questions and statements. This gave me a view of what the average question and statement looks like and provide a way to determine what the differences are between Hawaiian and HCE questions and statements. As can be seen in the line graph in Figure 7.2, the average Hz of each of the target areas of the statements are lower than the equivalent targets in questions. Both statements and questions come to a similar final Hz value at the end of the utterances. The question average distance is measured at around 50 Hz, up until the point where the last peak occurs. In questions, the last

peak, on average is 150 Hz, which seems quite high. In response to this, I have provided the standard deviation for questions and statements for Sam.

**Figure 7.3 Standard Deviation for Sam**



The columns in Figure 7.3 represent the averages for declaratives and questions for Sam; the black lines through these columns are error bars that represent the standard deviation from the data against the average. What can be learned from the standard deviation is that, although the standard deviation span for declaratives is quite narrow, the standard deviation span for questions is wider, indicating more variation in measured Hz for questions. Conversely, in statements, there was not as much variation in the range of measured Hz per target area. What this indicates is that although the average Hz in each target is higher in questions than statements, questions have more variation than statements. This variation in questions is to be expected as all question

types (wh-questions, as well as yes/no, echo, and declarative questions) are grouped in the category of “questions”. While not yet explored, the wide pitch range evident in Figure 7.3 may be consistent with the Functional Hypothesis (cf. Chapter 2), such that declarative questions have the highest pitch register followed by yes/no questions with a lower pitch register. Wh-questions would be at the lower end of the question pitch range, as would be consistent to what the Functional Hypothesis predicts. The Functional Hypothesis in HCE would need to be explored in greater detail, however, it would seem a plausible explanation given the variety of question types grouped together into one general question category.

For an additional explanation, as languages realize question intonation, pitch range proves to be more sensitive when it comes to questions (Haan 2002:43). Take for example, in Bengali, the statement and question pitch registers differ. Although both end in a rising and then falling pitch movement, the question has a much higher global  $F_0$  than the statement, (Haan (2002) causing the Bengali questions overall pitch range to be wider (Hayes and Lahiri 1991:65).

The basic characteristics of how a question differs from a statement provides support for this variation as well. These characteristics that encompass the nature of questions and separate questions from statements fundamentally are expressed through the relationship between speaker and listener. According to Haan (2002:1) “If speech serves the goal of human communication, the speech act of questioning does so in optima forma. More than any other act performed by speech, a question draws the addressee into interaction with the speaker.”

A question is a request for information from the other participant in the conversation. The speaker is asking for information and the other person’s cooperation is imperative for an effective exchange. Haan (2002:1) further adds, “Nonetheless, languages lacking explicit lexical, syntactic and/or prosodic strategies for encoding interrogativity seem to be nonexistent.”

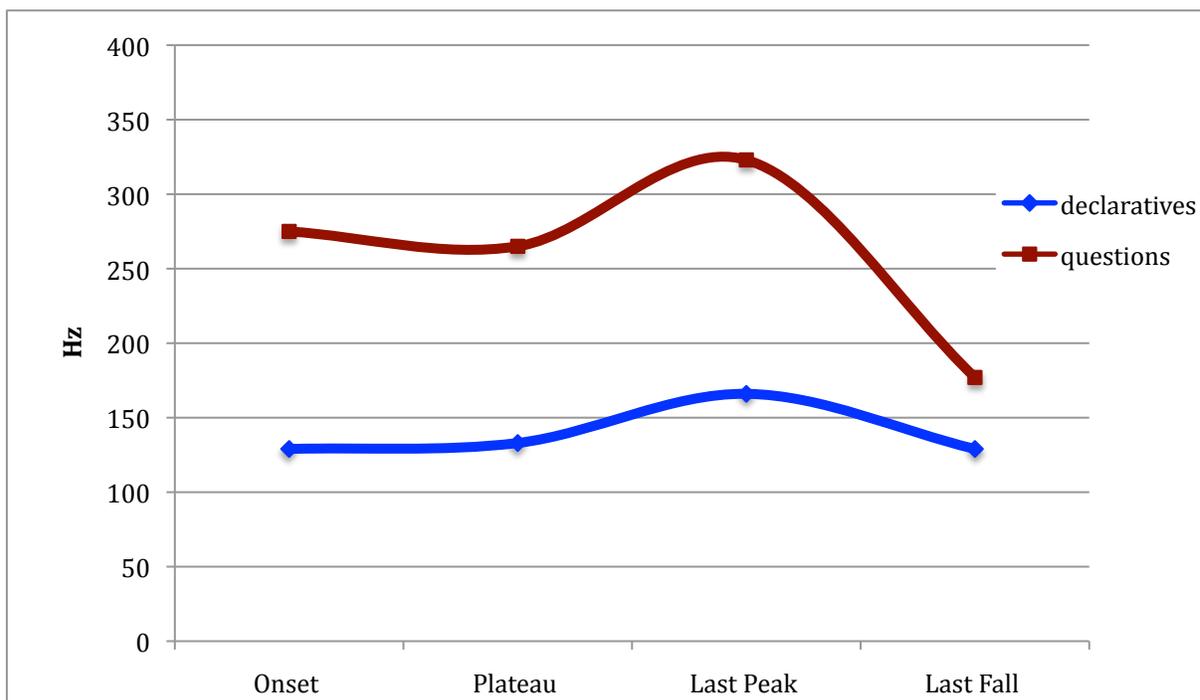
By nature, a question can be a negotiation for something in return (information) and it is in the best interest of the speaker to ask a question in such a manner as to not offend which places questions intonation variation into the realm of Effort Code, whereby the speaker must be polite in the deliverance of the request. The Effort Code is the biological code discussed by Gussenhoven (1999, 2002) whereby the increased effort in speech in order to emphasize something or place greater importance on it, as well as to express surprise (emotion) and is then achieved through wider pitch ranges. Therefore the grammaticalized Effort Code played out in greater intonation pitch range in questions, is observed. Thus the special request for information is contrasted effectively from the declarative, or statement (which does not request information). The Effort Code, with regard to questions, produces a wide pitch movement that in turn gets the attention of the listener by highlighting a difference in pitch.

I have accounted for the variation present in questions in the standard deviation for Sam by explaining possible reasons for such high variability, however, even with the variation with questions, the contours for both statements and questions are reflected in the standard deviation bars as well as in the averages. The main point which must be expressed here is that while the standard deviation suggests high variability in questions, it also maintains the pitch contours in both questions and statements.

#### **7.4. Jamin**

The Figure 7.5, represents utterances I have collected and analyzed; 10 statements and 10 questions for Jamin from Katie Drager interviews.

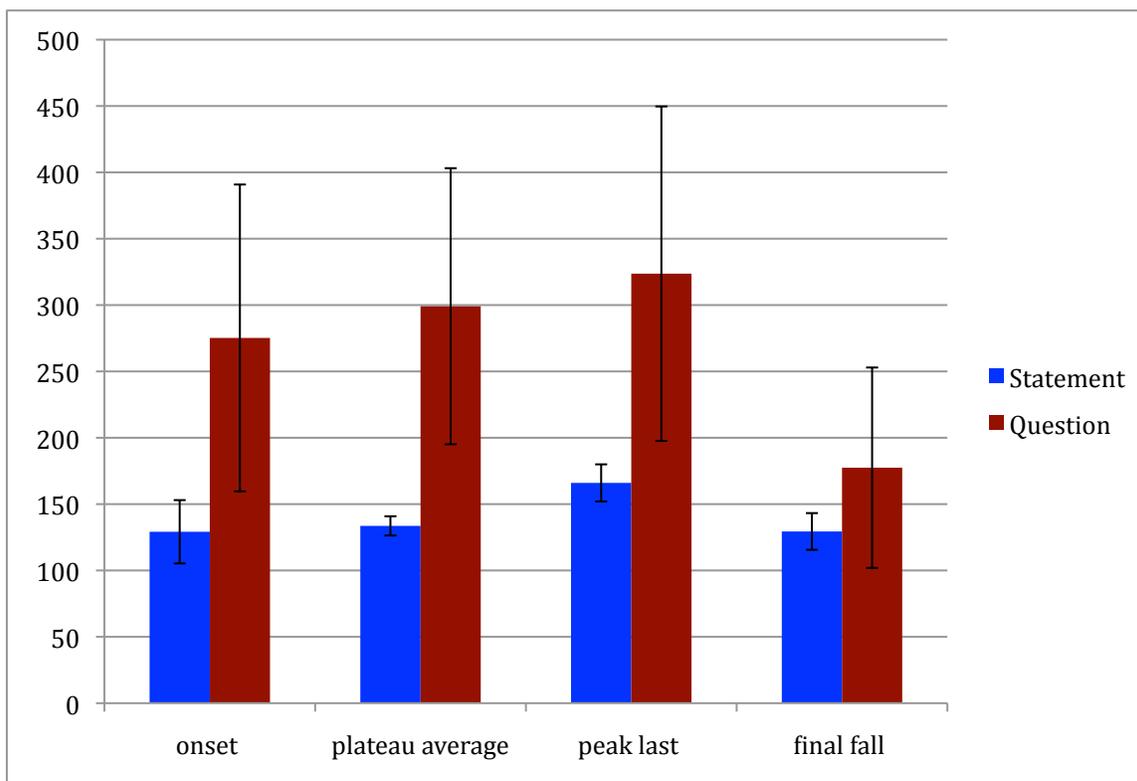
**Figure 7.5 Jamin's Questions and Statements**



In this line graph, the blue line represents the average target values for declaratives and the red line represents average target values for questions. As for the questions, I grouped both wh- and yes/no questions together as I did not have enough of each type for this speaker to separate them.

What I noticed for the data for Jamin is that both declaratives and question target values parallel each other, however the questions are substantially higher in each category.

**Figure 7.6 Standard Deviation for Jamin**



In comparison with Sam, I offer Jamin's standard deviation. Jamin's deviation shows much of the same wider span in questions and smaller span in statements as Sam's, however, Jamin's question variation is much more consistent across all four targets.

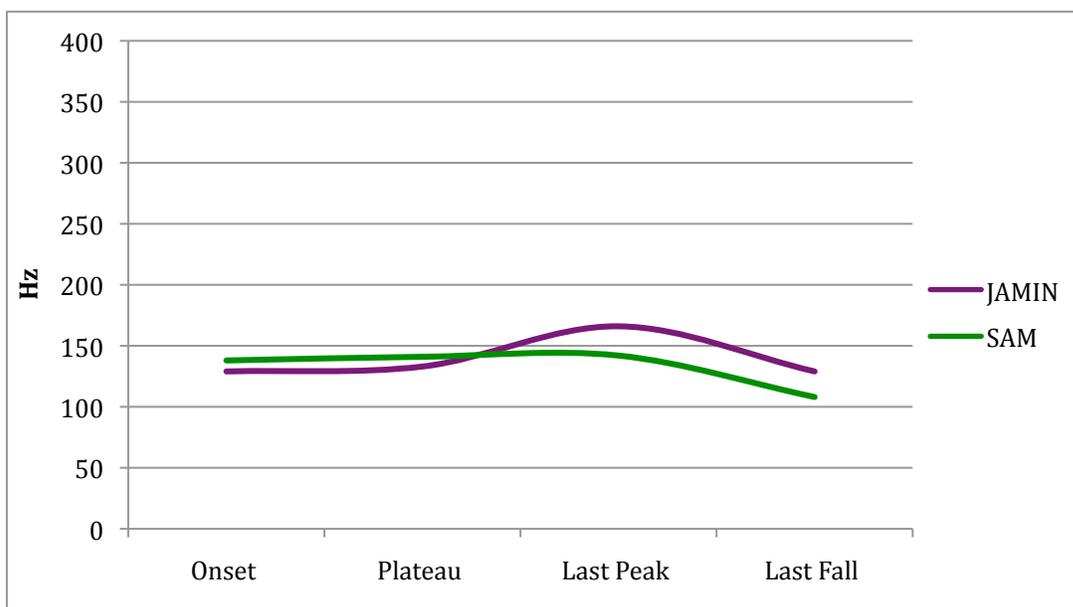
Jamin also has no overlap until the last target of final fall suggesting a clear categorical distinction between statements and questions. The final target measures the final Hz at the end of the utterance and so it is to be expected that the standard deviation for questions and statements should overlap as both speakers quite often end utterances around the same  $F_0$ . What can be taken from both the average and standard deviation for the HCE speakers is that there is a substantial variation of  $F_0$  in questions vs. statements and that in both speakers, the average of  $F_0$  for the last peak target is considerable higher (around 150 Hz) than in statements. While the

standard deviation shows highly variable data, this also is a testament to the naturalistic data that was collected.

### 7.5. Comparison of Jamin and Sam

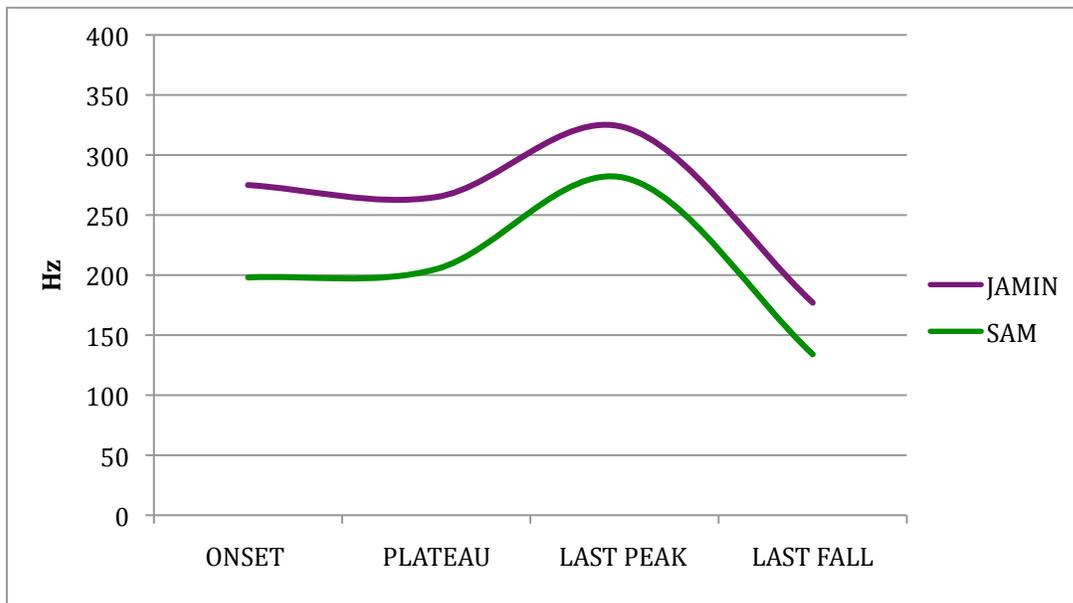
In the following figures, I present a comparison of two male HCE speakers; Jamin and Sam. The findings in this section provide evidence across speakers, of the similarities in categorical distinctions.

**Figure 7.7 Declaratives Comparison: Sam and Jamin**



The Figure 7.7 shows a comparison of the average declarative contour for Sam and Jamin. Sam is represented in green and Jamin is represented in purple. Notice a similar contour with both speakers, but due to speaker difference, one contour is overall higher than the other. In other words, Jamin has a slightly higher voice than Sam.

**Figure 7.8 Question Comparisons for Sam and Jamin**



Consistent with the declarative comparison, Jamin's contour is slightly higher than Sam, however, both speakers follow a very similar question contour. Note the almost parallel line.

**Figure 7.9 Declaratives and Questions for Sam and Jamin**

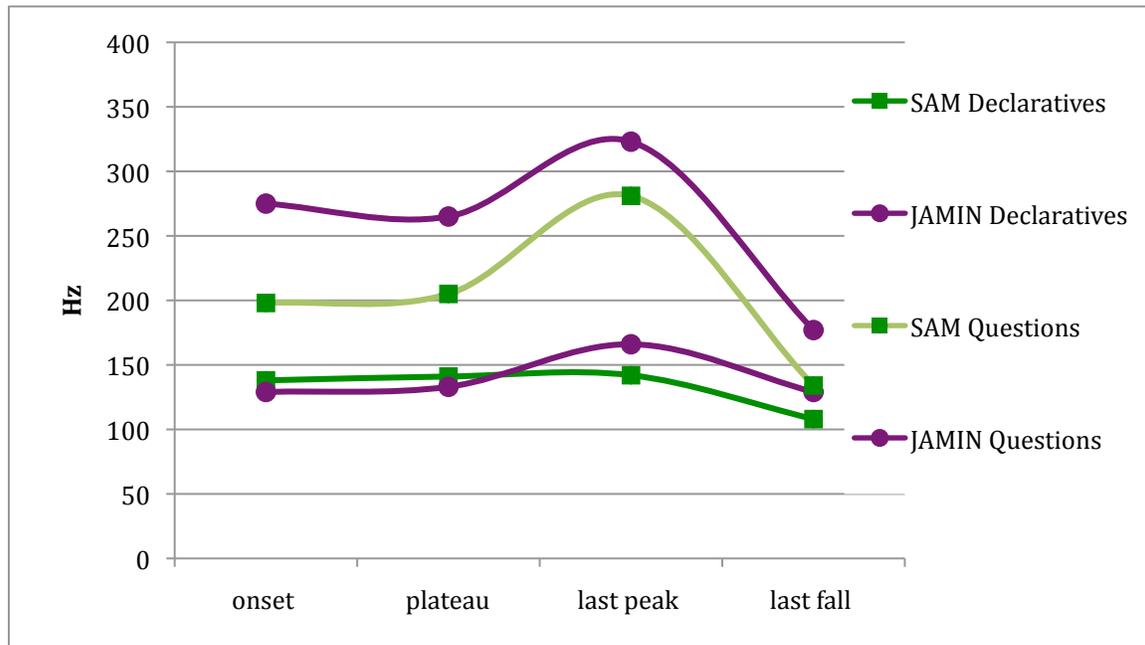


Figure 7.9 compares both questions and statements. Question contours are higher and are marked with triangles. Statements contours are lower and are marked with squares.

The above graphs show consistently across these two male HCE speakers from Oahu, the same contours in both declaratives and questions.

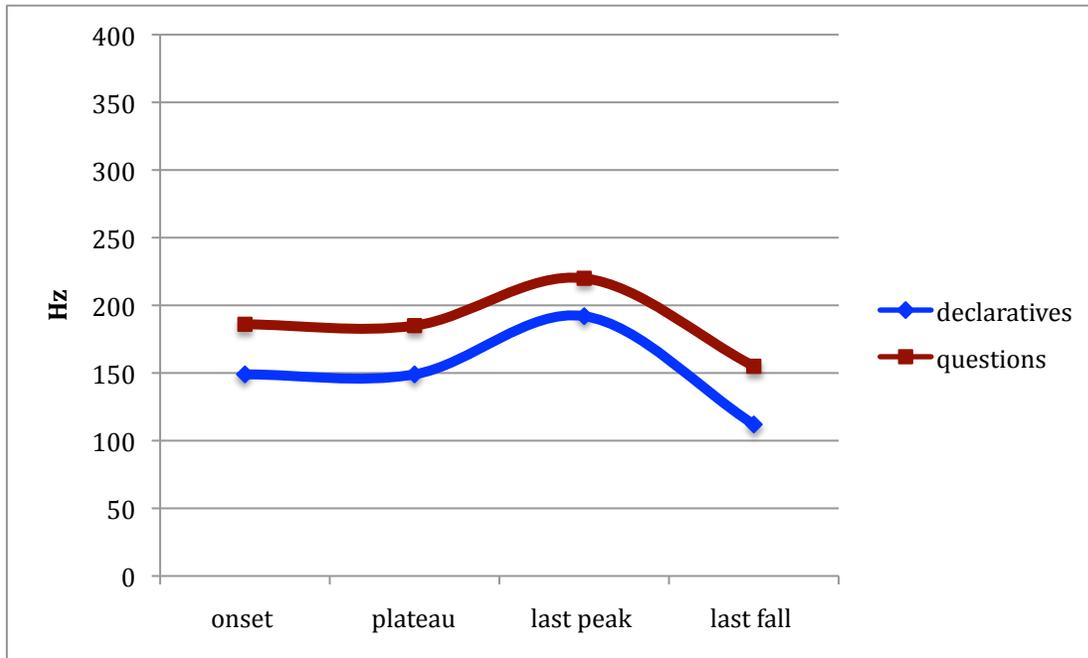
### 7.6. Clinton Kanahele

As I also wanted to see what was occurring in Hawaiian, using the same target values, I gathered data from the Clinton Kanahele interview with Levi Kapahulehua.

I took the average  $F_0$ s of 10 utterances of declaratives and 10 of questions for Clinton Kanahele, during the same interview, with Levi Kapahulehua.

In the bar chart, although not as dramatic as Jamin, the Hawaiian statements and questions behave much like those of the HCE speaker above. The declaratives and the questions parallel each other in contour, although the questions are higher.

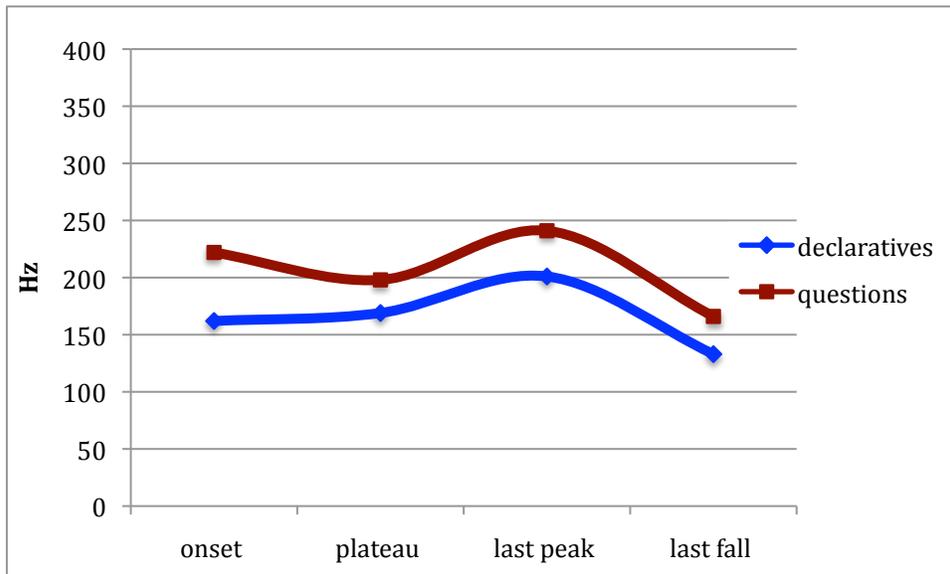
**Figure 7.10 Clinton Kanahale’s Questions and Statements (Levi Kapahulehua Interview)**



Although these are averaged and represent a simplified and abstract view, they show the difference in height, a contrast between statements and questions.

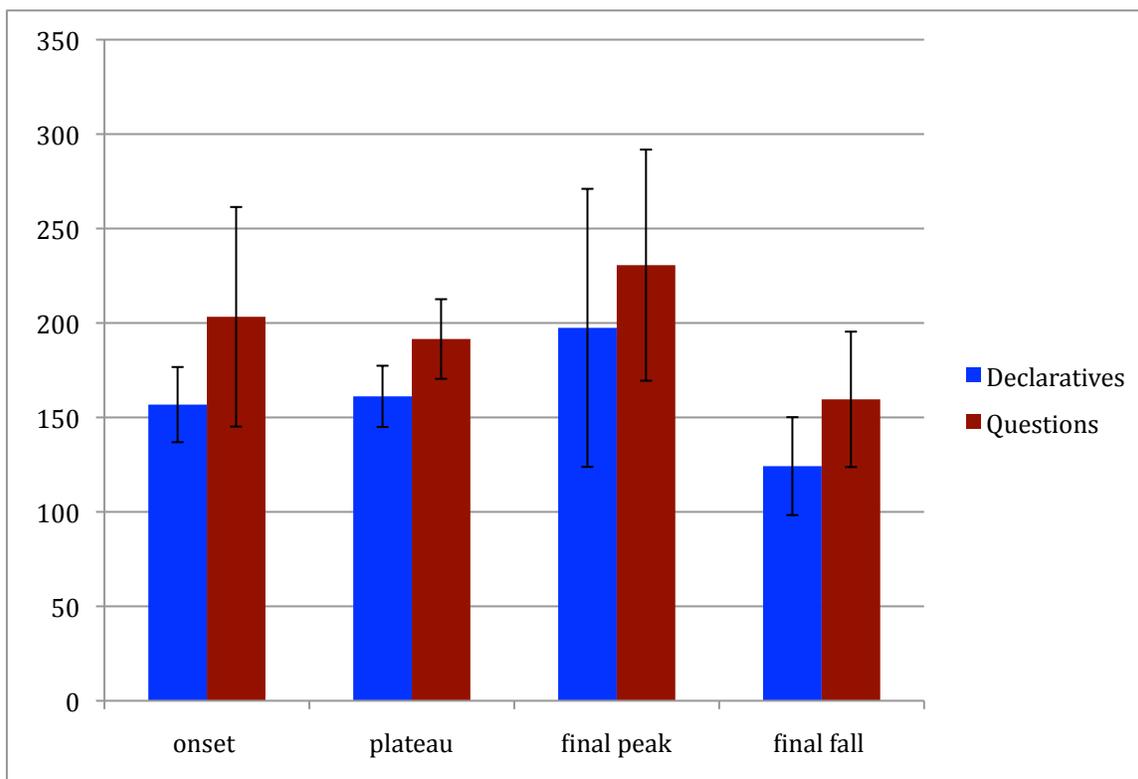
The following is a bar chart showing the average F<sub>0</sub>s for declaratives and questions for Clinton Kanahale during his interview with James Fay Lindsey.

**Figure 7.11 Clinton Kanahele Questions and Statements (James Fay Lindsey interview)**



By providing averages for Clinton in two different interviews, I am showing that the results are quite similar in two different interview sessions with two different interviewees. In the first chart for Clinton from his interview with Levi Kapahulehua, I questioned the results of the higher declarative  $F_0$ s due to a politeness factor- and that from the transcripts it appeared that Clinton was not very familiar with the interviewee. I analyzed and averaged declaratives and questions from another interview session with James Fay Lindsey, who, from the transcripts appeared that Clinton may have been more familiar with. I came to this conclusion as both men were familiar with Laie, Oahu and made reference to several people who they both knew. I found similar results with both interviews.

**Figure 7.12 Standard Deviation for Clinton Kanahale**



The standard deviation as compared to the  $F_0$  averages for Clinton Kanahale indicate that while there is quite a bit of overlap in each of the target points, questions still have the higher variation. This suggests that questions are variable, yet still have higher  $F_0$ s available than statements. The other indication provided by such variation is that the naturalistic data gathered represents a wide range of questions. By nature (cf. Gussenhoven, 2002), the statements are not as high, which provides a way to contrast grammatical categories in Hawaiian. I still do not rule out a politeness factor, as there is an interviewer/interviewee environment and in both sessions, Clinton maintains his interviewer register, perhaps a bit more formal than a casual conversation between friends. Certainly this recording was not as informal and casual as the conversations in the AnyKine Kine podcast.

With Jamin's interview, his sister is present and although the interviewer is asking the majority of the questions, Jamin and his sister tell stories and reminisce over shared memories of childhood and adulthood. Most of the questions posed by Jamin that I analyzed were presented to his sister, in a comfortable familiar type of register.

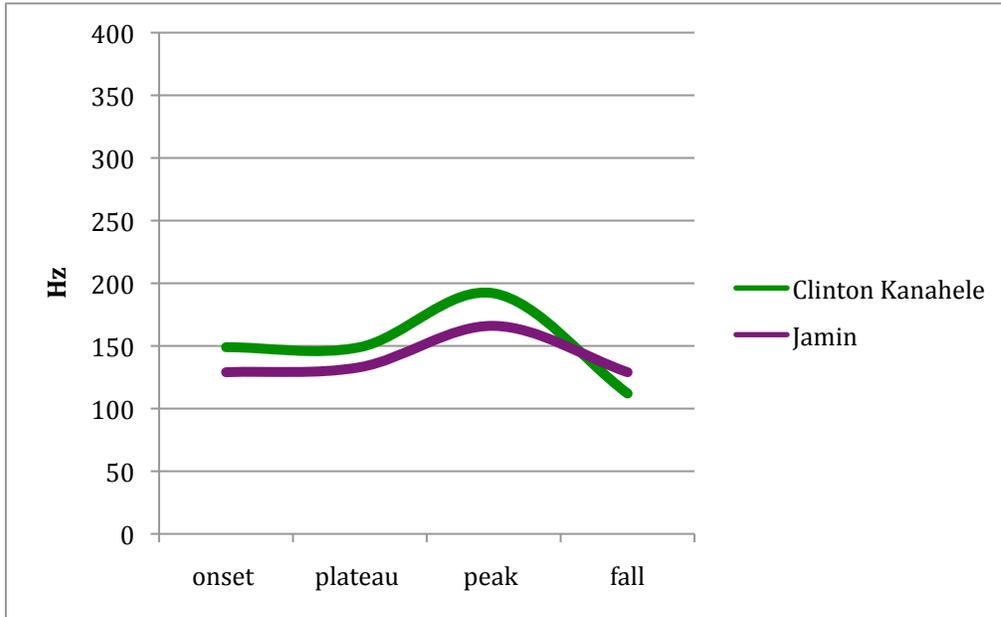
Regardless of the register, polite or familiar, it is the pitch height that differentiates declaratives and questions for both HCE and Hawaiian speakers, other variables would need to be investigated at a later time.

### **7.7. Clinton Kanahale and Jamin: A Comparison**

Analyzing the utterances by marking the four target areas provided me with answers to what I already felt were the key differences between questions and statements- helping me to answer the question: If statements and questions have falling intonation in HCE and Hawaiian, what are the contrastive cues that differentiate the two?

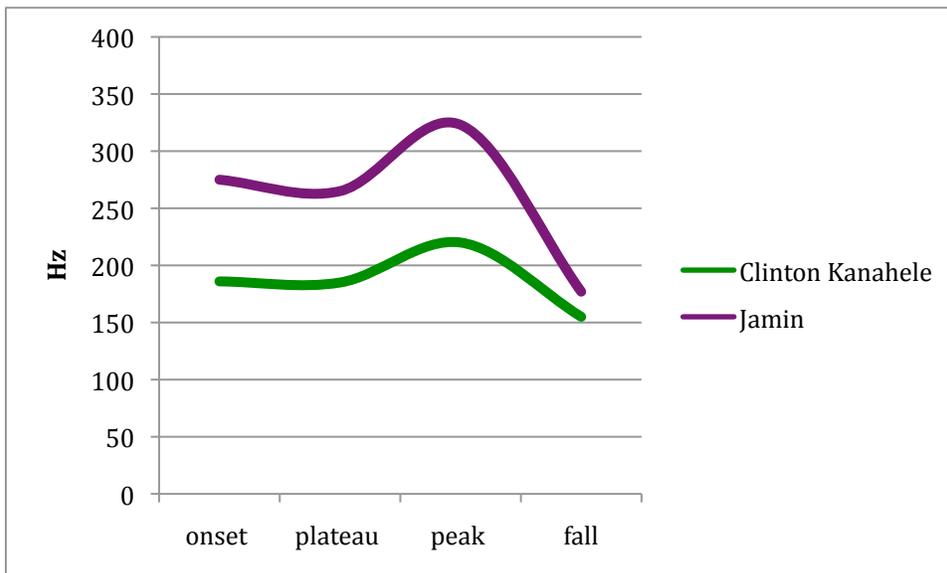
What is interesting to note is that Jamin's average  $F_0$ s for questions is quite high compared to his statements. There is a much more substantial difference between the two. Note that with Clinton Kanahale's questions vs. statements  $F_0$ s, the difference is not as dramatic as with Jamin.

**Figure 7.13 Declaratives: Jamin and Clinton Kanahele**



In declaratives, Clinton Kanahele has higher overall target values.

**Figure 7.14 Questions: Jamin and Clinton Kanahele**



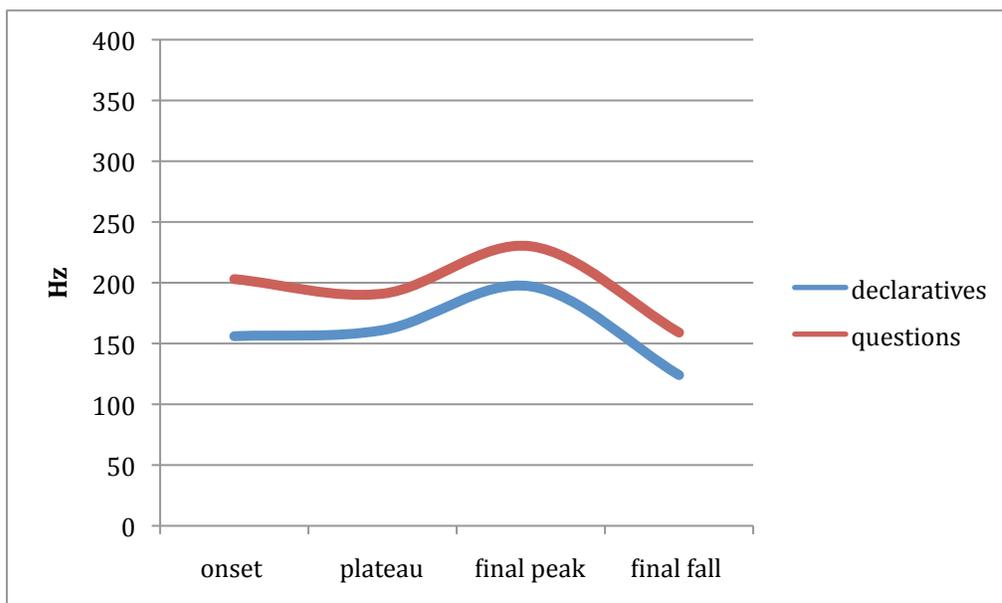
In questions, Jamin has much higher target values.

The Figure 7.14 shows that Jamin has a much higher question register than Clinton. I will discuss this result further in Chapter Eight. What would cause the difference between these two speakers? A higher pitched voice, for example, a woman's voice has higher  $F_0$ s than a male's voice, typically, which can attribute to different pitch ranges. Speakers with deeper voices will have, in general, lower  $F_0$ s than speakers with higher voices.

It would make sense that the same type of difference occurs in both declaratives and questions with each speaker. In this case, either Jamin's voice registers higher in declaratives as well as questions, or Clinton's voice registers higher with both declaratives and questions. However, the differences between the two speakers is not what you would expect. Clinton's declaratives are higher than Jamin in the target value categories and Jamin's questions are higher than Clinton's.

As mentioned, I initially attributed this to the possibility that Clinton's statements were impacted by a politeness factor that I would need to parse and compare to some other interviews he conducted, where he was more familiar with the interviewee. Comparing two separate interviews with two different interviewees did not yield a noticeable difference in declarative pitch averages. I still have not ruled out a specific type of register to attest for the seemingly high declarative  $F_0$ s in Clinton Kanahale. As per Ohala and Gussenhoven, high pitch can be a sign of respect, and/or politeness. However, what explains the much higher pitch of Jamin's questions over Clinton's? How can this difference be explained?

**Figure 7.15 Clinton Kanahale Declaratives and Questions (cumulative of both interviews)**



The bar chart above represents the average  $F_0$ s for 20 declaratives and 20 questions, a combination of both interviews, providing yet more data from which to demonstrate Hawaiian differentiating  $F_0$  levels.

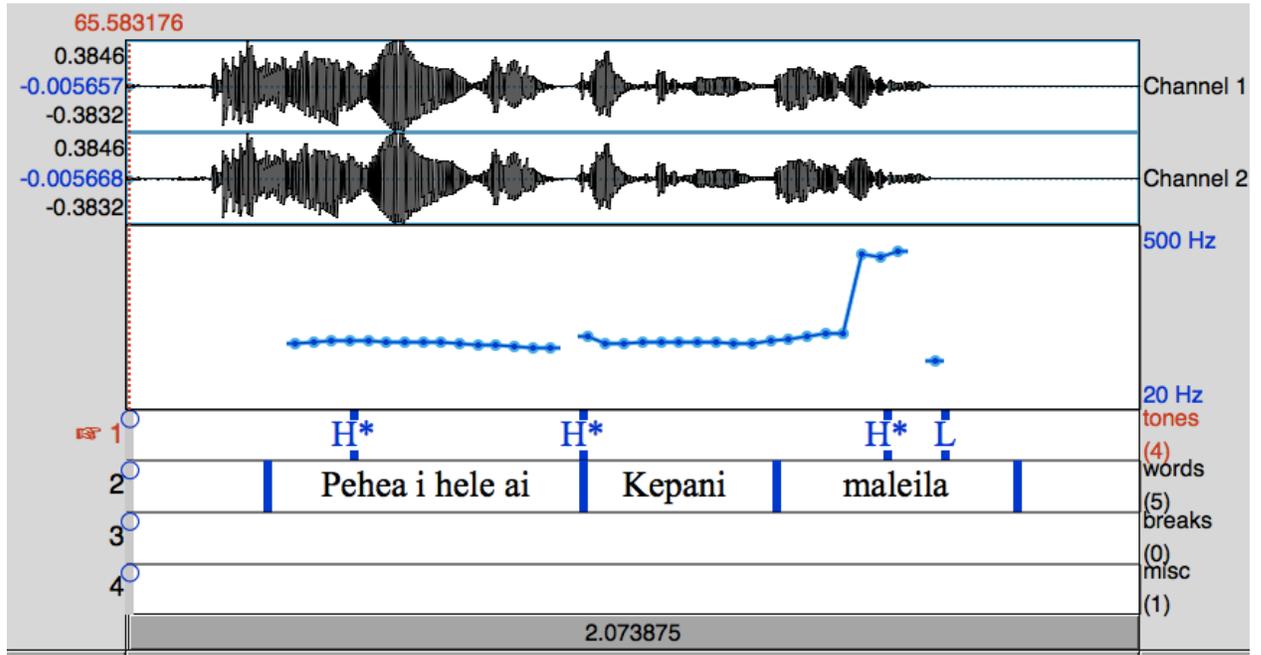
Another comparison I would like to make before moving on to female examples is that of Clinton and Sam. In gathering data and listening to sound files I noticed a very similar pattern in Sam's and Clinton's speech. Below I will provide both PRAAT graphics for convenience and then compare  $F_0$  values for both.

Clinton Kanahale Wh-Question (interview with Levi, p. 14 of the transcript).

Hawaiian: Pehea I hele ai na Kepani maleila?

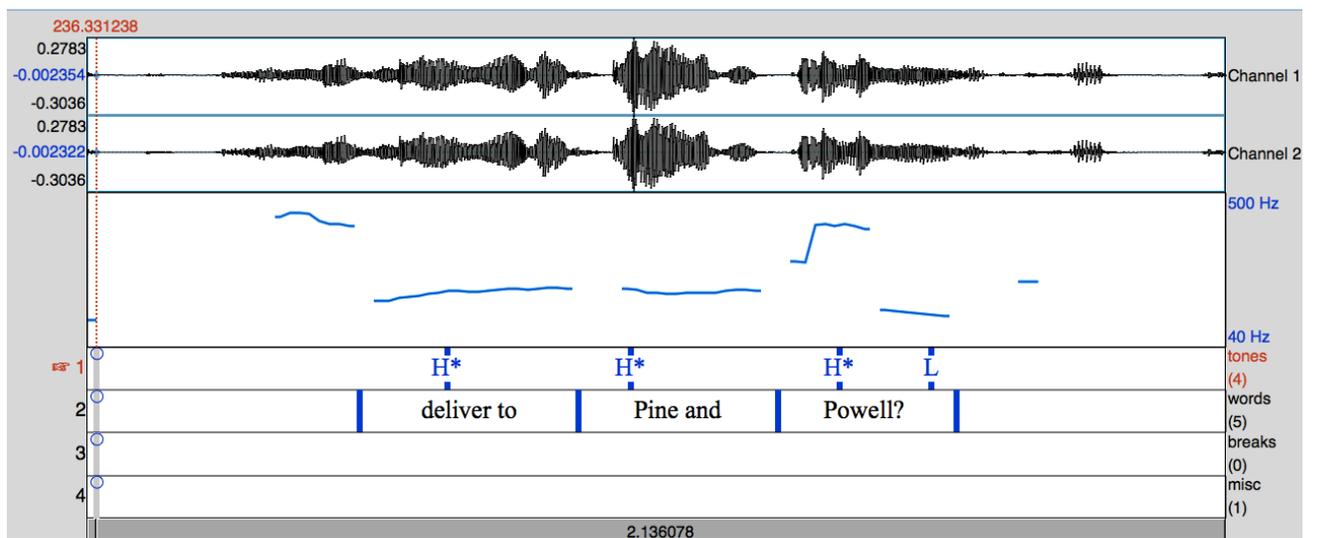
“How did the Japanese get here? “

Figure 7.16 Clinton Kanahela Wh-Question



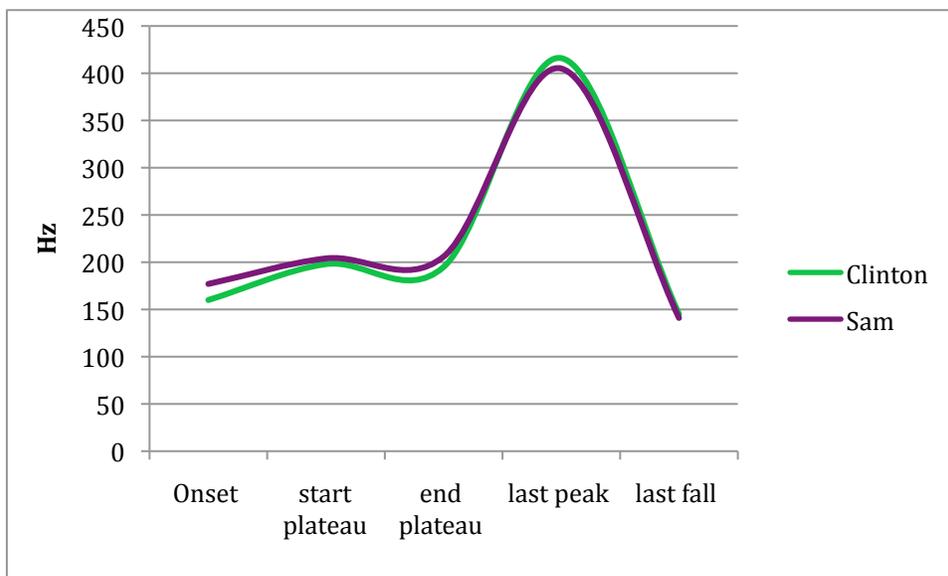
This contour compares to that of Sam's yes/no question, Deliver to Pine and Powell?

Figure 7.17 Sam's Yes/No Question



By comparing these two different types of questions by two different speakers of two different languages, it is possible to see some striking similarities. Below is a line chart of the  $F_0$  measurements of five target points, the onset, start of the plateau, end of the plateau, final peak and final fall. I have changed the usual measurement of ‘average plateau’ to include both the start and end of the plateau to better show the similarities.

**Figure 7.18 Clinton and Sam Question Intonation Comparison**



What is noticeable is the striking similarity in  $F_0$  measurements for each of the target points for both speakers. To expand, the two questions that are being compared are two different types of questions. Typically, a wh-question in Standard English has falling intonation, that is to say, falling intonation in wh-questions is not particularly unusual. However, falling yes-no question intonation is unusual, as mentioned in Chapter 2, 70% of the world’s languages have rising question intonation (Gussenhoven, 2002). In addition to these cross-linguistic differences and similarities, wh-questions, although perhaps commonly falling, do not all share the same contour.

Given these facts, the above wh-question and yes-no question have the same exact contour, suggesting a similarity that spans across question types which also can be found in these two different languages; HCE and Hawaiian. What is more is the fact that these two speakers are not only separated by language, they are also separated by age and geography. Sam, an HCE speaker from O’ahu, was born in 1979 and Clinton, from Maui, was born in 1902. The fact that these two speakers separated by many variables, share this contour, all so common in HCE and Hawaiian. I emphasize this example because it strengthens my argument that what is found in Hawaiian (traditional Hawaiian at that), is found in HCE, still today. The fact that two speakers from two completely different backgrounds share these contours provides proof that even influence from other languages (Mainland English), did not dilute the impact of Hawaiian on HCE.

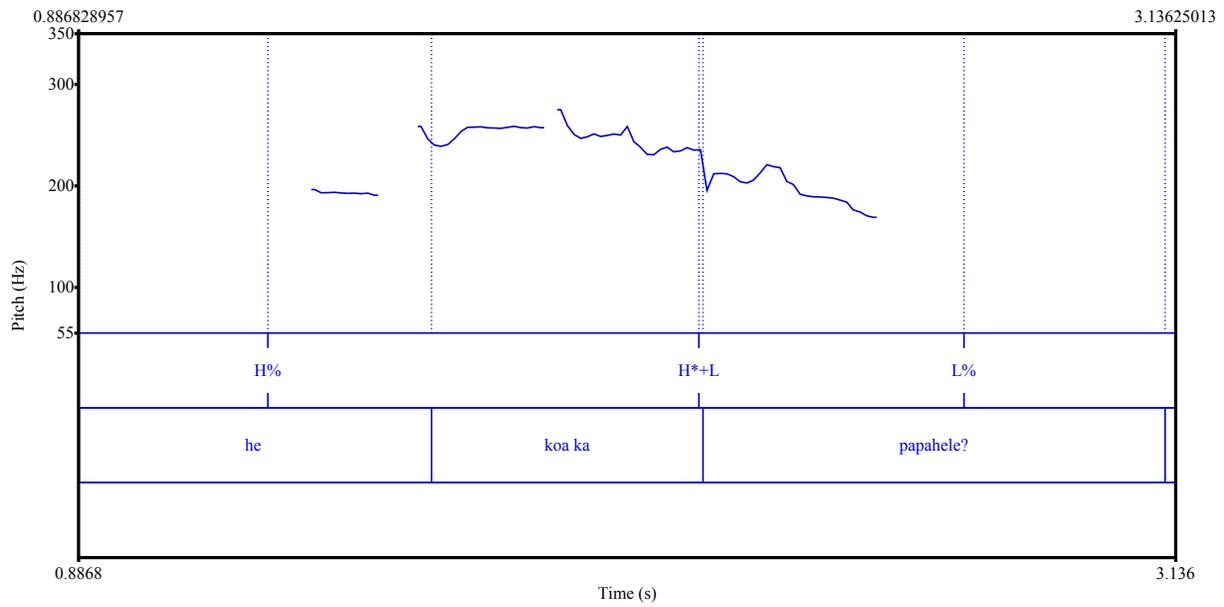
With regards to the difference between the height of questions in HCE and Hawaiian, I noticed the same type of difference in another speaker; a female who is familiar with both Pidgin and Hawaiian. Next, I will present the findings from this female speaker.

### **7.8. Ahonui Mims**

The following utterance from Ahonui Mim’s Living the Aloha Spirit, YouTube lessons show a comparison between the question, “He koa ka papahele?” and the statement “He koa ka papahele.”

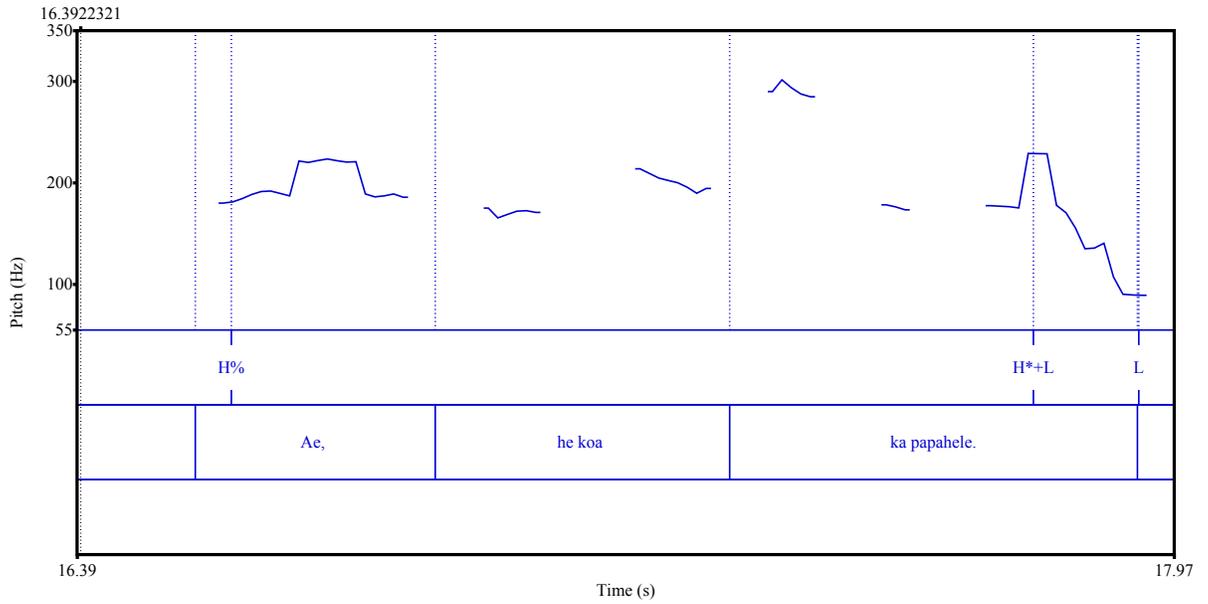
I have provided the example here again for convenience. The first example is the question posed in Hawaiian.

**Figure 7.19** Ahonui Mims “He Koa ka papahele?”



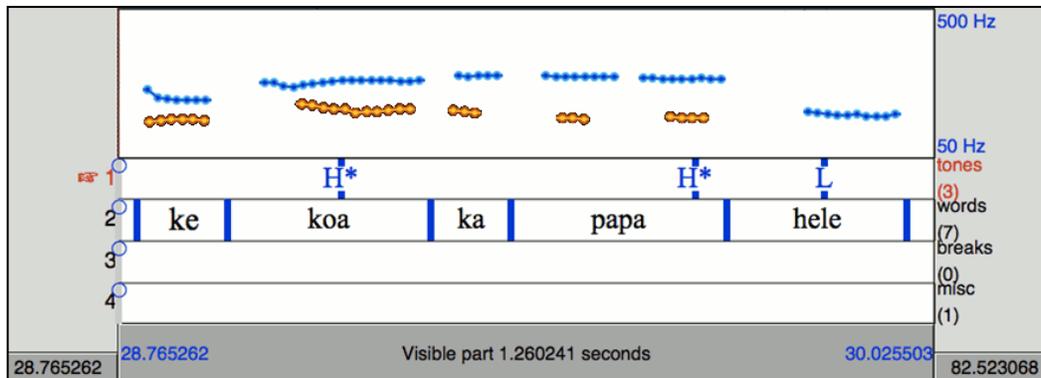
The onset of this question is noticeably higher than that of the statement. This onset starts at 256, whereas the statement starts at 156 Hz. The plateaus are also noticeably different as well as the last peak and last fall.

**Figure 7.20 Ahonui Mims “He Koa Ka Papahele”**



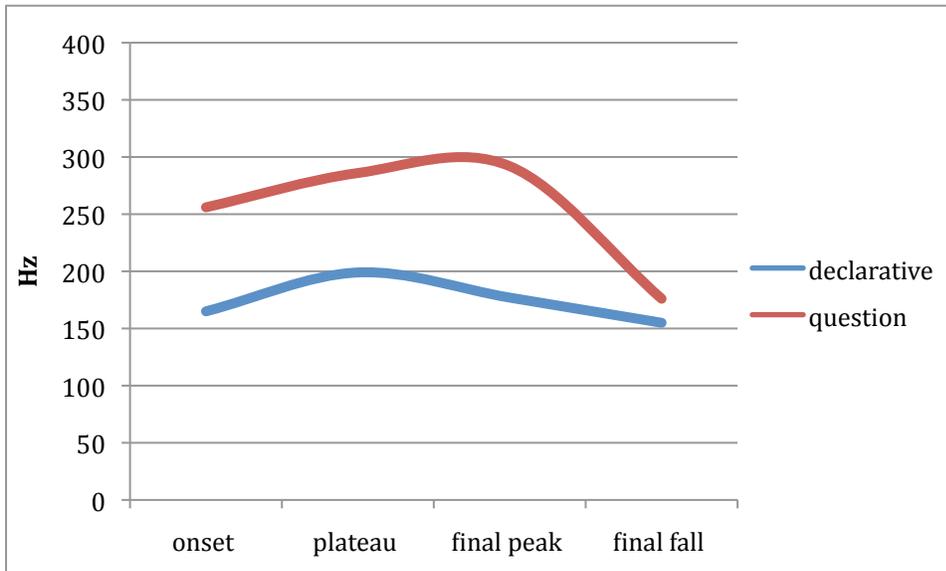
Combining these two images to illustrate these differences makes it easier to see.

**Figure 7.21 Hawaiian Question and Statement Comparison**



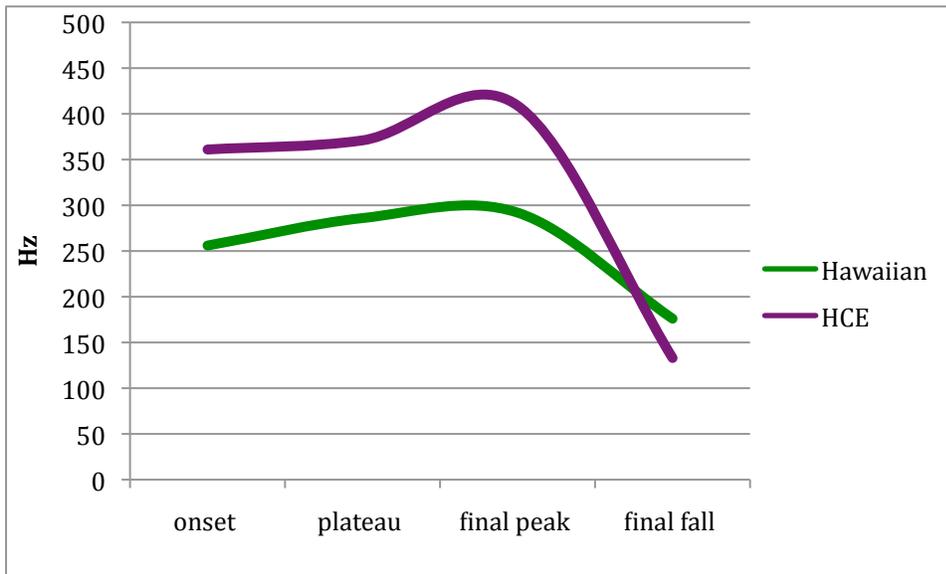
Also, the bar chart provided breaks down the target values to see each of the four values for the declarative and question side by side to see the general height difference for each.

**Figure 7.22 He koa ka papahale (Statement and Question in Hawaiian)**



This chart is only comparing two utterances, one a declarative and one a question, both in Hawaiian. What I found quite surprising is that when Ahonui Mims provided the same utterance, only posing the question in Pidgin, her pitch rose higher than the same question posed in Hawaiian. Below I have compared both of these utterances to see the difference in pitch height between Hawaiian and the Pidgin (HCE) question.

**Figure 7.23 Comparison of Hawaiian: He koa ka papahale? And HCE: Is the floor koa?**



The graph above shows the target values for the same question posed by the same speaker. Comparing a question spoken in Hawaiian and a question spoken in HCE, both by the speaker Ahonui Mims from Living the Aloha Spirit YouTube Hawaiian lessons, the difference is the overall height of questions in HCE.

The green bar represents the target values for the Hawaiian Question, He koa ka papahale? The purple bar represents the target values for the HCE Question, “Is the floor koa?” Something similar happens with an example from the KSDL Kulaiwi lessons with Ele.

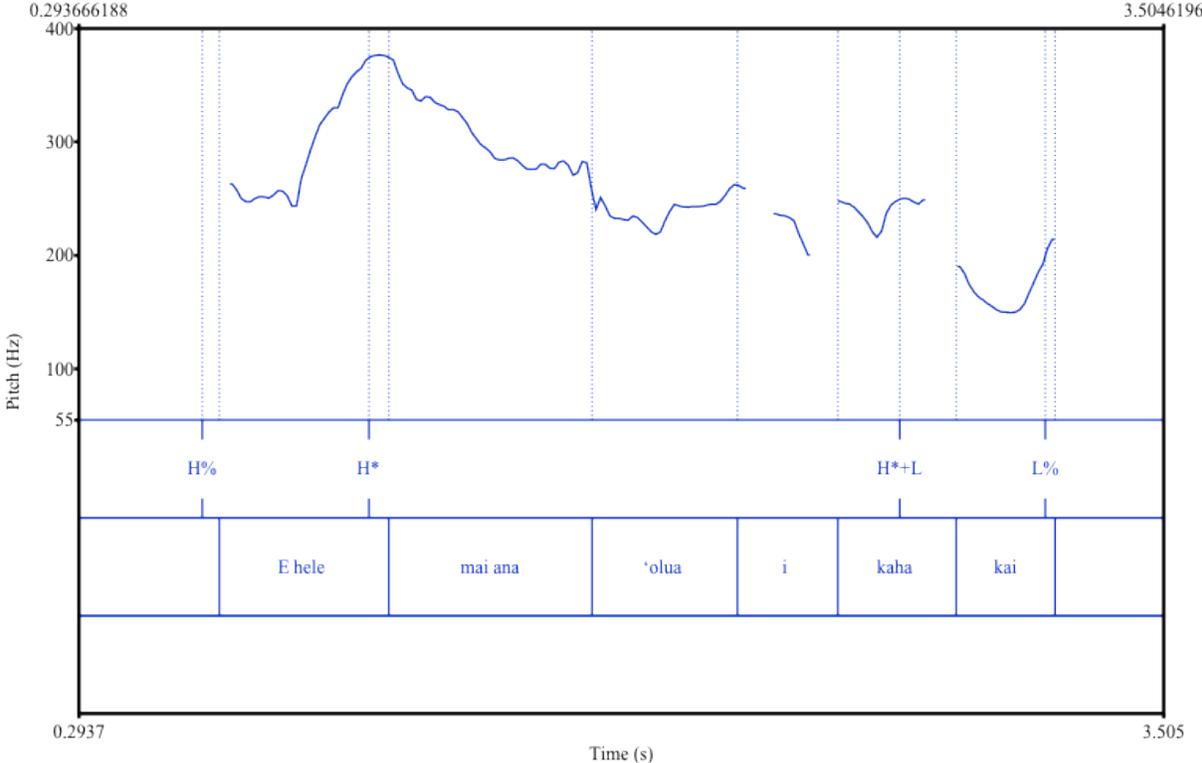
**7.9. Ekela Kaniaupio-Crozier, KSDL Kulaiwi**

Ele provides a Hawaiian question and then follows with the Pidgin equivalent.

**E hele mai ana ‘olua i kahakai? Are you two gonna go to the beach?**

First I will provide the Hawaiian example.

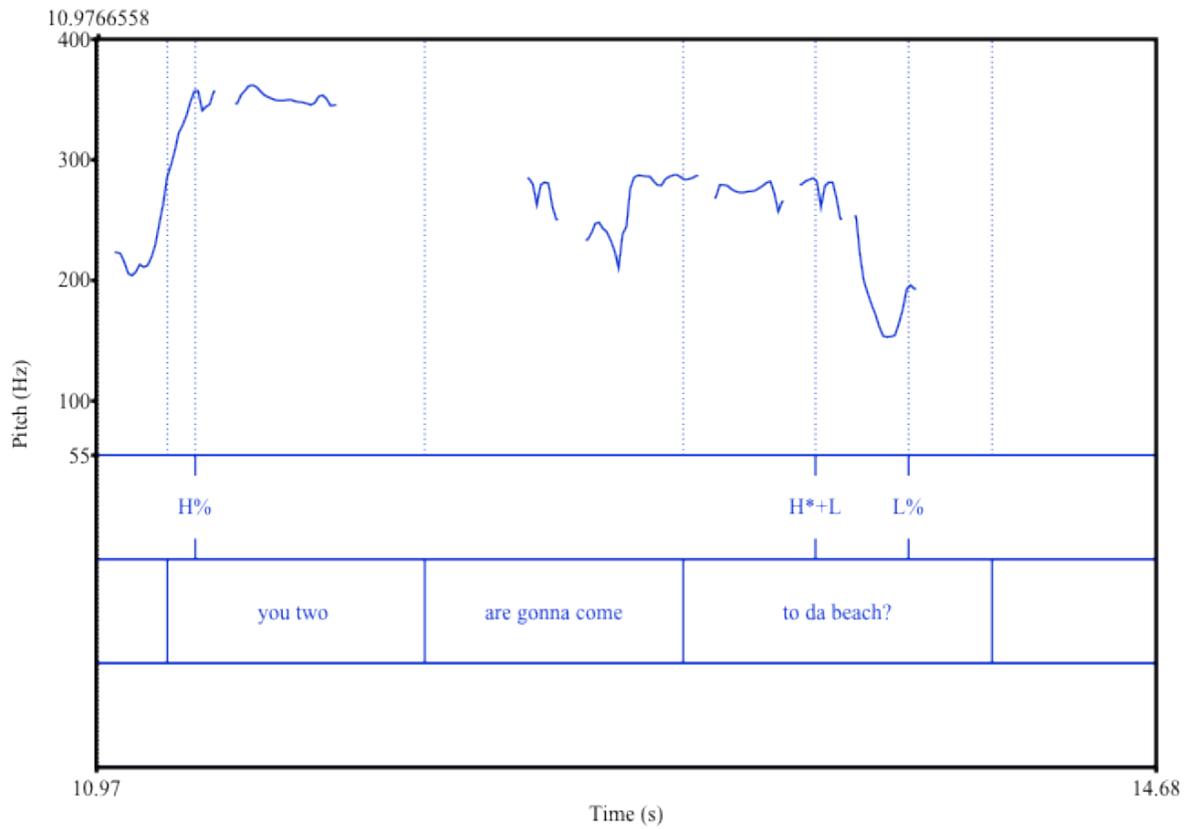
**Figure 7.24 Ekela Kanaiaupio-Crozier Hawaiian and HCE Comparison**



Hawaiian: E hele mai ana 'olua i kahakai?

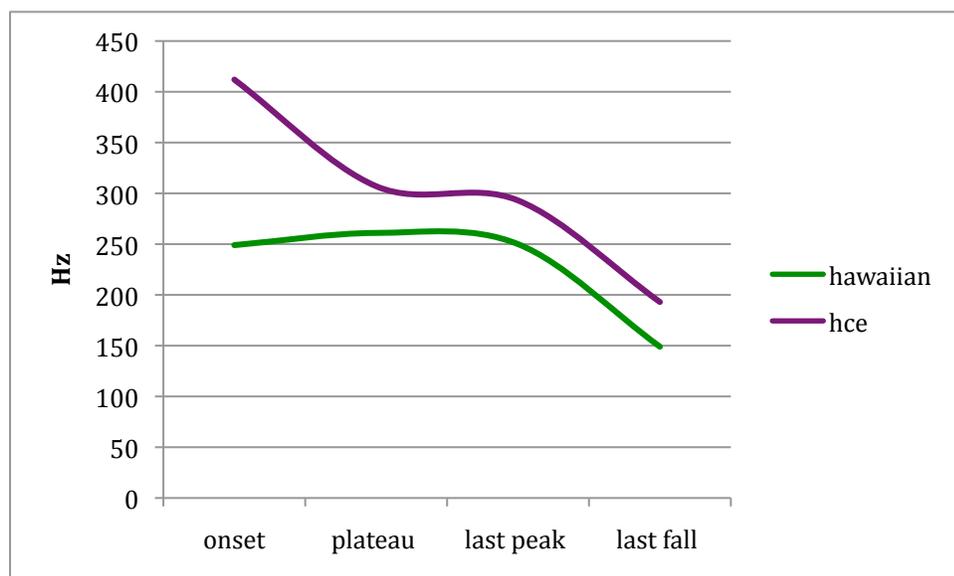
Below is the Pidgin example.

**Figure 7.25 HCE “Are You Two Gonna Come to the Beach?”**



When comparing the target values of onset, first peak, plateau, final peak, and final fall, the Pidgin and Hawaiian contours are very similar, but the Pidgin contour is higher.

**Figure 7.26 Crozier HCE and Hawaiian: Are you two gonna come to the beach?**



It appears, that the HCE questions, although following the same contour as the Hawaiian question, has a higher overall pitch, and in this case, as with the previous ones I have provided, a much more dramatic fall.

As far as results go, I was not expecting to find a significant difference between HCE and Hawaiian. I knew from analysis and data collection that the melodies for these two languages were very similar and that I had set out to argue their close relationship. I was not expecting to identify a difference between pitch levels.

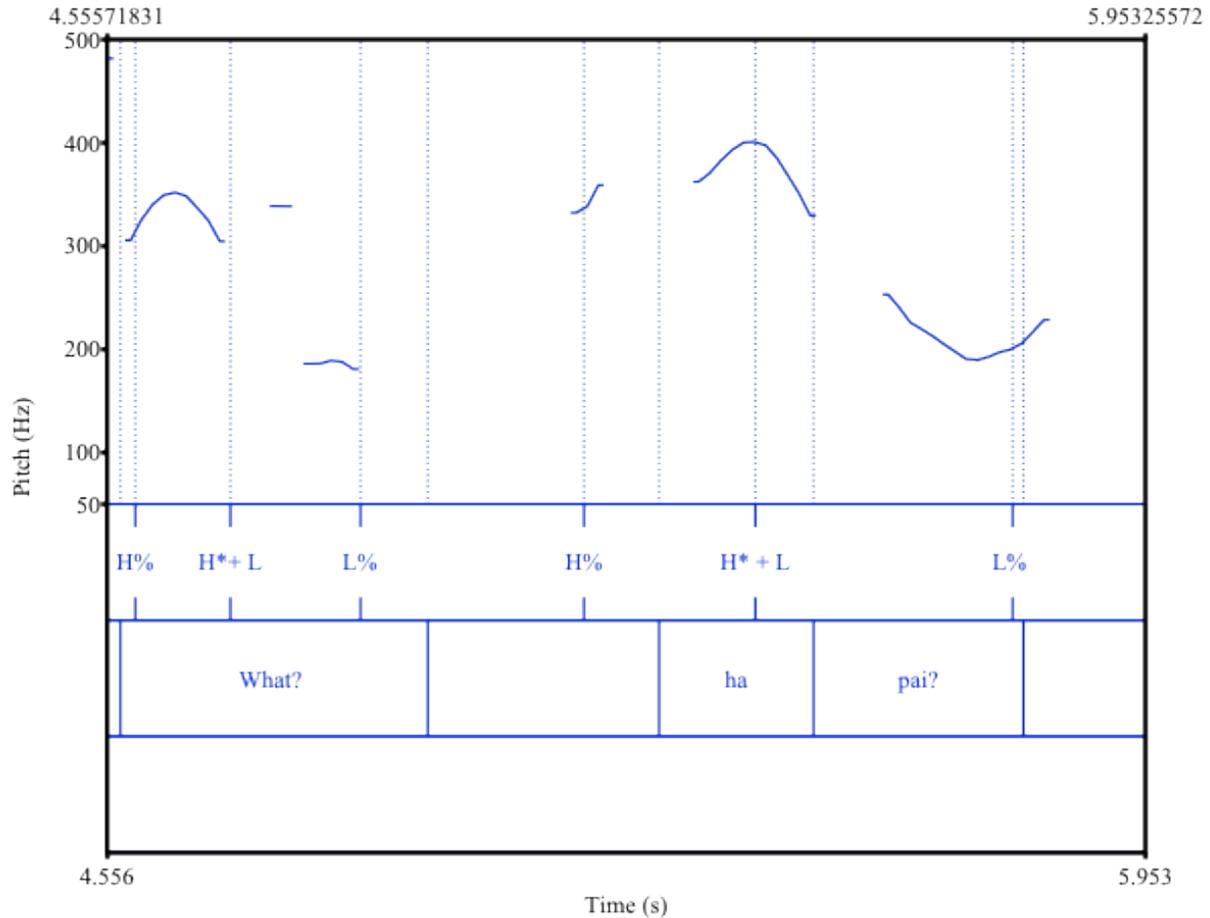
### **7.10. Shorter Questions (Condensed Intonation)**

The following results show the condensed question intonation of short questions.

In this first example, the female speaker is asking if someone is pregnant.

“What? Hapai?” (Hapai means is *pregnant* and is commonly used in Hawai‘i ; of Hawaiian origin).

**Figure 7.27 Female Speaker Shortened Yes/No Question (Full On Pidgin)**



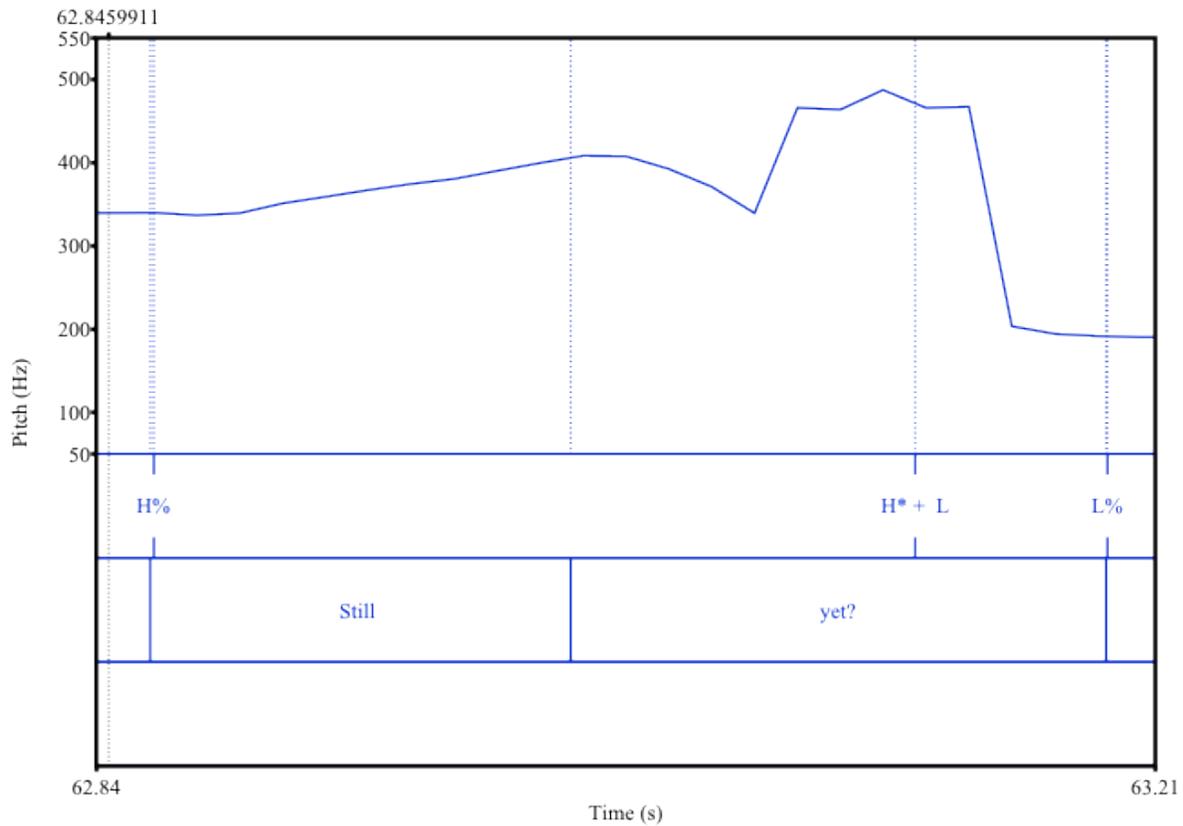
In this yes/no question in Figure 7.27, the onset of the word HAPAI starts at 334 Hz. In these condensed questions or statements, there is an onset, a peak and a final fall. The plateau is not present. However, the fall is still present, suggesting a compression rather than truncation as seen in Hungarian (discussed in Chapter 2; Ladd, 1996)

The peak of this one word question rises to 400 Hz and falls to 190 Hz.

In comparison, another female speaker asks a shortened question, “Still yet?”

In this example, taken from Katie Drager’s interviews, a female speaker is talking to her brother who just informed her that their tenants did not yet pay their rent. The sister asks, “still yet?”

**Figure 7.28 Female Speaker, Shortened Yes/No Question (Katie Drager Interview)**

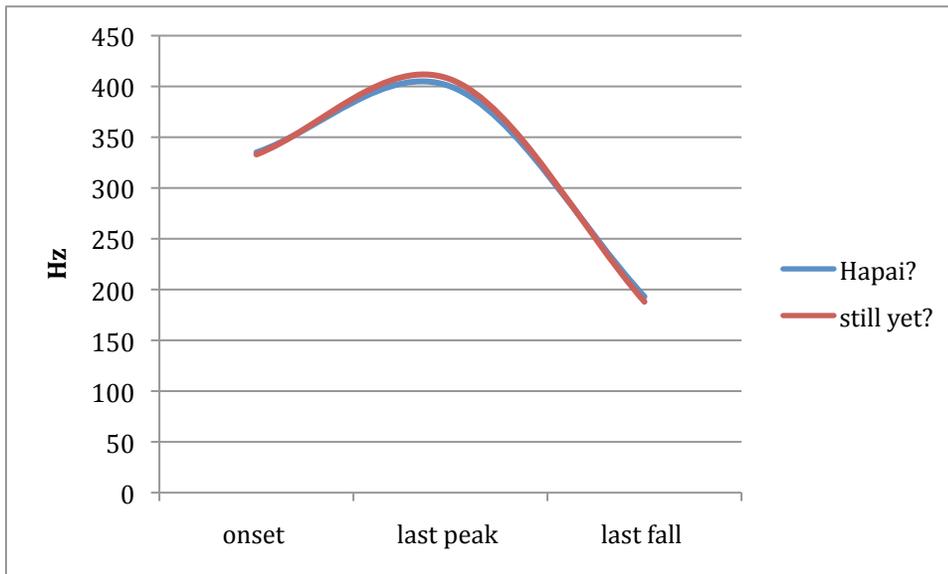


In this example, the onset starts at 339 Hz. The peak rises to 407 Hz and then falls to 194 Hz.

As indicated previously, the plateau is not present in these condensed utterances.

The following line graph compares the target values of Onset, Peak, and Fall for the two yes/no questions above.

**Figure 7.29 HCE Short Questions Comparison Female Speakers**



With virtually identical values, the two lines show remarkable consistency.

In this next comparison, I analyzed two HCE male speakers with similar shortened yes/no questions.

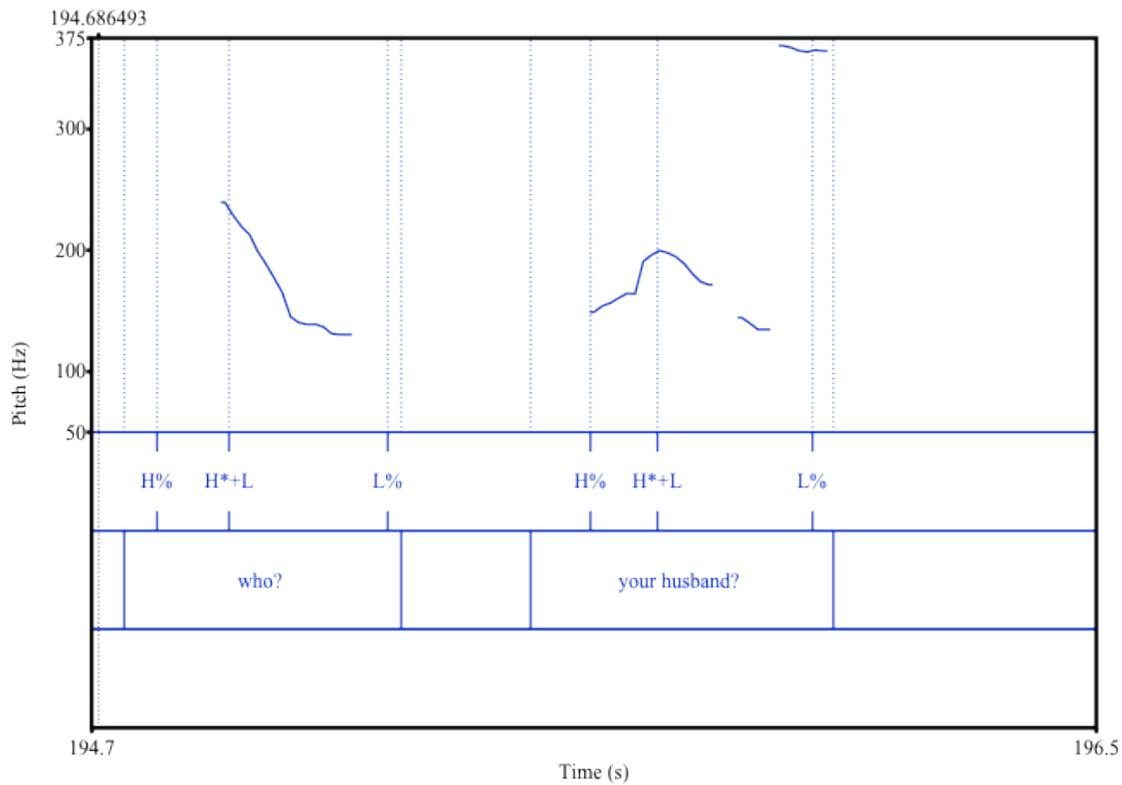
In the first example, taken from Katie Drager interviews, Jamin is asking a question about the interviewer's husband. He asks, "Who? Your husband?"

The onset of this shortened question starts at 148 Hz and rises to 199 Hz and then falls at 124 Hz. Although this yes/no question does not start particularly high, it follows the same onset, peak, and fall as the other shortened yes/no questions.

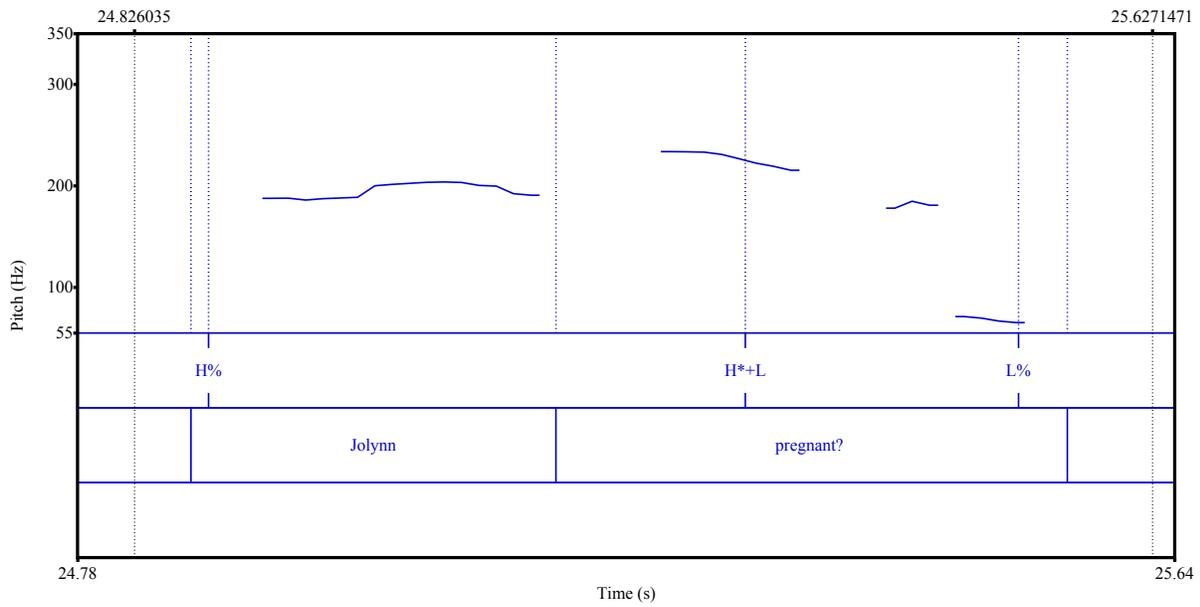
In this next example, Lee Tonouchi is telling a story about a friend asking about another friend being pregnant. He asks, “Jolynn pregnant?”

This question starts at 187 Hz, rises to 233 Hz and then falls to 130 Hz.

**Figure 7.30 Jamin’s Short Question**

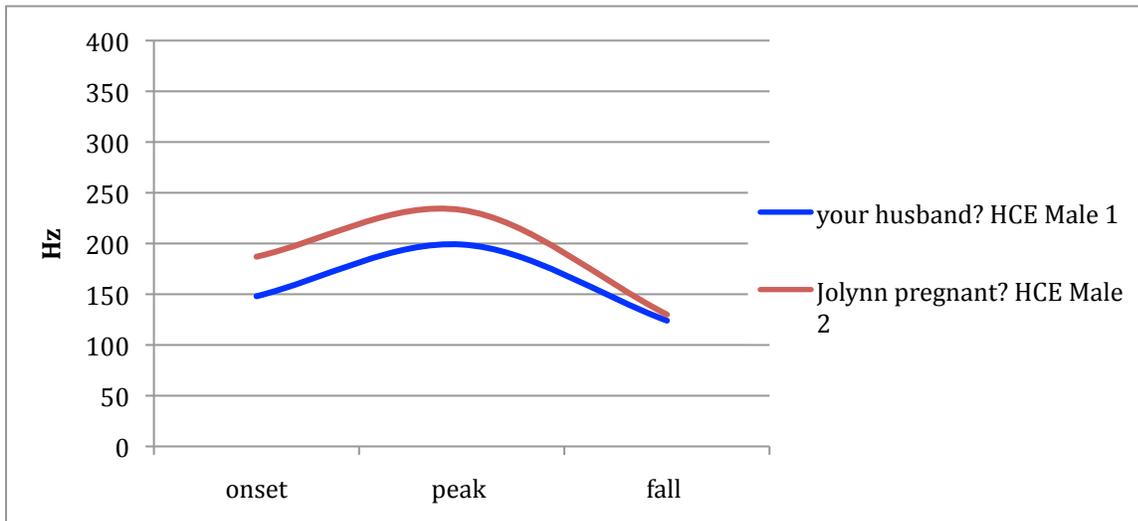


**Figure 7.31 Lee Tonouchi's Short Question**



The following line graph compares these two HCE male speakers and the above shortened yes/no questions. The blue line represents Jamin and the red line represents Lee Tonouchi. It is quite easy to see the same pattern here, in the line chart, as compared with the actual PRAAT pitch plot.

**Figure 7.32 HCE Short Question Comparison Male Speakers**



In these shortened yes/no questions in both female and male speakers, the falling pitch contour is easy to spot and highlighted due to the condensed utterance. Although the plateau is missing, the onset, peak, and fall simply and effectively convey the question cues which could indicate that these are the most salient cues for questions in HCE.

In other words, because a question can be asked with one word and that one word, missing any lexical or morphological question markers has to carry all question information, it is crucial that the word conveys the appropriate message and in this case, the single word must carry all question cues. Although the female speakers have a much wider pitch movement compared to the male speakers (Haan, 2002; Grabe, 2001), both female and male speakers exhibit the same question cues on the three target values.

Hawaiian also has a similar contour in shortened questions. I do not have speakers to compare, but I have included examples from the Clinton Kanahela interviews.

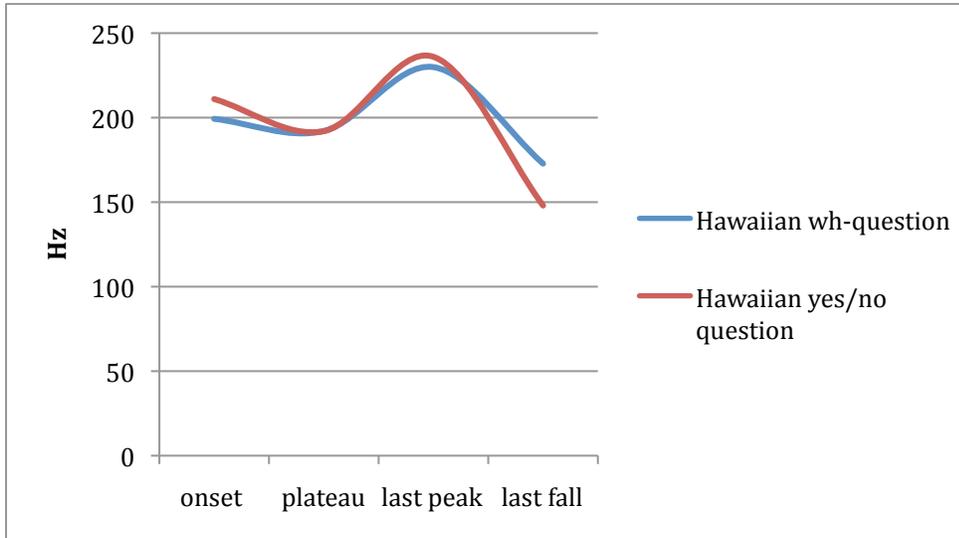
### **7.11. Speech Registers**

As mentioned Chapter Four, the speech registers documented in this study represent a more casual type of register used between people who are familiar with each other, or in situations that are friendlier in nature and formality is not necessary. The results in this chapter, although quite variable due to the casual nature of the environment, proved to be crucial in representing the contours. The averages emerged despite the variability of utterances and provided a picture of both Hawaiian and HCE which has not yet been apparent.

### **7.12. Functional Hypothesis**

As previously mentioned in Chapter 2, Haan (2002) developed a question type hierarchy which describes a correlation between syntactic and lexical question marking with average  $F_0$  height of an utterance type. The graph below represents 20 questions in Hawaiian; 10 yes/no questions and 10 wh-questions. The average  $F_0$  was calculated for each of the target points measured in previous examples. The results do not conclude the Functional Hypothesis; which would predict that yes/no questions in Hawaiian would be higher than wh-questions, given the lack of syntactic and lexical question marking in yes/no questions. It appears that yes/no questions are slightly higher, but not substantially and not certainly not perceptually so.

**Figure 7.33 Functional Hypothesis and Hawaiian**



In summary, the findings presented in this section represent averages for four crucial target points used to compare HCE and Hawaiian questions and statements. Standard deviations indicate that questions have a much higher amount of variability, but are still consistently in general higher than statements. One noticeable difference between HCE and Hawaiian questions is that HCE has wider pitch ranges, but that difference will also need to be researched further provide stronger evidence that this difference is maintained across speaker populations in general. Perhaps a modified controlled elicitation would be able to produce naturalistic height difference, but this type of study has yet to be conducted. In the following, Chapter Eight, I discuss the possible theoretical reasons for the findings discussed in this chapter.

## **Chapter 8: Theoretical Discussion**

### **8.1. Introduction**

In this section of the dissertation I discuss theories that help explain the results that I discussed in the previous chapter.

### **8.2. Pre-Planning Response and Functional Hypothesis**

What is noticeable is that when a question follows a statement, in both Hawaiian and HCE, it is possible to hear the dramatic jump in pitch at the onset. When having so many utterances with falling pitch, i.e., continuation, statements, and questions, what is it that differentiates them for the listener? As I have documented in the Chapter 7, it is in fact the left edge of the utterance that contains the contrasting cues used to differentiate question from statement (along with other cues). The question cue is not only the high onset, but then the dramatic last peak with the even more dramatic fall immediately after. The dramatic fall is the result of the previous height of the plateau and last peak. The height of the last peak provides an environment where the dramatic falling pitch is produced to conclude the utterance. The conclusion of the utterance in a question ends up being a more dramatic fall than in statements due to the height of the last peak. Also, I have found in comparing target pitch measurements that HCE has a higher pitch register in questions than Hawaiian. The high onset, also falls in line with the Functional Hypothesis suggested by Haan (2001) and supported by Grabe (2002) as well.

Hawaiian does not have question words in the yes/no question and so it is up to the intonation to carry the burden of differentiating statements vs. questions. Likewise, omitting

question words is very common in HCE, such that yes/no questions sound like declarative questions. This is also attested by Day and Sato (1980:438) SE= Standard English

Change from SE to HCE is one which is based on a difference in rules in the two grammars. For example, SE has a rule of subject-verb inversion used in forming yes-no questions: declarative: 'John is eating'; interrogative: 'Is John eating?' the intonation may or may not be the same in SE. HCE is different. Yes-no questions are not formed by a subject-verb inversion rule; intonation changes. This is categorized as a transformational rule difference between HCE and SE.

From this quote, Day and Sato (1980) express the difference of question formation between Standard English and HCE whereby HCE does not have subject-verb inversion and that it is the intonation that changes. This is what is also seen in Hawaiian, as previously mentioned. It is observed in other research, however not formally analyzed, that HCE relies on intonation to make the question/statement distinction. My research also concludes that Hawaiian does the same. As well, I have contributed through this study to the knowledge of how these languages use intonation to make the questions/statement distinction.

In agreement with the Functional Hypothesis, the pitch needs to be highest to signal a question lacking syntactic or question word cues. This plays out in a latitudinal or global difference between questions and statements in Hawaiian and HCE. While I have not yet identified if HCE yes/no questions are higher than wh-questions, but this is something I would like to look at further.

I propose that the overall level of the question, which also gives opportunity for a deeper fall, is what a speaker uses to let the listener know the message is a question. How can a speaker achieve the levels needed to convey the message effectively as a question versus a statement? The speaker needs to pre-plan in order to calculate these levels. A statement has a flatter contour, with falling intonation. While the H and L pattern may look similar to Standard

Mainland English, the high plateau, fall and timing are different which makes the HCE statement sound different.

### **8.3. Peak delay**

While I am not aware that HCE and Hawaiian have peak delay, I maintain that it is the other cues I have mentioned (i.e., onset, high peak, as well as global pitch register) that remain the most salient cues; by having these cues peak delay becomes irrelevant in question signaling. In terms of measuring peak delay to determine whether it is manifested in HCE and Hawaiian, I am unable to do so with the data I have gathered due to the variable nature and lack of examples to compare in a stricter laboratory controlled environment. I gathered examples that illustrate the difference in height between statements and questions, which is the categorical difference that should thus be the focus, as emphasized in Chapter 2.

### **8.4. Raised Register**

“ $\uparrow$ H\* This pitch accent occurs in nuclear position, with the high tone produced extra high. Its phonetic realization in nuclear position is affected by the following boundary tone. When followed by a high boundary (top), the high plateau persists throughout the duration of the tonic syllable. When followed by a low boundary (bottom), the F0 persists throughout the syllable onset and may begin the fall anywhere from early in the vowel to about three quarters of the way through it. It is found in nuclear position for polite questions, imperative questions and broad focus yes-no questions.”

Hawaiian and HCE makes use of a latitudinal intonation distinction to tell apart questions and statements. Given the binary conventions of the AM/TOBI system, this poses a problem of how to convey this distinction formally in Hawaiian and HCE. Grabe (2002) also makes note that there are limitations to the AM system as Belfast English has quite similar contours for questions and statements (cf. Chapter 2). For Hawaiian and HCE, the categorical distinction lies in the phonetic space and not in the sequencing of H and L tones. In other words, questions and statements are contrasted in what can be considered more phonetically instead of through a distinct sequence of H and L which can be seen in languages such as Mainland United States English. For example, in English, the contrast can be easily expressed via phonological modeling such that a yes/no question ends in a H%, whereas a statement ends in a L%. However, in Hawaiian and HCE (cf. Chapter 5 and 6), all utterance types share the same phonological representation as transcribed through the AM/TOBI system. As mentioned in Chapter 2, the TOBI transcription system, while providing a standard by which we can compare a variety of languages, also provides support for a need of a discrete phonological tone to express the question/statement distinction in languages such as Hawaiian and HCE.

In attempting to resolve this dilemma, there are several ways to potentially accomplish a more accurate phonological model of Hawaiian and HCE. For instance, Haan (2002) entertains “a discrete phonological category [+raised register]” (p. 161), which Inkelas and Leben (1990) alluded to in modeling what they called the “Global Raising” of Hs and Ls in Hausa yes/no questions. (Inkelas and Leben suggested that the opposite value of this parameter, [–raised register], might represent downdrift, which is incompatible with question raising in Hausa.) Inkelas and Leben suggest that the raised register specification is added to each tonal node

specified H or L in Hausa yes/no questions. This new category could be a solution for Hawaiian and HCE, but I continue with some additional options within TOBI.

Another formal method used to resolve this issue is to invoke a type of phonetic superscript, such that a symbol would express the raised pitch of the tone, whether it is an H or L tone. In example 6a, the upstep (<sup>↑</sup>) symbol is used to express the formal phonological model of a Hawaiian and HCE question; the statement is provided in 11b.

(11)

a. Hawaiian/HCE question:  $H^{\uparrow}\% \ H^{\uparrow*} + L - L^{\uparrow}\%$

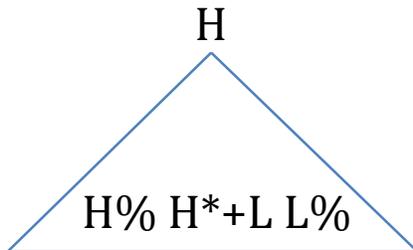
b. Hawaiian/HCE statement:  $H\% \ H^* + L - L\%$

Attaching these symbols to the boundary tones and pitch accents would express a higher pitch and thus differentiate questions from statements. However, it seems that this type of “add-on” offers a phonetic description rather than a discrete phonological category representative of what occurs in Hawaiian and HCE. In addition, it is better suited to a local tone or intonational effect rather than a global one, hence the need to add it to each H and L in 6a. (Compare Inkelas and Leben’s addition of a raised register specification to each H and L in Hausa yes/no questions.)

Interestingly, Haan (2002) remarks that a phonological solution (like [+raised register]) entails several joint assumptions: “(i) a raised register is indispensable to questions, (ii) that non-questions do not display register shifts, and (iii) that register shifts only upwards. These assumptions seem somewhat questionable, though” (p. 162). However, these are exactly the types of assumptions that need to be acknowledged in Hawaiian and HCE. Instead of an upstep

symbol, perhaps modification of the H and L tones could involve a different formalism that could express the raised register, yet still remain consistent with the already established set of conventions in the AM/TOBI system. At this time, I favor the option of a discrete raised register category to express the question/statement distinction in Hawaiian and HCE with regard to a formal phonological model, transcribed via the AM/TOBI system. In the absence of another method to convey this in TOBI, I suggest that a (superscripted) H is added to the prosodic constituent which encompasses questions in Hawaiian and HCE. This superscripted H raises the register of all tones—be they boundary, pitch accent or trailing tones—within the prosodic constituent, as diagrammed here:

(12)



In example 13, I present how the constituent-level H could be expressed within the TOBI system.

(13)

a. Hawaiian/HCE question: <sup>H</sup>(H% H\*+ L -L% )

b. Hawaiian /HCE statement. H% H\*+L -L%

In sum, examining pitch register illustrates the intersection of phonology and phonetics and how it is important to formally characterize register which is not widely recognized as a fundamental linguistic element (Kingston and Beckman 1990:58). The data presented in Chapters 5 and 6 will hopefully provide a basis for additional future work on providing formal mechanisms to express pitch. In the meantime, I provide revised tables for Hawaiian and HCE contours as shown in Table 8.1 and 8.2 respectively.

**Table 8.1 Formal Phonological Model of Contours in Hawaiian**

TYPE	Falling/Rising	H and L Pattern
Statement	<b>Falling</b>	<b>H% H* + L- L%</b>
Yes/No Question	<b>Falling</b>	<b>H<sup>H</sup>% H* + L- L%</b>
Wh-Question	<b>Falling</b>	<b>H<sup>H</sup>% H* + L- L%</b>
Echo Question	<b>Falling</b>	<b>H<sup>H</sup>% H* + L- L%</b>
Tag Question	<b>Falling</b>	<b>H<sup>H</sup>% H* + L- L%</b>
Continuation	<b>Falling</b>	<b>H% H* + L- L%</b>

**Table 8.2 Formal Phonological Model for Contours in HCE**

TYPE	Falling/Rising	Contour
Statement	<b>Falling</b>	<b>H% H* + L- L%</b>
Yes/No Question	<b>Falling</b>	<b>H<sup>H</sup>% H*+ L -L%</b>
Wh-Question	<b>Falling</b>	<b>H<sup>H</sup>% H*+ L-L%</b>
Echo Question	<b>Falling</b>	<b>H<sup>H</sup>% H* + L-L%</b>
Tag Question	<b>Rising</b>	<b>H% H* +L- H%</b>
Continuation	<b>Falling</b>	<b>H% H* +L-L%</b>
Declarative question	<b>Falling</b>	<b>H<sup>H</sup>% H* +L -L%</b>

### 8.5. Hawaiian Island Prosody: Falling Intonation

One question I have asked myself repeatedly when investigating the intonation patterns in Hawaii is; how has this intonation pattern prevailed over the years? As I have argued, the unique falling intonation of the Hawaiian language has been prevalent in Hawaii across language backgrounds and across the continuum of Pidgin use levels from Hawai'i English which is closer to Mainland English, to a much "thicker" Pidgin: mesolectal to basolectal. How did this intonation pattern become so widely used by so many people and is still maintained today? In my investigation for the reasons why, I have turned to literature in bilingualism and second language acquisition to provide possible explanations.

### ***8.5.1. Creolist Views***

Given the underrepresentation of intonation in creoles studies, this research has special importance. Sakoda and Siegel (2004:733) state, “[t]he phonology of Hawai’i Creole also has some similarities to that of Hawaiian, Cantonese, and Portuguese, especially in the vowel system and intonation in questions, but these connections have not been studied in detail.” My contribution to telling this story impacts many areas and helps complete the story of HCE development.

Jeff Siegel (2000) has argued that a greater influence on Hawai’i Creole English was made through the contributing substratum languages of Chinese and Portuguese. I claim that the native Hawaiian influenced the intonation patterns of Hawai’i Pidgin English (HPE) and still has an imprint on modern HCE. While Siegel (2000) does not emphasize the substantial influence that Hawaiian has had on HCE, he acknowledges the influence of another language (Fijian) on the corresponding creole (Fiji English). I make a parallel between that of HCE and Fiji English with regards to prosodic influence with a similar question intonation pattern in Fiji English for two reasons. The first is that Fijian and Hawaiian both belong to the Polynesian language family, and regardless of the chronology of the development of these two languages, they share common intonation patterns.

The second reason is that Fijian and Hawaiian have had imprints on the resulting creoles due to the influence of the initial populations of native speakers. Below, I list two quotes about Fijian English, one from Siegel (1989) and one from Dixon (1988) to illustrate the parallel I make with HCE and Hawaiian. Siegel (1989:55) states,

The most striking phonological feature of Fiji English is the presence of intonation patterns similar to those of Fijian—for example, questions beginning at a higher pitch than in Standard English and ending with a falling rather than rising intonation, similar to Hawaiian English (Carr, 1972:52-53). The characteristics Fiji English intonation is recognized throughout the Pacific region and has become a stereotype (Labov, 1972).

To further relevant information with regard to Fijian intonation, Dixon (1988:18) states that there are three basic intonation patterns (the two most relevant are provided below).

(1) in a statement, an order, or a question involving an interrogative word such as cava “what”, cai “who”, or vei “where”, pitch will fall from the last stressed syllable of the clause. If the clause ends in a stressed syllable (containing a long vowel or diphthong) then pitch will fall steadily over it; if the last stressed syllable is followed by an unstressed syllable (with a short vowel) then the pitch will start to fall on the stressed syllable and continue falling over the unstressed syllable.

(2) in Fijian, polar questions (expecting “yes” or “no” as answer) are marked only by intonation. The syllable immediately preceding the last stressed syllable in the clause will have a sharp pitch rise; this then falls a little over the final stressed syllable (and the following unstressed syllable, if there is one.) ...and it can sometimes be hard for a learner to catch that a question is being asked.

These two quotes shed light on a comparative situation that has occurred in Hawai‘i. The reason I make this parallel between Hawaiian and Fijian is to further strengthen my claim that Hawaiian could reasonably have had an influence on HCE.

### ***8.5.2. Founder’s Principle***

Siegel (2000) proposes that of the substrate languages in Hawai‘i, Portuguese and Chinese had the most influence on HCE due to the increased numbers of these two groups and the decline of the native Hawaiian population. However, I have claimed that due to the initial imprint Hawaiian had on Hawai‘i Pidgin English, which continued when HCE developed, Hawaiian had more of an influence phonologically than has been acknowledged. This imprint happened around 200 years ago and has lasted even through relexification. One theory that could explain this long lasting imprint is that of the Founder’s Principle. Zelinsky (1973:13-14), states:

Whenever an empty territory undergoes settlement, or an earlier population is dislodged by invaders, the specific characteristics of the first group able to effect a viable, self-perpetuating society are of crucial significance for the later social and cultural geography of the area, no matter how tiny the initial band of settlers may have been. As an obvious corollary to this statement, we can ignore nonviable experiments, for example, the Raleigh group in North Carolina or some ephemeral shore parties in pre-Puritan New England and elsewhere. Thus, in terms of lasting impact, activities of a few hundred, or even a few score, initial colonizers can mean much more for the cultural geography of a place than the contributions of tens of thousands of new immigrants a few generations later.

Mufwene (1996: 125-126) also agreed that the Founder's Principle is a way in which we can initiate creole studies and research creole genesis, "The Founder Principle offers a useful perspective from which we may address various, though not all, aspects of the complex question of the genesis of creoles as mixed languages with features coming from diverse sources and possibly at different stages of their gradual and protracted development."

Different from a typical founder's situation where perhaps European colonists are considered the "founders" so that their language becomes the lexifier language, the HCE and Hawaiian relationship presents a unique situation. In this case, the "founders" are the native Hawaiians whose language shaped the contact of initial immigrants. The linguistic landscape changed and as the contact language relexified to English, Hawaiian became a substrate. The fact that features from the Hawaiian founders can still be seen in HCE as well as the English used in Hawai'i, offers an even more interesting view of the Founder's Principle.

It is the Founder's Principle that I think can explain the initial long lasting impact that Hawaiian had on the new immigrants. Even if Hawaiian populations declined and immigrants with other language backgrounds arrived in the thousands, this occurred decades after the imprint of Hawaiian.

### **8.5.3. *Second Language Acquisition***

It has been claimed that even in the womb, fetuses can detect and recognize intonation of the languages spoken around them. Out of the womb, as first language learners, children have an advantage as they have been exposed to intonation patterns before they were born. As Mora (2000:149) states,

discourse intonation, the ordering of pitched sounds made by a human voice, is the first thing we learn when we are acquiring a language. Later on, it is through interaction that a child picks up not only the musicality of each language, but also the necessary communication skills.

However, for second language learners it is not as easy to learn intonation. Intonation can be hard to learn due to its abstractness. Although, there are theories that would imply that Hawaiian intonation as well as Pidgin Hawaiian and HCE intonation would have been easy to learn for second language learners.

### **8.5.4. *Flege (1987)***

One possible explanation for the ease in which people from many different language backgrounds were able to learn and adopt the speech melodies of Hawaiian is what Flege (1987) found which contradicted the Contrastive Analysis Hypothesis. The Contrastive Analysis Hypothesis (CAH) states that if a feature is similar in both the first language (L1) and the second language (L2) in which the individual is trying to learn, then it will be easier to learn (Wardhaugh 1970:124). To expand, a feature or sound that is different in the L1 and the L2, the feature or sound will be harder to learn.

Flege (1987:48) investigated this concept and came to a different conclusion. Something that is too similar in both languages would be harder to learn and a sound or feature that is new

to the learner, something not in their L1 (something different) would be easier to learn. Thus, I will extend this to the intonation scenario in the Hawaiian Islands. Among the heritage languages spoken by the main groups to immigrate to Hawaii, they all have rising intonation in questions. When coming to Hawai‘i and learning Pidgin Hawaiian to communicate, these immigrants would no doubt hear a novel intonation contour, one quite different from their L1. Being very different from their L1 intonation contours, the falling intonation in questions in the L2 of Hawaiian or even Pidgin Hawaiian would be easy to identify, perceive, and thus easy to learn and produce by immigrants (who have rising intonation in their L1).

Another theory of Second Language Acquisition or (SLA), is that of the Noticing Hypothesis (cf. Schmidt 1990). This hypothesis states that a learner must take notice of something before it can be learned. In other words, language learners can not learn grammatical features of a language unless they notice them. This somewhat goes hand-in-hand with Flege (1987) as something “novel” is easier to notice and thus easier to learn, or rather- for Schmidt (1990) it is then required that the features be noticeable for the learner to learn it. At any rate, for the people acquiring PH or HPE or even HCE, they would have had a noticeable and thus easy to learn intonation pattern, it being so different from their heritage language as well as from any English they would hear.

#### **8.5.5. *Simonet (2011) Convergence***

By hearing a novel intonation contour and speaking it in the L2 (PH or HCE, in this case), there is a good chance that the intonation of the L2 impacted the L1 (Cantonese or Portuguese, in this case) intonation. Simonet (2011) investigated convergence of prosody with speakers of Catalan and Spanish in Majorca and found that with the close contact of both languages, Spanish has

been adopting a more Catalan-like intonation, while Catalan is not adopting a more Spanish-like intonation and thus producing an asymmetric convergence. Simonet (2011) proposes that this Catalan intonation will diffuse across the entire community. Perhaps this could also extend to the intonation contours in Hawai'i . Thus, it could be that while Mainland English and Pidgin are in close contact, the Mainland English converged to become more Pidgin-like, producing Hawai'i English (local variety of English). Also, research could be conducted to see whether the Pidgin-like intonation had an impact on the immigrant languages such as Japanese, Chinese, and Portuguese to sound more Pidgin-like in the L1 of the immigrants, however this is out of the scope of this particular research project. The following quote suggests that Bickerton accepts that language transfer would be a factor in the development of HCE, however he counters with the fact that all these radically different languages would produce variation and what we see in HCE is homogeneity. Bickerton (1999a:55) states:

Most of the first creole generation acquired one or more of their ancestral languages, so that in principle, parameters could have been set according to those languages and the settings transferred to the nascent creole...However, no such explanation will account for the facts. The parameter settings of English, Hawaiian, Portuguese, Chinese, and Japanese differ radically from one another. If children had transferred settings from their ancestral languages, then we would have found variant versions of the nascent creole-Hawaiian- influenced, Chinese- influenced, and so on. In fact, what strikes one more forcibly about HCE is its homogeneity.

To this I reply with the historical observations I presented in Chapter 1 with regard to a Pidgin Hawaiian, which is never mentioned in Bickerton's LBH. I have presented historical evidence from Roberts (1995:5-6) that provides information that PH existed well into the mid-1900's and had a lasting impact. In fact, Chinese immigrants coming to Hawai'i learned PH before learning English. Chinese immigrants from different language backgrounds spoke PH together as a common language when coming to Hawai'i . Schools were taught in Hawai'i until

1896. All of these factors contribute to the claims that Hawaiian and PH were widely used before English took over. As Simonet (2011) points out in his research, there is evidence that a person's L1 language can change from what is learned in the L2 language.

This is true in other research, i.e. Flege et al. (2003), in that transfer is not necessarily always unidirectional, from the L1 to the L2; it can be bidirectional. Bidirectional transference may have played a part in a possible explanation for the exaggerated question intonation contour found in Pidgin in comparison to that of Hawaiian. I will discuss this further in the next subsection.

#### ***8.5.6. Category Assimilation and Category Dissimilation***

I presented results in the previous chapter that indicate that HCE or Pidgin has an even more pronounced question intonation than that of Hawaiian. At this point I would like to propose a theoretical explanation as to how this could have occurred. It is true that many languages influenced HCE, but in this research I have argued that the intonation contour came from Hawaiian. Having proposed this, I acknowledge that the HCE contour is not identical in its overall height. It is substantially higher, in the examples I have documented.

In order to explain this, I posit that category dissimilation triggered an exaggeration of the intonation contour and over time this exaggerated contour became the grammaticalized register. In Flege et al. (2003), predictions are made as to the production of English vowels and how the speakers' age and L1 influence the output. Taking into account several factors, one factor suggests that the accuracy that L2 phonetic segments are produced is based on how much native speaker input is heard as opposed to foreign-accented L2 input. Also, mentioned in Flege et al. (2003) is the fact that an L2 could develop into the dominant language for the bilingual if

used for a wider range for every day activities. As documented in Chapter 1, from Roberts (1995), Pidgin Hawaiian was the plantation language and used extensively between Hawaiians and Chinese workers. It could have been that PH began to be a more dominant language for immigrants, especially for the majority of the day when at work in the plantation and communicating with other workers.

Flege et al (2003), conducted a study with a group of English/Italian bilingual speakers who were placed into four groups based on their age and use of Italian. The participants in the study were bilinguals who had moved to Canada. The English and Italian /e/ vowels were evaluated to see how each group produced them. Flege et al (2003) made predictions as to the accuracy by which the vowels were produced. According to the speech learning model, or SLM, phonetic elements that make up the L1 and L2 sub-system for the bilingual exist in the same space and thus influence each other. The SLM posits that two possible outcomes occur when sounds interact. These two mechanisms are category assimilation and category dissimilation. L2 phonetic category dissimilation will occur when a bilingual will attempt to preserve the contrast between all phonetic elements in their combined L1 and L2 space. Phonetic category assimilation occurs when a speaker somewhat attempts to merge the elements, due to placing both elements in the same category, and in doing so changes the L1 element to become closer to the L2 element, which can also be considered as convergence as discussed in Simonet (2011).

In Flege et al (2003), the early, or younger bilinguals made more exaggerated movements when producing the English /e/ showing that category dissimilation occurred. In later, or older bilinguals, category assimilation occurred as they had a much smaller movement when producing the English vowel, and made much less distinction with the Italian equivalent. In

other words, younger, or early bilinguals who recognized the Italian and English vowels as categorically different maintained phonetic contrast between them.

Theoretically speaking, category dissimilation could have occurred in HCE early development of question contours. The fact that it is the early bilinguals in Flege et al (2003), who made the most exaggerated movements to distinguish between two categories may perhaps explain how HCE intonation is exaggerated from Hawaiian. It could be that children, or early bilinguals emphasized the contrast between their L1 heritage language and the L2 of Pidgin Hawaiian, and thus exaggerated the intonation contours. It could also be that for bilinguals in Hawai'i, the Hawaiian intonation impacted the L1 of the immigrants, whether it was Cantonese or other, and that the L2 of the Pidgin Hawaiian was influencing the L1 of Cantonese (bidirectional influence), thus changing the Cantonese intonation, yet in order to differentiate between the two systems, the speakers were exaggerating the L2 (Pidgin Hawaiian) intonation.

Another option could come from exaggeration of intonation by Standard Hawaiian speakers when speaking to immigrants in a foreigner speak type register. Perhaps immigrants were commonly confused by the different intonation and were not able to interpret question markers. Hawaiian speakers would need to exaggerate the question intonation in order to provide extra cues for the immigrants learning the common language (Pidgin Hawaiian). It could be more plausible that this exaggeration was grammaticalized in Pidgin and thus being similar to the Standard Hawaiian, has lasting characteristics of this foreigner speak.

## **8.6. Conclusion**

Of all these possible explanations it appears that despite the reported difficulty in learning intonation in L2 languages, that it was precisely the fact that Hawaiian has a uniquely falling

intonation contour that made learning it so salient to immigrants. According to the Noticing Hypothesis (Schmidt 1990), the fact that it was so different than other intonation contours, was a reason it was 'noticed' so readily. As well, according to Flege (1987), the fact that it was so different, made the intonation easy to learn. Even Simonet (2011) shows that intonation can be easily adopted and may even change the L1, or dominant language used. It is this plasticity, the alterability of intonation that shows the unique contour of Hawai'i was easily learned and widely accepted.

I have not conducted any study on this and it is purely a theoretical discussion at this point. I am only coming to conclusions that would be mere predictions of the SLM, and based on the research conducted in Flege et al (2003). I would be interested to see how Hawaiian intonation influenced the L1 of immigrants to Hawai'i and to see, in fact, what kind of transfer occurred; whether it was bidirectional or asymmetrical.

What I propose, to argue against the LBH effects on HCE, is that with the introduction of English, and the stabilization of HCE, the features had a leveling effect that created a homogeneity despite all the different languages contributing to it. Thus, even if all the languages are radically different, historically, each contributing language had a chance to make an impact, and it was not all languages at once. While Hawaiian had the most influence early on and put a prosodic imprint on the creole, it was also Cantonese and Portuguese that made their mark on HCE later in the stabilization of the creole. I also have posited that the lasting prosodic imprint of Hawaiian on PH, HPE, HCE, and even modern Hawai'i English, was adopted by all despite the different intonation systems of the other contributing languages. This uniquely HCE intonation system was grammaticalized and easily learned even as English re-lexified the creole. What we see then is the homogeneity of HCE, even in the prosody. This is what is so striking,

that the prosody we see today has maintained prominence and remained the preferred intonation over 200 years in the development of Hawai'i . From its start as a Hawaiian lexified pidgin, to an English lexified creole as well as from basilect to acrolect, the intonation has remained.

## **Chapter 9: Conclusions**

### **9.1. Introduction**

In this dissertation I have examined the intonation contours of Hawaiian and HCE in order to address a number of questions. During this journey, I have answered my research questions as well as discovered more aspects of Hawaiian and HCE that I will study in the future. I have offered Praat and TOBI (Pierrehumbert, 1980) transcriptions to document HCE and Hawaiian intonation, which provide consistency by using the same methodology and conventions. I have also suggested a diacritic that offers some clarity of the distinction made between questions and statements in Hawaiian and HCE. Based on my preliminary study of Hawaiian and HCE, I discuss my conclusions in this section and address the topics that my study impacts.

### **9.2. Universal Question Intonation and Variation**

One of the topics I have addressed in this dissertation is that of universals and variation. Evans and Levinson (2009:429) state that “languages differ so fundamentally from one another at every level of description that it is very hard to find any single structural property which they share.” It is true indeed that languages vary, but paradoxically the more they differ it seems the more they are the same, at least in terms of question intonation. As mentioned previously, according to Gussenhoven (2004), there are language universals, but conformity to such universals is language specific, contributing to the variation. As seen in this dissertation, variation can be observed in questions cross-linguistically.

Speaking of variation in intonation, I have mentioned that some languages have final high pitch (rising question intonation) while others have a final low pitch (falling question intonation) but all maintain the use of high pitch in some part of the question, be it high onset, high plateau, high final peak or high final rise. This was presented in Haan (2002) with the simple formula  $Q=H$  (cf. Chapter 2). HCE and Hawaiian support this as well. While it would appear that the falling intonation goes against a SUH, it turns out that HCE and Hawaiian adhere to what all languages use. As conveyed with biological codes, high pitch indicates uncertainty and these phonetic realizations are grammaticalized as a phonological rule based on innate human communication fundamentals.

When represented by the TOBI set of conventions, Hawaiian and HCE appear to have the same contour patterns  $H\% H^* L-L\%$  for both statements and questions, as well as for continuation or listing intonation. The next goal of mine was to identify the contrastive cues that differentiate statements from questions in both Hawaiian and HCE. While the nuclear tone ( $H^*$ ) occurs on the last stressed syllable in both Hawaiian and HCE and the pitch falls on the remaining syllable or syllables in the same way in both questions and statements ( $H^* L$ ), it is the pitch range or accent range that changes the categorical distinction. In Chapters 2 and 8, I discussed the use of AM/TOBI framework to convey Hawaiian and HCE intonation contours. In Chapter 8, I offered a solution through a diacritic to represent a discrete phonological level (raised register) to express the question/statement distinction in Hawaiian and HCE.

Hawaiian and HCE make use of phonetic space to produce phonological categories. In HCE, a higher onset and higher plateau support or allow for a higher nuclear tone or last peak which signals a question. The higher  $H^*$  in questions contributes to a greater accent range when

the fall occurs. In statements, the H\* occurs in the same location, but because global pitch is lower than in questions, the nuclear tone is a phonetically lower H\* than in questions, and thus the accent range is not as wide as in questions. To expand, questions involve a high fall where the high pitch falls to a low pitch in the speaker's natural range, and a statement would then involve an almost high-mid type pitch (compared to the higher high in questions) which would then fall to the low pitch (cf. Cruttenden 1997)

As mentioned, the pitch register difference is a categorical one in Hawaiian and HCE. However, in other languages such as English, different degrees of accent range may signal degrees of emphasis but not change the category or meaning (cf. Snow and Balog, 2002). By identifying this categorical difference I have further identified a pitch register difference between Hawaiian and HCE. As presented in my results section, the pitch movement in HCE questions is much wider than that of Hawaiian. From the data I gathered, it is apparent that HCE and Hawaiian have a noticeable difference when it comes to pitch movement in questions.

I suggested the possibility that HCE, being innately more informal and casual, given its historical background, could contribute to this difference. Most of my Hawaiian data comes from interviews conducted by Clinton Kanahale. Although it does appear that Clinton was familiar with some of his interviewees and these interviews seem of a casual and comfortable nature, it is still perhaps conducted in an interviewer type register; not completely formal and not completely familiar. The pitch ranges may reflect this. The other possibility is that Hawaiian does not inherently exhibit as wide of pitch ranges as HCE does. Aside from situational, environmental, or emotional differences, another possible explanation for this pitch difference is that in the development of HCE, the simplified Hawaiian input may have also been accompanied with an emphasis on the intonation contour in order to clearly signal questions. This intonation contour

would have been an informal register, using the informal intonation as described in Chapter 6. The emphasized intonation contours would have resulted in wider pitch ranges, which then became grammaticalized in HCE. Future study would need to be conducted with a variety of speakers to verify and explain this difference between Hawaiian and HCE.

### **9.3. Saliency**

What is the most salient aspect of Hawaiian and HCE question intonation? As I mentioned above, the general accent range differentiates questions and statements. However, at which location in the utterance does the accent range matter the most? Does the question cue start at the onset? Is the final peak the most important? In comparing longer questions to the shortened condensed questions that may only consist of one word, the fact that the plateau is non-existent in short questions provides information that perhaps the last peak and fall is the most salient in cueing and differentiating questions and statements. It is apparent, at least in HCE, that the pitch movement is substantially wider in questions, producing a much wider accent range in the last peak. With regard to short questions, consisting of only one or two words, this difference can be heard more (supported through PRAAT analysis). These short questions have to be extreme in their height to ensure the intention is received. In other words, to ensure the request for information has been conveyed, as there is no other cue (lexical or morphological) and the shortened question does not have much of an onset leading to a plateau, it is condensed to last peak and last fall.

### **9.4. LBH and Creole Genesis**

With regard to the discussion of the LBH, I believe that by investigating and presenting the results of Hawaiian and HCE similar intonation patterns, I have raised some questions. Although

the intonation patterns of HCE provide a pattern which is considered marked and uncommon in the list of the world's languages, it is such that being a rarer pattern strengthens even more that the intonation pattern did not come from the LBH but from Hawaiian. McWhorter also emphasizes that instead of tapping into innate human properties of language as a cause for common features found in creoles, it is the abbreviated input which is the reason for features lacking in the world's creoles (McWhorter, 2011, 2012).

Given that most of the research pertaining to creole genesis and the LBH is of syntactic or morphological nature, it makes the intonation of creoles that much more exciting to research. For example, HCE, which also falls under McWhorter's creole prototype hypothesis formula of features common to all creoles, also has an intonation pattern taken from Hawaiian, the founding lexifier language. This means that with respect to linguistic features affected by simplifications it appears that intonation escapes the modifications. What does this mean for creole studies? Quite possibly by investigating intonation in more creoles, we might find that although grammatical features are simplified or deleted from source languages to the contact language, the intonation may end up doing more of the work, conveying meaning when the morphology has been deleted or the syntactic structure has been simplified or modified. For example, should the creole lack syntactic or morphological question markers, it is imperative that the intonation signal questions. Thus the intonation would contribute to grammatical meaning when syntactic or morphological features were simplified. In fact, this most definitely plays out cross-linguistically as argued by Haan (2002) and Grabe (2002) with the Functional Hypothesis.

The other area in which my research makes a contribution is that of creole genesis. I have shown that there are features in HCE that have come from Hawaiian and quite interestingly this is due to Hawaiian being the superstrate at one point. Around the 1900s when the contact

language was relexified, these features still present themselves, which argues the long lasting impact of Hawaiian. These features provide evidence against a strong LBH account for features found in HCE as mentioned in Chapter 2. However, input simplification plays a role in creole genesis and provides a curious view on the LBH as discussed in Chapter 2 as well (McWhorter, 2001, 2011, 2012). I think that when telling the story of HCE genesis, it is important to include the prevalence of Hawaiian and the lasting Founder's effects (Mufwene, 1996 and Zelinsky, 1973) that contribute to HCE still today.

## **9.5. Biological Codes**

“Intonational meaning is located in two components of language, the phonetic implementation and the intonation grammar” (Gussenhoven, 2002:1). Gussenhoven claims that phonetic implementation is what provides universal meaning and biological codes motivate these meanings. As previously mentioned (cf. Chapter 2), these codes are the Frequency Code, the Effort code and the Production code. HCE and Hawaiian interpret these codes differently to what Gussenhoven has outlined in his summary (cf. Gussenhoven 2002).

The Frequency Code, or the code in which questions are usually interpreted, is phonetically implemented in HCE and Hawaiian in a less common manner. The intonation pattern for questions in HCE and Hawaiian implement high pitch (globally), as discussed previously (cf. Chapter 7). The intonation does not phonetically realize a final high, nor does it exactly provide a commonly encoded sense of uncertainty (cross-linguistically), or submission, given that the end of the utterance falls sharply instead of rising in pitch. Also, it is the overall height, with a large pitch (or accent) range that differentiates questions from statements, which then brings the discussion to the Effort code.

In the Effort Code, the most common interpretation is that of emphasis or focus, showing prominence on a certain point in the utterance. For example, in Mainland English, the amount of energy produced to display greater pitch movements to signal prominence is perhaps interpreted differently in HCE and Hawaiian. In HCE and Hawaiian, the Effort code is used to signal questions, given the high last peak and wide pitch movements. Or rather, the Effort code is what helps HCE and Hawaiian produce categorical difference in utterances.

The Production Code, as Gussenhoven (2002:1) attests, entails that higher pitch signals the beginning of an utterance and a lower pitch signals the end. Declination is also housed under the production code as mentioned previously. In HCE, it appears that instead of declination in statements, there can be a level plateau with a final high peak, followed by a steep fall. This kind of pattern in HCE does not exhibit declination. As well, Gussenhoven (2002:1) mentions high continuation pitch to indicate the incompleteness of an utterance. This is also not the case in HCE or Hawaiian as the continuation or listing intonation is falling, which would commonly indicate the completion of an utterance according to Gussenhoven (2002). What is interesting about the way HCE and Hawaiian interpret the biological codes is that it seems counter-intuitive from what Gussenhoven has proposed as being innate human interpretations of form and function intonation patterns. Where falling intonation would mean the finality of an utterance, HCE and Hawaiian use this intonation pattern for listing and continuation intonation, generally thought to be incomplete and thus use high pitch to indicate as such.

Another way in which HCE and Hawaiian do not seem to follow the biological codes set forth by Gussenhoven is that the general declination slope caused by the lower pressure in the subglottal over the span of an utterance does not always occur and quite commonly the high peak and dramatic fall is observed. I think that this is the point in which Mainland English speakers

may identify the divergence in intonation pattern. In HCE and Hawaiian it can be observed that instead of a declination slope, the utterance follows a level plateau, followed by a peak on the last stressed syllable with a sharp fall on the remaining unstressed syllable/s.

In summary, it appears that HCE and Hawaiian do not follow the biological codes as commonly proposed by Gussenhoven (2002). He states, “unnatural form function relations appear to be quite liberally available in the case of interrogative intonation in which case they are falling...” (Gussenhoven, 2002:3) which means that perhaps there can be more variation in these metaphors than commonly accepted.

## **9.6. Methodology**

What I learned in my efforts to gather naturalistic data in both Hawaiian and HCE is the importance of building relationships and making connections to the language communities. In this age of technology and emailing, it seems as though the convenience of electronic correspondence was less than ideal when making connections with possible language experts. In this situation, asking for assistance or even linguistic judgments proved to be fruitless when attempting to do so via email. I was told that in the Hawaiian culture, it was not uncommon for individuals to not want to promise to do something that they might not be able to complete. I think that in some instances, this could have been a reason that my requests were left with no response. I respect the culture and the people and for this reason, I acknowledge that it would have been beneficial to be able to have an extended stay of two months or more to establish relationships. However, given the location of my residence and responsibilities, this was not a possibility at this time. The next best thing was for me to gather the most naturalistic examples of spontaneous speech that I could and I think that I was able to do that for Hawaiian and HCE.

In fact, having access to files of Hawaiian speakers born in the late 1800s and early 1900 provided me with Hawaiian pre-revitalization and gave me samples of intonation less apt to be influenced by English.

### **9.7. Language Documentation**

Another goal I wanted to achieve was to commemorate and educate the importance of HCE and Hawaiian in the Hawaiian Islands. These two languages support each other. Hawaiian, being the voice of the native people of Hawai'i, brings life to their culture and its traditions. HCE, is the voice of Hawai'i as well, the voice of the many people who share their heritage together, brought together in one place and who embrace and celebrate the local kine culture. For this reason, there is local pride for both languages. I wanted to document the melodies in these language not just for linguistic analysis purposes but to offer a description for the communities to use for teaching purposes as well as to contribute to the general body of knowledge for Hawaiian and HCE. These descriptions may find a place in teaching materials or other applications and if this should happen, I would be content in knowing that my work was used for others to hear and know the intonation of these two languages of Hawaii. I hope that I have provided an essential view of the intonation, which I think is important in telling the story of the two languages while also describing their melodies.

### **9.8. Language Identity**

During the course of the research I have conducted for this study, I have talked to people living in Hawai'i who have differing opinions of Pidgin and its use. As mentioned in Chapter 1, there are some people who condemn the use of Pidgin and who think of it as a “broken” language.

There are others who embrace Pidgin as part of the local identity and culture. Offering respect to both HCE and Hawaiian, I hope that this study has provided linguistic relevance to a debate that continues and adds to other bodies of work that contribute to the legitimacy of Pidgin and its place in Hawai'i.

### **9.9. Further Research**

Contributing to the knowledge of different intonation patterns in Hawaiian, I have represented most of the main structures. However, the investigation of pitch range and gradient variation in Hawaiian with regard to the mention of formal vs. informal pitch contours will need to be conducted at a later time. In addition to this, it will also be important to look at other variables that contribute to the form and function of HCE and Hawaiian intonation structures such as emotion and politeness. I firmly stand by the method of collecting the most naturalistic, spontaneous speech to analyze in order to capture the true representation of intonation levels. As learned from this research, it is especially important when investigating Hawaiian and HCE to use naturalistic data. Another area for further research is to address the theory of Functional Hypothesis as it relates to Hawaiian and HCE. I touched upon this topic with Hawaiian, however, I was unable to fully explore this hypothesis with HCE. I would like to conduct this research in the future.

### **9.10. Conclusion**

In conclusion, I reflect that what I have set out to do, I feel I have accomplished. It has been a goal of mine to primarily represent Hawaiian and HCE in a way that will help other researchers continue to investigate prosodic variations in the world's languages but also to contribute to the

body of knowledge for the people who speak these languages. To date, this is the only in depth representation of a variety of intonation patterns in Hawaiian and HCE. I think by having documented these features unique to Hawaiian and HCE, I have contributed to the story of them both and hope that this dissertation will enhance the inventory of research already available. I also know that the contributions made in this dissertation to the field of creole studies gives credit to the Hawaiian language as being a major influence on HCE. This is also one of the things I had hoped to express because before this, Hawaiian was not given the proper credit. In closing, this research has made contributions to many areas of linguistic study and I can say that these contributions are just a start.

## APPENDIX A: HAWAIIAN DATA

The following is additional data sources listed in Chapter Four for Hawaiian.

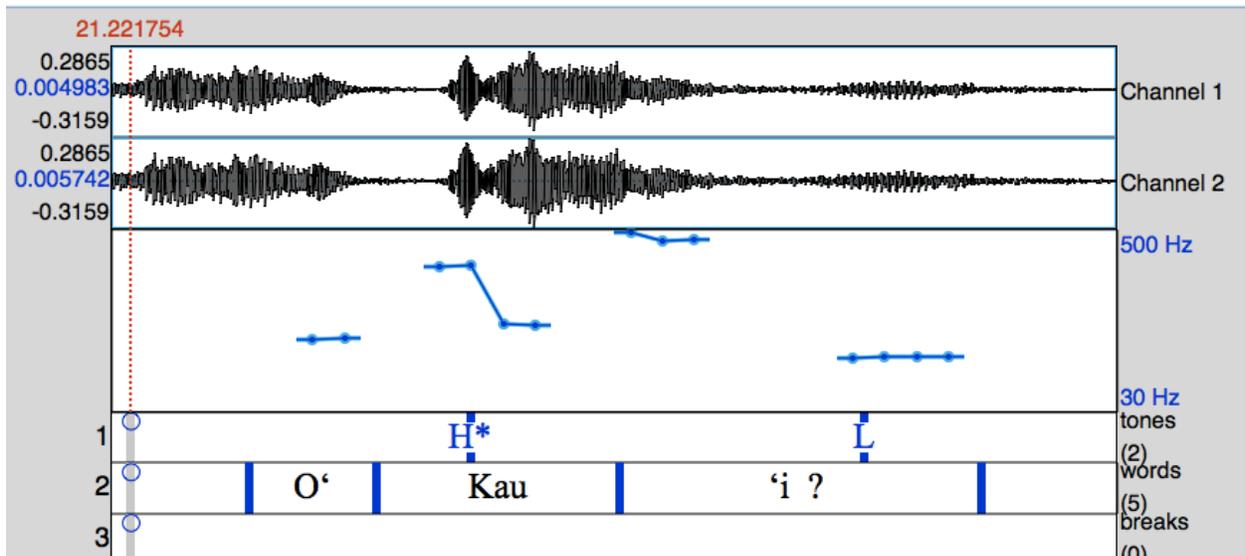
### Kulaiwi from KSDL

#### In a vignette in the 14<sup>th</sup> lesson from KSDL

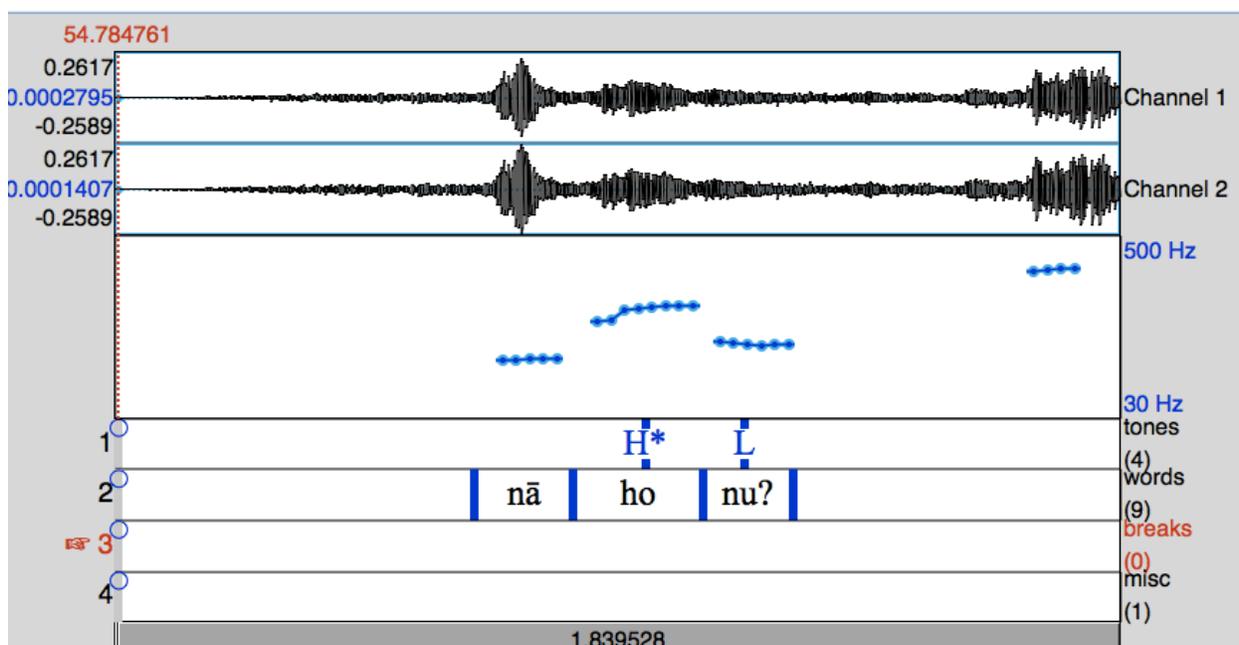
In this vignette, there are three young men at a store looking for a graduation gift for the girlfriend of Kunāne, one of the young men. When the store clerk asks them what they are looking for, Kunāne tells her that they are looking for a graduation gift. She then asks him if it is for a man or woman? Kunāne replies, “He wahine.” (a woman)

Kunāne’s friend, Keawe asks, “He aha? He wahine?” (a what? A woman?)

Keawe then replies, “ ‘O wai kēlā wahine? ‘O Kau‘i? (which woman? Kau‘i?)



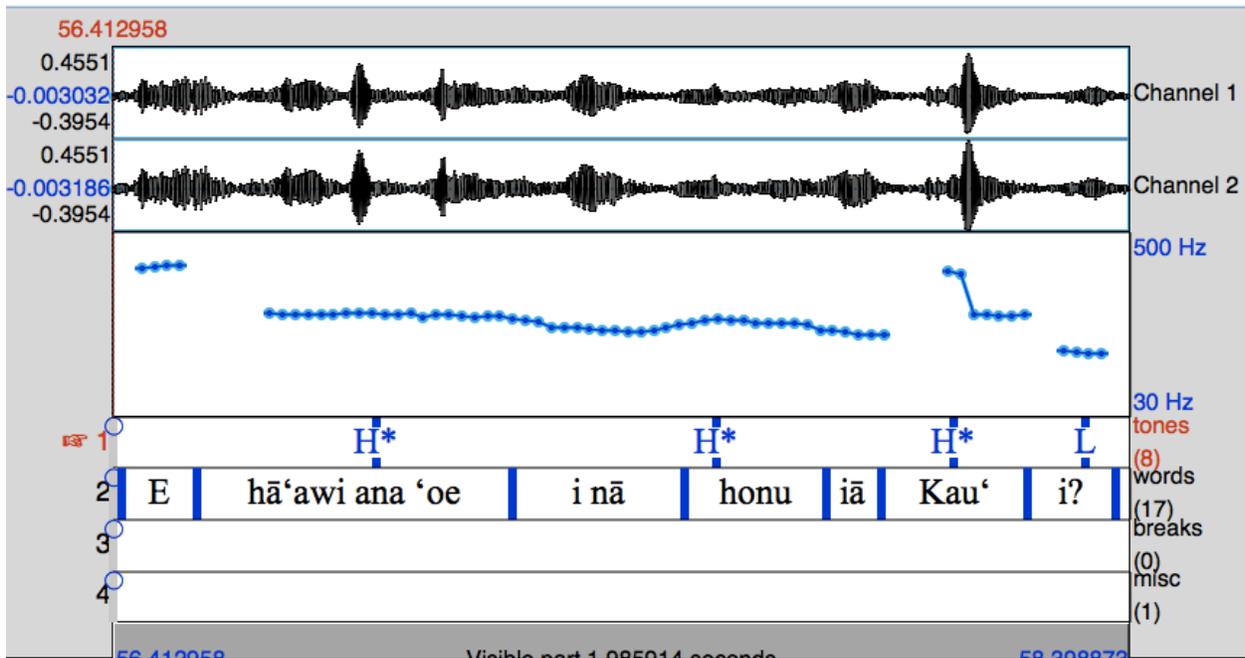
The young men look around the store and Kanāne looks at some decorative turtles which are hanging on the wall. His friend asks him, “The Turtles? You going to give the turtles to Kau‘i?” “Nā honu? E hā‘awi ana ‘oe i nā honu iā Kau‘i?” (suggesting it isn’t a good idea). First I will provide, “Nā honu?”



NĀ starts at 178 Hz at the onset.

The stressed syllable of **H**ONU rises and peaks at 318 Hz and falls on the last syllable of HONU at 218 Hz.

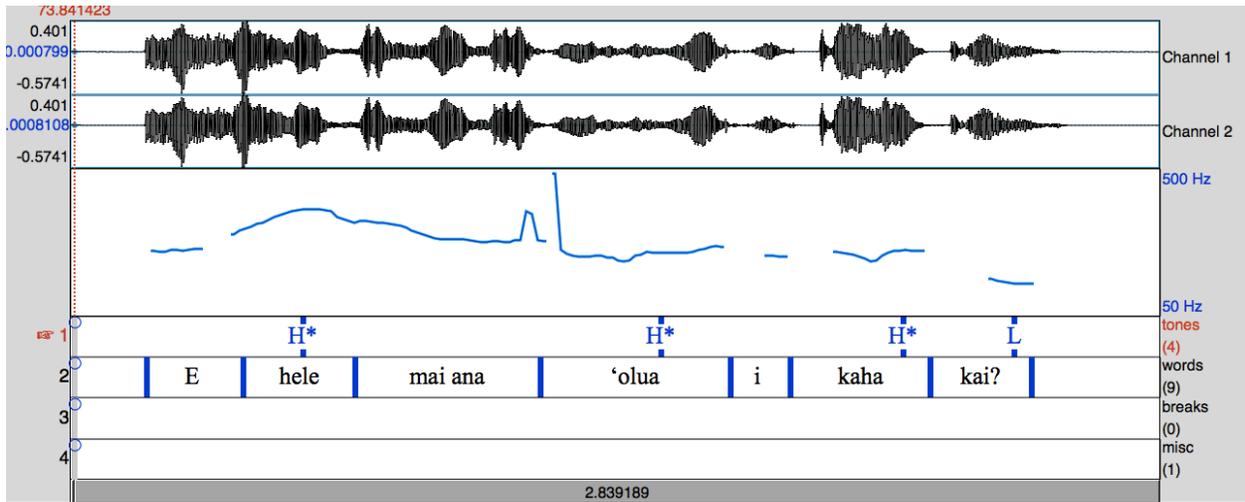
The next utterance is, “E hā‘awi ana ‘oe i nā honu iā Kau‘i” (You going to give those turtles to Kau‘i?)



Hawaiian: E hā'awi ana 'oe i nā honu iā Kau'i?

“You going to give those turtles to Kau'i?”

In the lesson, the teacher provides additional information regarding future tense formation in Hawaiian. She indicates,



Hawaiian: E hele mai ana ‘oluia i kahakai?

**Ho’olele Hualono HAW101 Ka Haka ‘Ula O Ke’ elikolani, UH Hilo Mokuna 4, Helu 1**

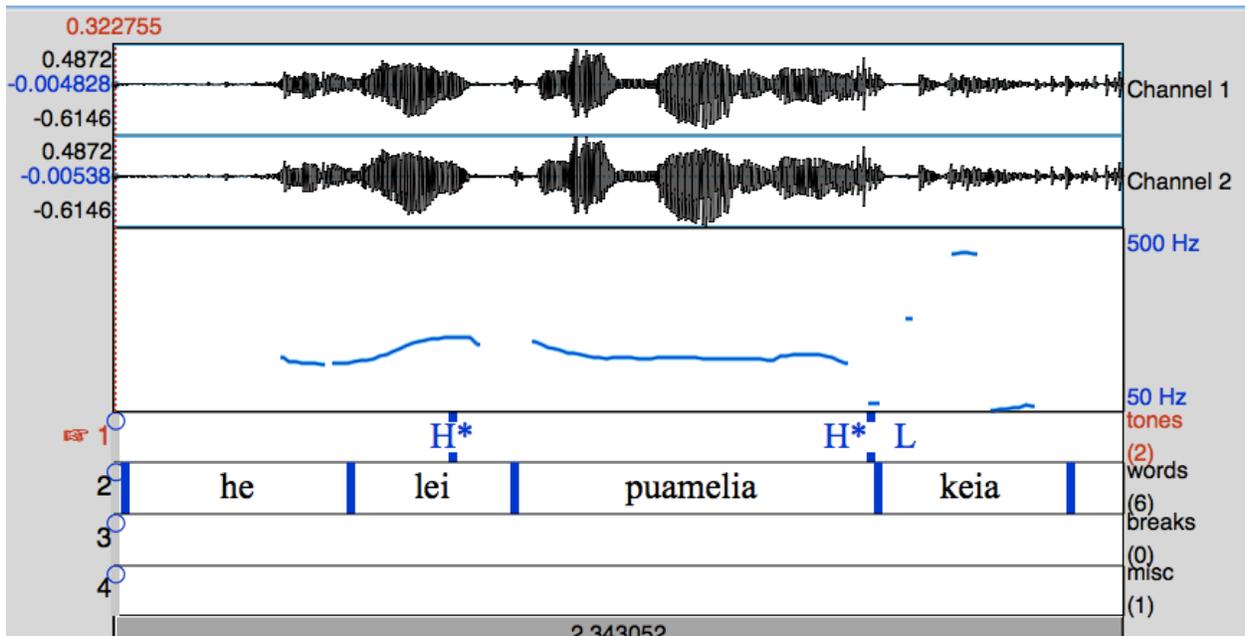
**June 11, 2007**

In this Hawaiian Language learning podcast produced by University of Hawaii, Hilo, the instructor Kainani Kahaunaele is teaching listeners how to produce statements as well as how to ask yes/no and wh-questions. I am going to provide statements and questions below with analysis from this podcast.

Statement

English gloss: This is a plumeria lei.

He lei puamelia keia.



The instructor is female, so the pitch is a bit higher.

The onset starts with HE at 178 Hz

Then the first peak at the stress on LEI rises to 231 Hz

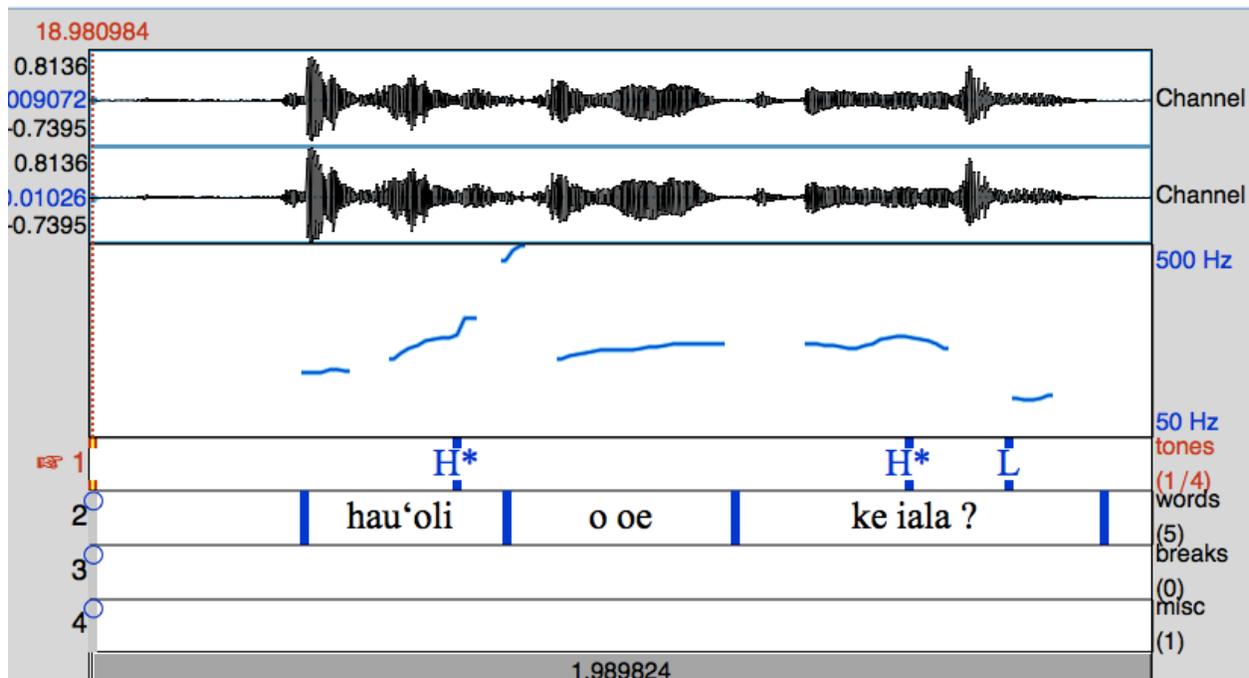
The word PUAMELIA plateaus at around 180 Hz with a rise to the stressed syllable, puameLIA, at 190 Hz

And drops on KEIA, with a creaky voice, the pitch drops out, unmeasurable below 50 Hz.

### Yes/No Question

“Is she happy today?”

Hawaiian: Hau‘oli o ia ke iala?



The same female speaker, the instructor of the podcast, is speaking in this yes/no question example.

The onset of the utterance starts with HAU at 200 Hz and rises with the second half of this word, ‘OLI at 326 Hz (*hau‘oli* means happy in Hawaiian).

The utterance then plateaus with o oe, starting at 233 Hz but starts to rise slightly by the end of the word OE at 266 Hz.

The last peak happens on the word IALA, with the peak on the stressed part, IA at 283 Hz and falling on LA around 138 Hz.

The above examples for this speaker demonstrates the difference in height between statement and yes/no question.

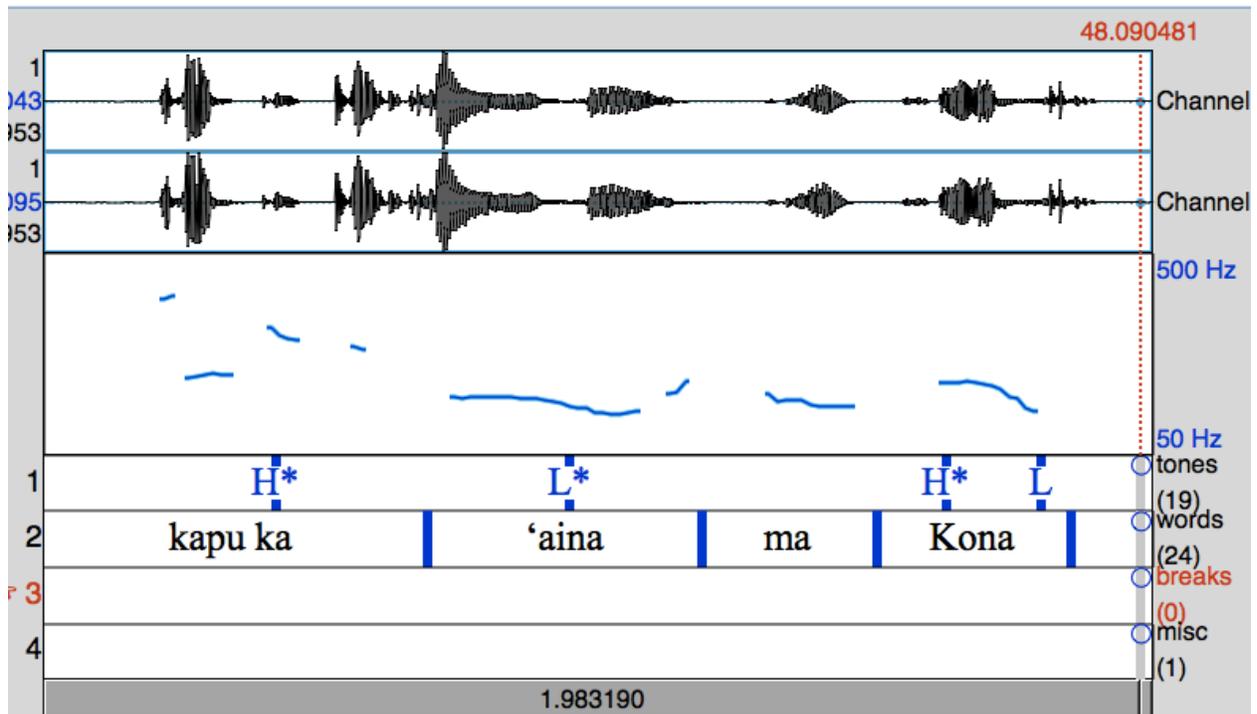
The instructor mentions in this lesson, “ In this example, I will say the statement and then I will change the intonation, to change it to a question. Notice that the entire pepeke remains intact.

The only difference is the intonation.” Kainani Kahaunaele

The following examples are from the same podcast lesson where Kainani provides a statement and then changes the intonation to change it to a question.

“The land in Kona is sacred.”

Hawaiian: kapu ka ‘aina ma Kona

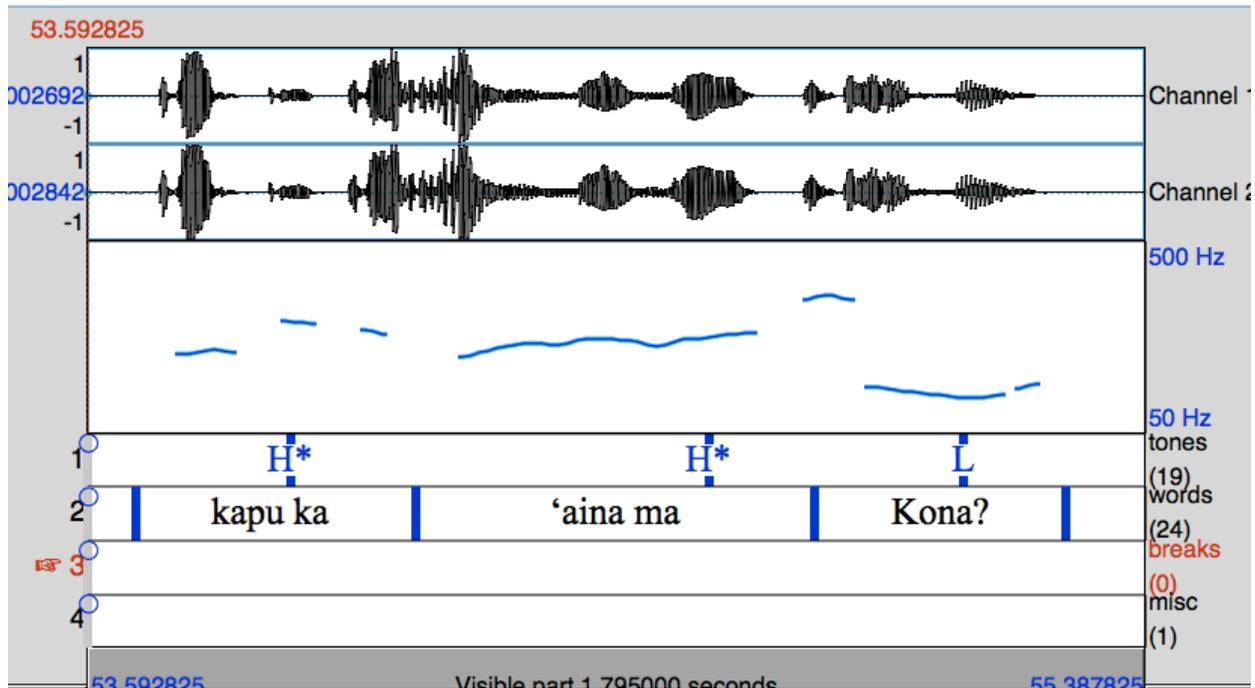


The onset of this statement starts at 224 Hz and reaches the first peak at PU at around 320 Hz.

'Aina starts at 177 and plateaus with a small declination to 143 Hz.

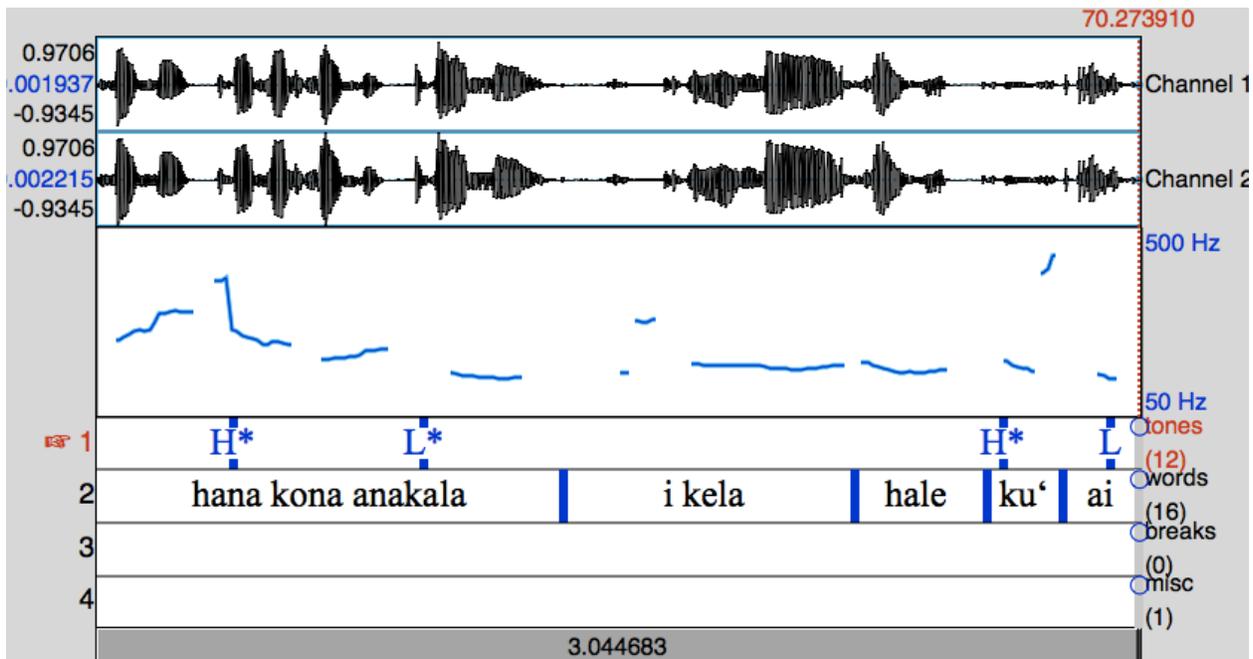
MA is at 166 Hz and then the last peak on KONA at 211 Hz and then falls to 148 Hz.

The following example is the same sentence posed as a question in Hawaiian.



The onset of this question starts at 239 Hz and rises to the first peak at 311 Hz at PU in KAPU, on the stressed syllable.

In the question example, 'AINA is much higher at 227 Hz and gradually rising to the peak at MA at 284 Hz with the fall on KONA at 135 Hz.



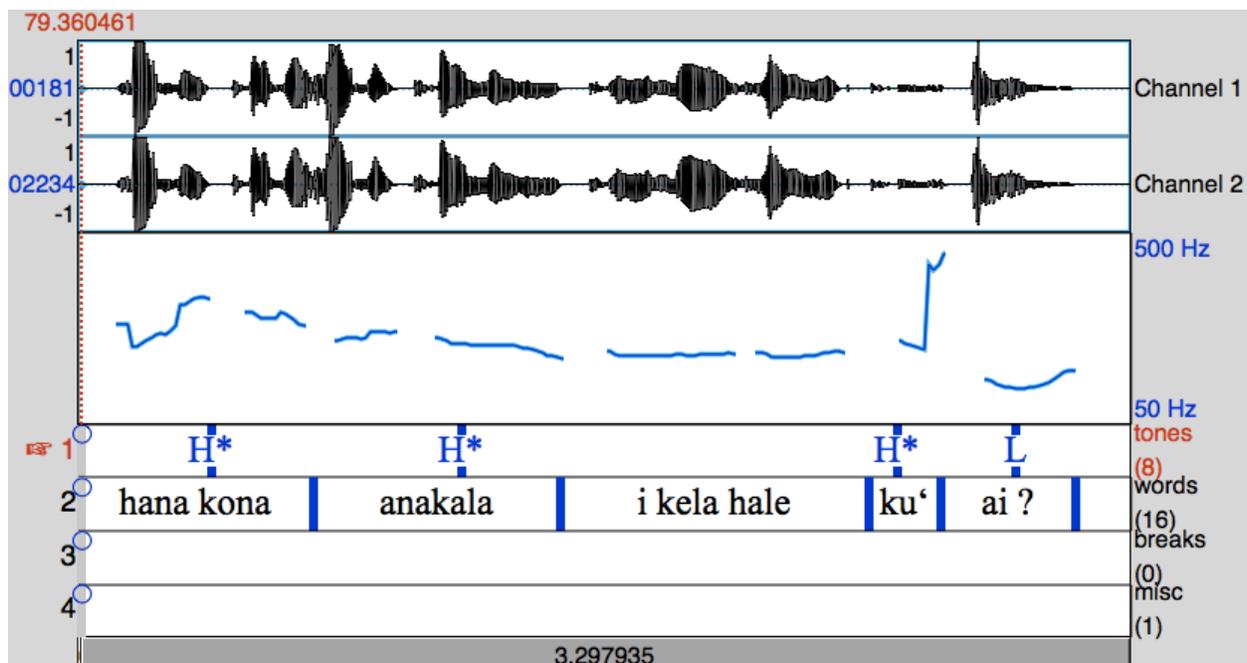
Hawaiian: Hana kona anakala i kela hale ku' ai.

“His uncle works at the store”

The onset of this utterance is at 233 Hz at HANA and the first peak at KONA reaches around 297 Hz, ANAKALA starts at 185 Hz but then has a decline to 141 Hz. The rest of the utterance plateaus and then has the last peak at KU at 182 Hz and falls on AI at 144 Hz.

Followed by the question, Does his uncle work at that store?

Hawaiian: Hana kona anakala i kela hale ku' ai?



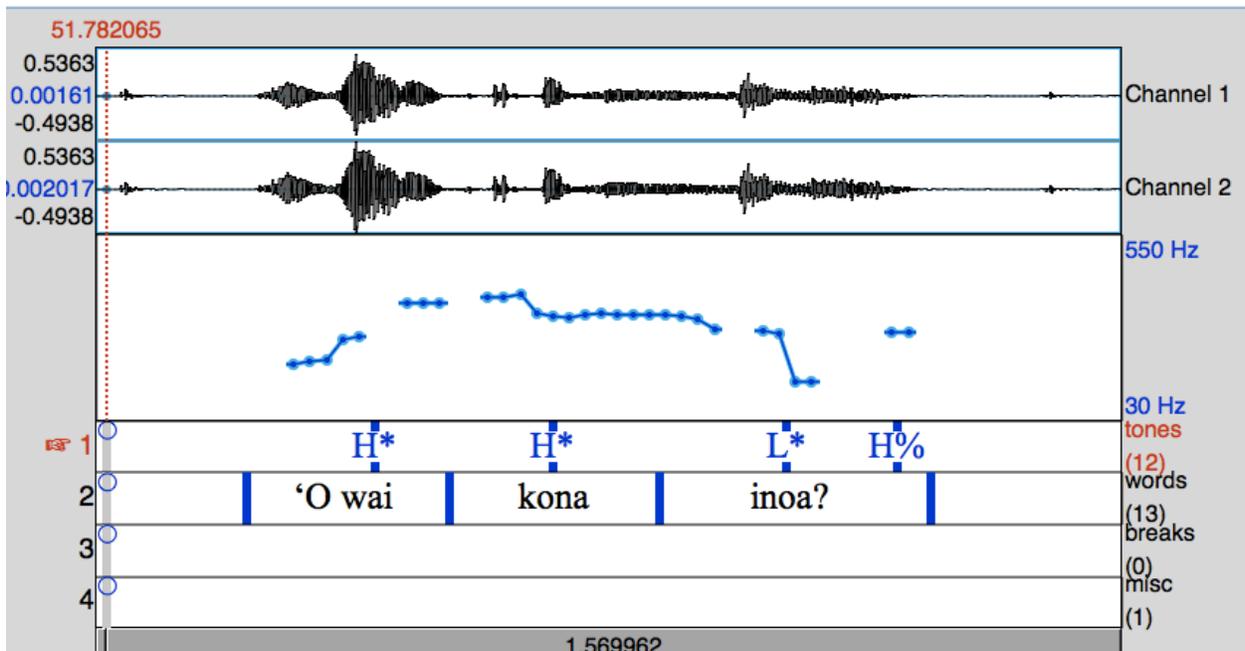
The onset of this utterance is 233 Hz at HANA, which then rises to a peak at KONA, at 347 Hz.

Quite a significant increase. The utterance plateaus and remains high with the peak at

ANAKALA at 266 Hz. 243 Hz at the last high peak with KU' and the fall at AI, at 134 Hz.

In this Wh- Question, the instructor indicates that she will give examples of formal or polite forms of the question. She also indicates that, “formal and or polite *ho‘o piha ike* questions start at a moderately high pitch and remain at that level until the last word or two, where the pitch rises somewhat, Informal *ho‘o piha ike* questions have the same intonation as statements, this question is also usually answered using the same word order with the question word serving as a blank space filled in with the answer.”

Hawaiian: ‘O wai kona inoa?



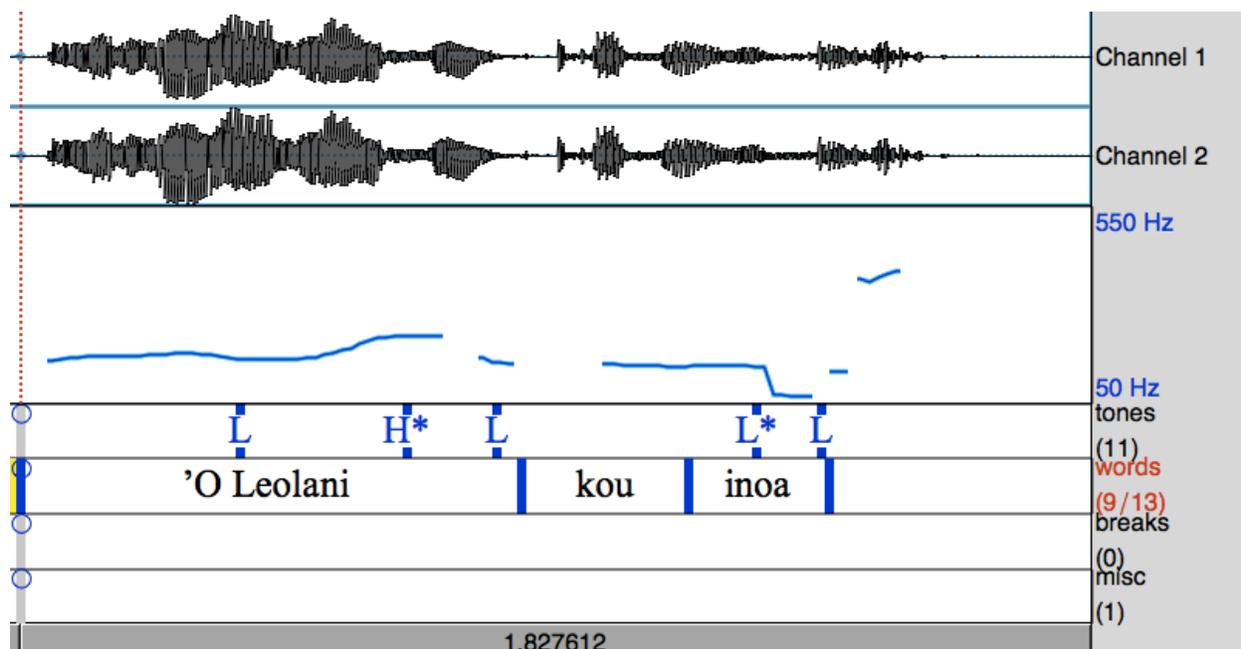
“What is her name?”

Hawaiian: ‘O wai kona inoa?

The onset for this Wh-question is 187 Hz with ‘O and peaks at WAI at 359 Hz.

KONA remains high at 378 Hz and maintains height with around 324 Hz at I and drops to 138 Hz, at NO, then rises with A at 275 Hz. While this question does show a rise at the end, I would like to point out that there was a substantial drop before the slight rise. As indicated by the instructor, the pitch starts moderately high and then rises somewhat on the last word or two. My analysis shows that, perhaps with formal questions, there could be a rise to indicate politeness, but in Hawaiian questions, you will not see a rise following a high plateau. There is always a drop. The drop may remain low (as in informal questions) or it may drop and rise somewhat as indicated in formal questions.





## 'Oiwī Ka Leo

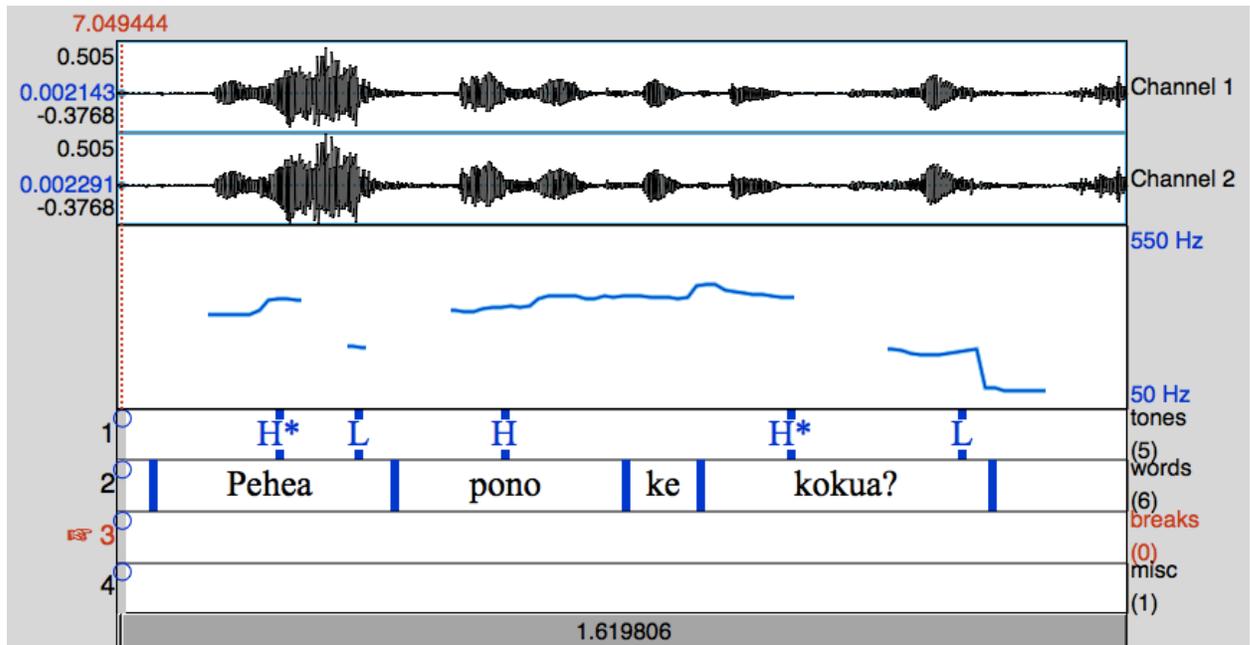
This Hawaiian language lesson series is available to stream from the 'Oiwī TV website.

In the third episode, the instructor mentions, "If you grew up in Hawai'i, you no doubt speak Pidgin, some better than others, and for those of us learning our Olelo Hawai'i, It's neat to see how Pidgin mirrors many Hawaiian language structures and expressions."

### Episode 3

While talking to Larry Kimura, during a cultural component of the lesson, Hina asks Larry if he needs any help preparing the chicken long rice. She asks, "Do you need any help?"

### Wh-Question



Hawaiian: Pehea pono ke kokua?

English gloss: Do you need help?

PEHEA has a peak and fall, starting with the onset at 345 Hz and falling to 217 Hz.

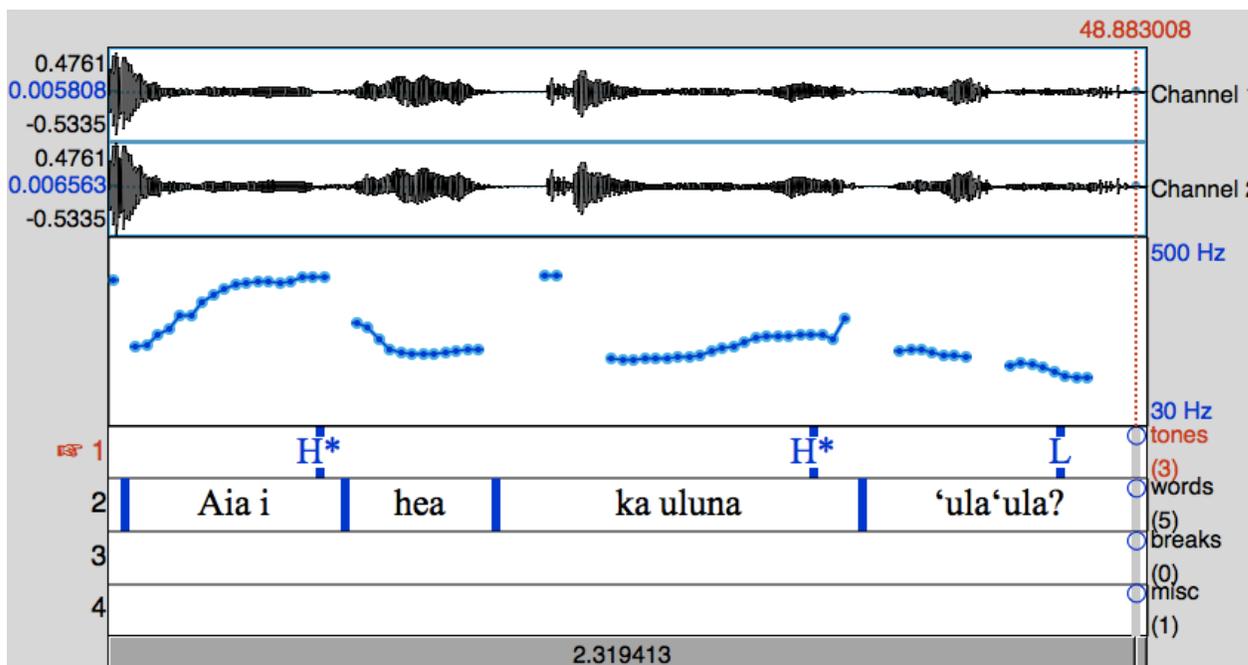
PONO restarts the question height at 315 Hz and then the plateau rises gradually up to the last peak at KO at 387 Hz and falling starting at 353 Hz with KUA and dramatically falling to 200 Hz. In this example it appears that *Pehea* H\* L is separated from the rest of the utterance, because then *pono* restarts to an H tone, and the typical high plateau takes place with the usual H\* L fall on *kokua* (help).

### Episode 5

Where is the thing?

Where is the red pillow?

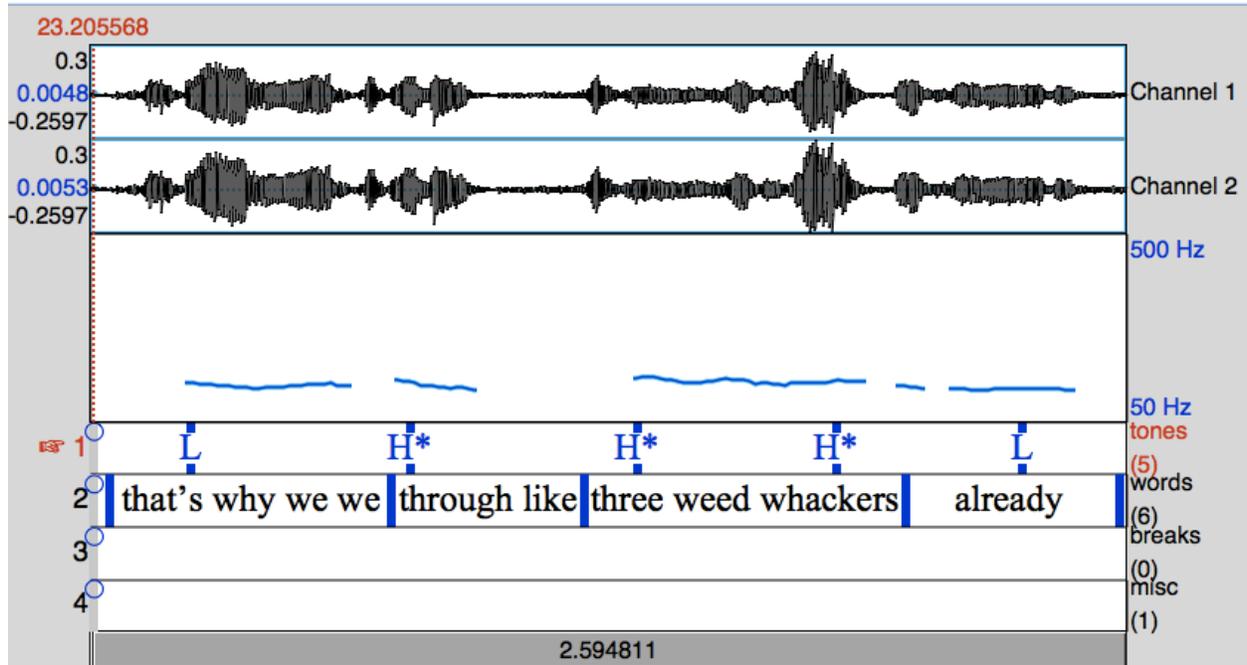
Hawaiian: Aia i hea ka uluna ‘ula‘ula?



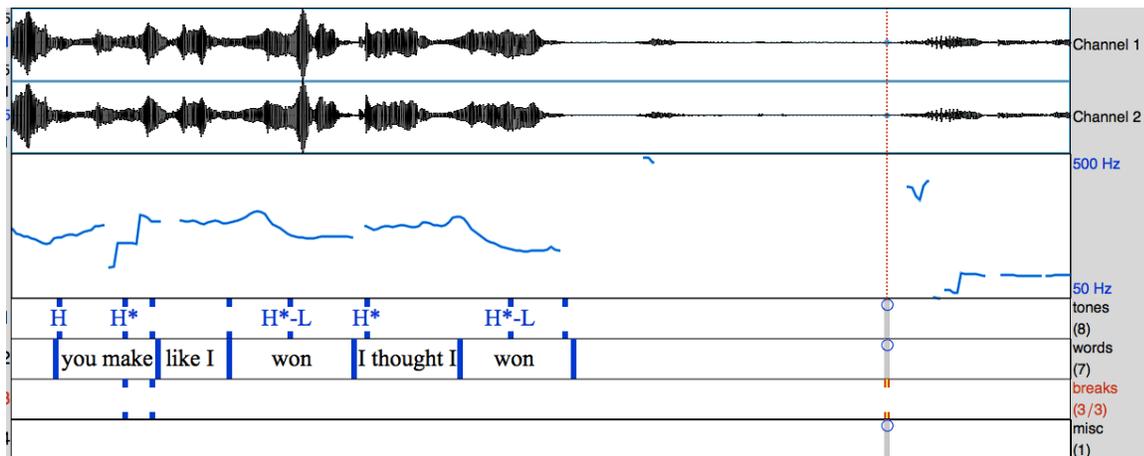
## APPENDIX B: HCE DATA

The following examples are taken from HCE data from sources listed in Chapter 4.

Jamin from Katie Drager Interviews via SOLIS

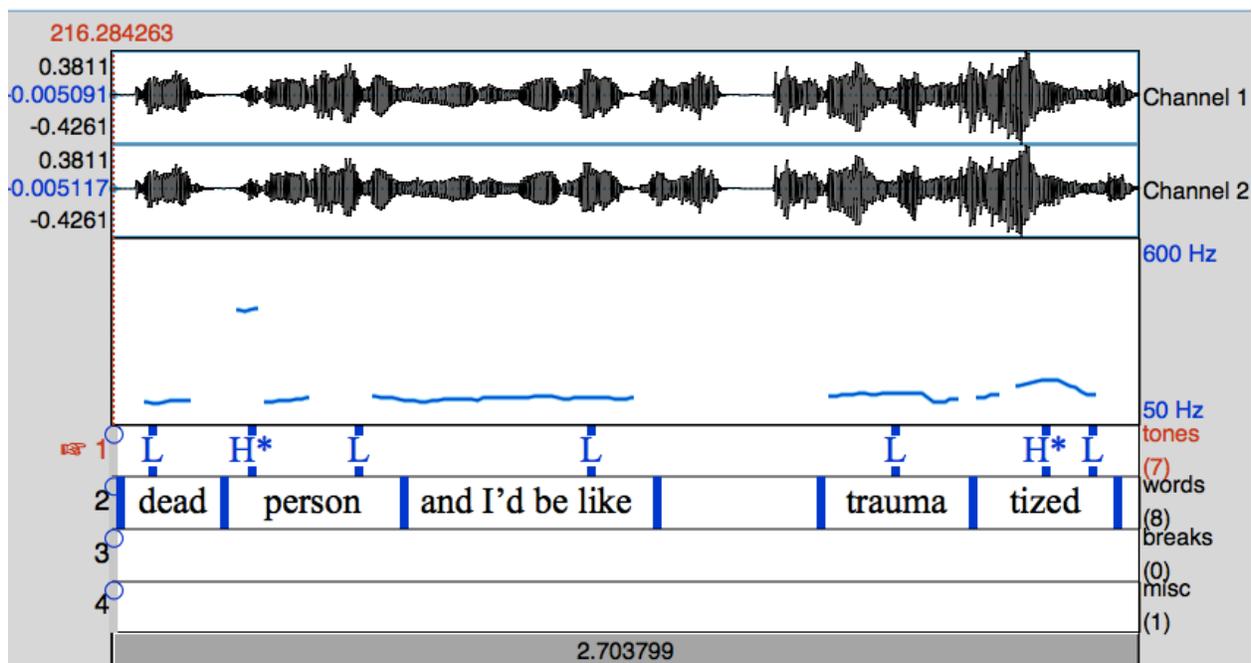


This example highlights the stress of weed WHACKers.

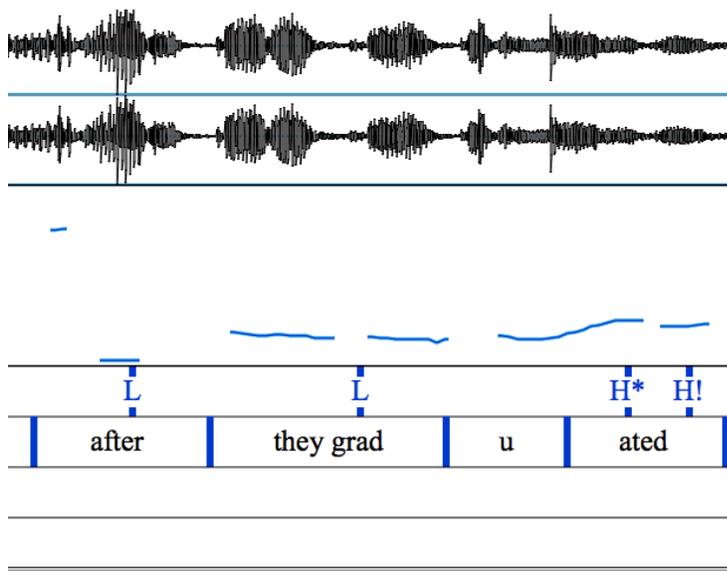


This is an example of higher overall register typical of an utterance with emotion (excitement, story telling) You make like I won, I thought I won. (Natalie and Jamin, Interview with Katie Drager)

In this situation Jamin is talking about how he once received a call that his grandfather passed away. He says that he was a bit relieved that his grandfather didn't pass away while he was sleeping next to him as a child, saying, "I don't wanna wake up next to one dead person, and I'd be like traumatized."

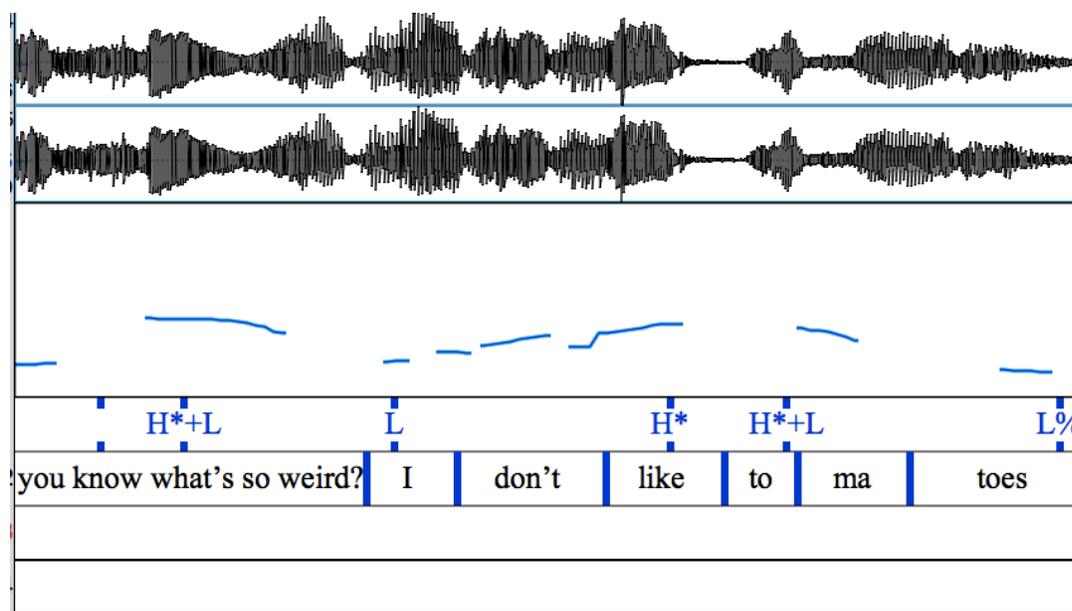
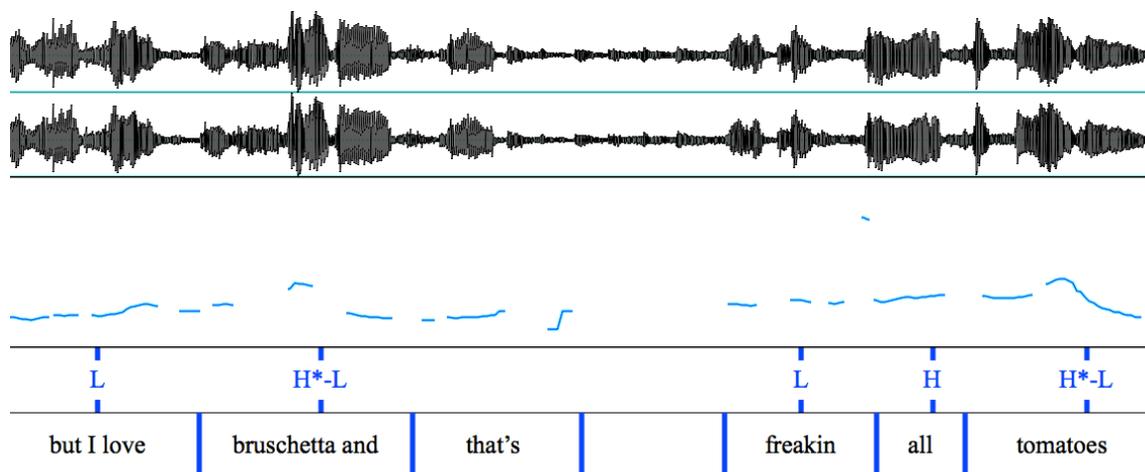


Also note the flat and lower pitch in this statement. The stress is placed differently than in Mainland English, which would be TRAUMATized.

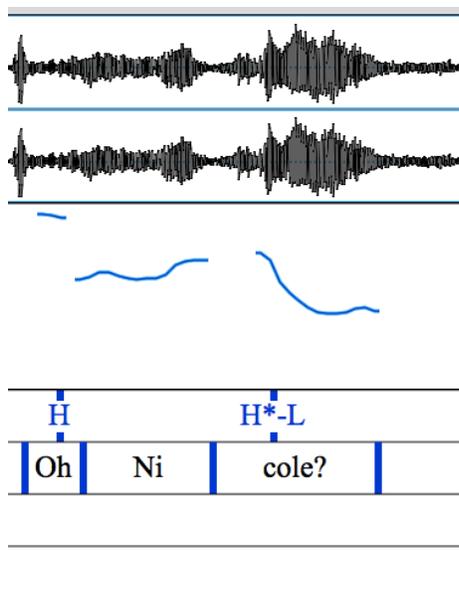


Mainland English speakers would also put the stress on the first syllable in ‘graduated’, Jamin places stress on the second to last (penultimate) syllable.

The following examples from Sam (Anykine Kine podcast) may look like Mainland English, but the contour is HCE.

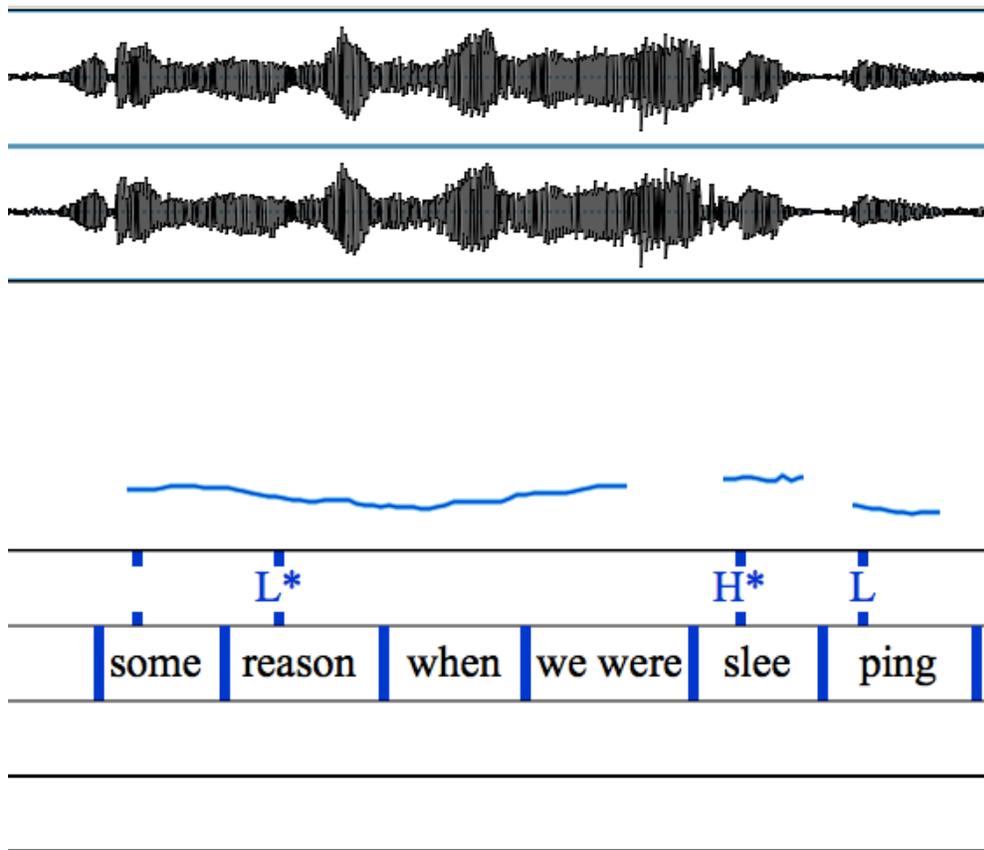


The example of a short question below is Natalie from Katie Drager interviews from the SOLIS database.



Yes/No question- Natalie, verifying that her brother is talking about Nicole Scherzinger a famous pop singer who is from Hawai'i .

Jamin from Katie Drager Interviews via SOLIS



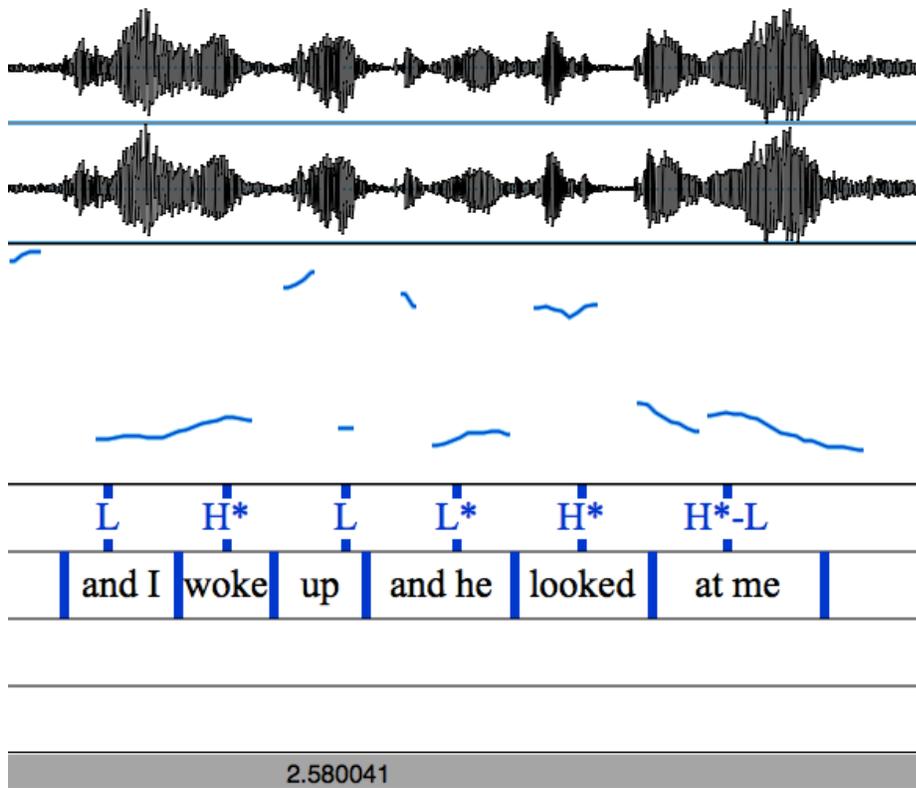
In this example, Jamin is telling the interviewer (Katie Drager, UH) about a time when he experienced a type of ‘psychic’ moment when he was sleeping next to his grandfather.

This is an example of continuation intonation contour in HCE. Jamin continues with his story saying, we got up at the same time and the book fell on top of his head”

A few things to note about this example is that, there is a gradual rise starting with “when” and gradually rising, “we were” to a peak at SLEEping.

In Mainland English, a continuation intonation would rise at the end. If for some reason, the speaker did not rise at the end, the Mainland English speaker would not have a gradual rise with a high peak on SLEEping, but rather, the tone would be low, until perhaps the final word of SLEEping.

Another example below is also continuation intonation, from the same topic

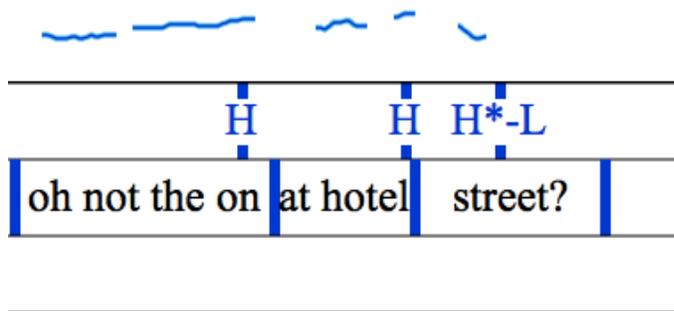


“and I woke up, and he looked at me...”

Usually in standard mainland English variety, continuation with a story involves a rising intonation, could be a type of listing intonation contour. In HCE, the continuation intonation is the same as a falling statement intonation pattern.

Also, even if someone in Standard Mainland English has a falling pattern with the continuation intonation pattern as with telling a story that is not yet complete, there is something different about the timing of the fall in HCE, but also the timing of the rise. In HCE, the rise happens earlier.

Typical to HCE's falling pattern, whether it is a continuation fall or statement fall, or Wh-question, or yes/no question fall- it is the timing of that fall that makes HCE different. What is more striking to the ears of a standard mainland English speaker would be the difference in Yet/No questions, but overall, the way that the HCE melody rises and falls in all the situations listed above is noticeable.



Falling yes/no question intonation. "Oh, not the one right at hotel street?"

Jamin asking his sister about a pancake house they went to as kids.

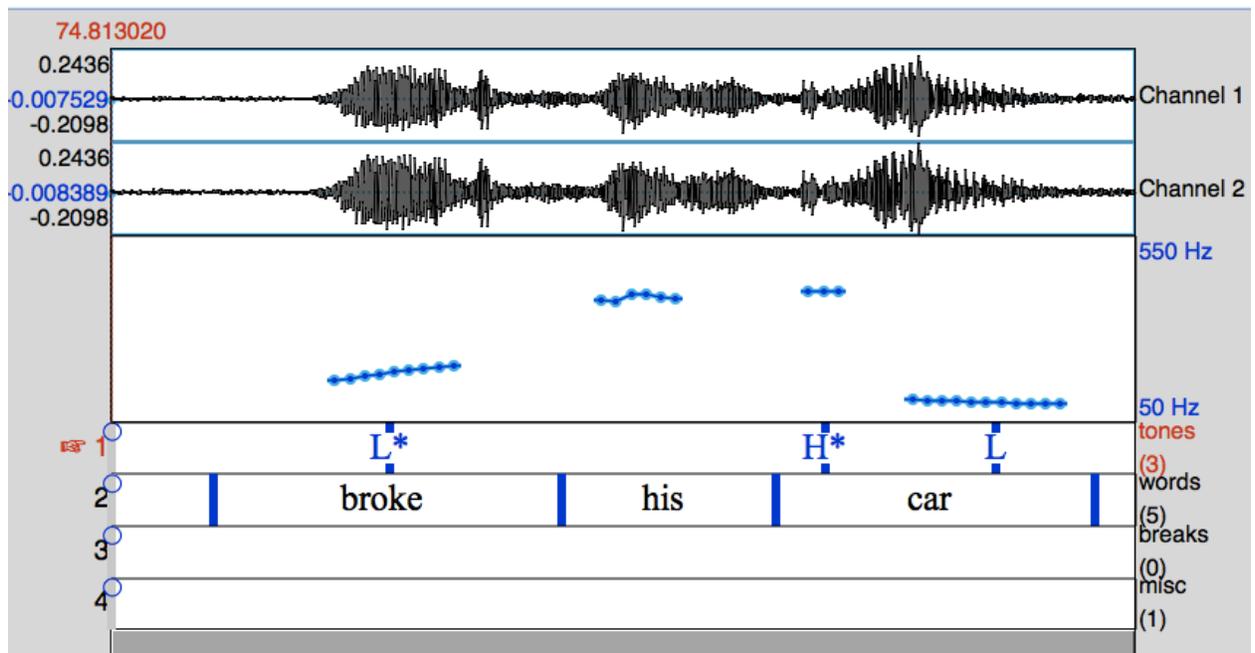
**Ka Leo 'Ōiwi,**

Examples in Pidgin

When learning the proper way to describe things, in Hawaiian, the structure is the same that is commonly used in HCE.

The instructor asks, "How would you say in Pidgin, his car is broken?"

The male student replies, "Broke his car."

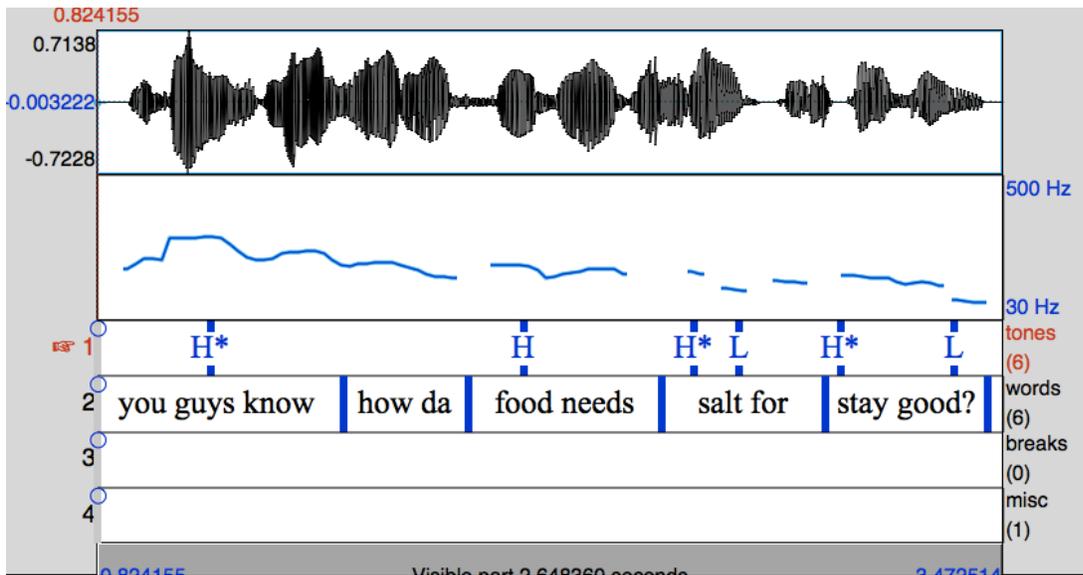


BROKE starts at 162 Hz at the onset pitch.

HIS rises to 395 Hz and CAR peaks at 400 and drops to 107 Hz for this male speaker.

### Da Jesus Story

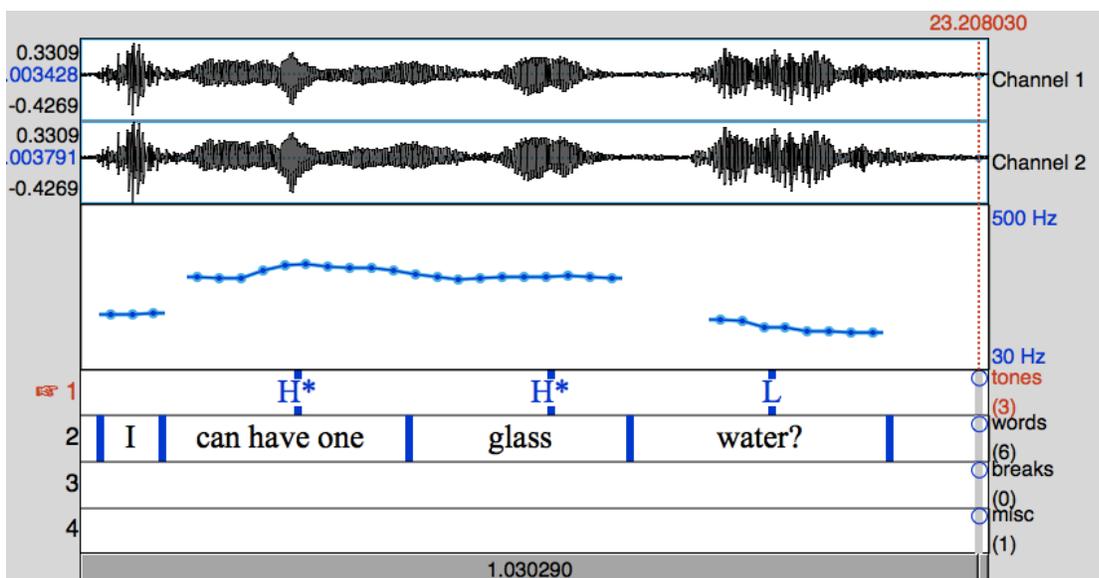
You guys know how da food needs salt for stay good?



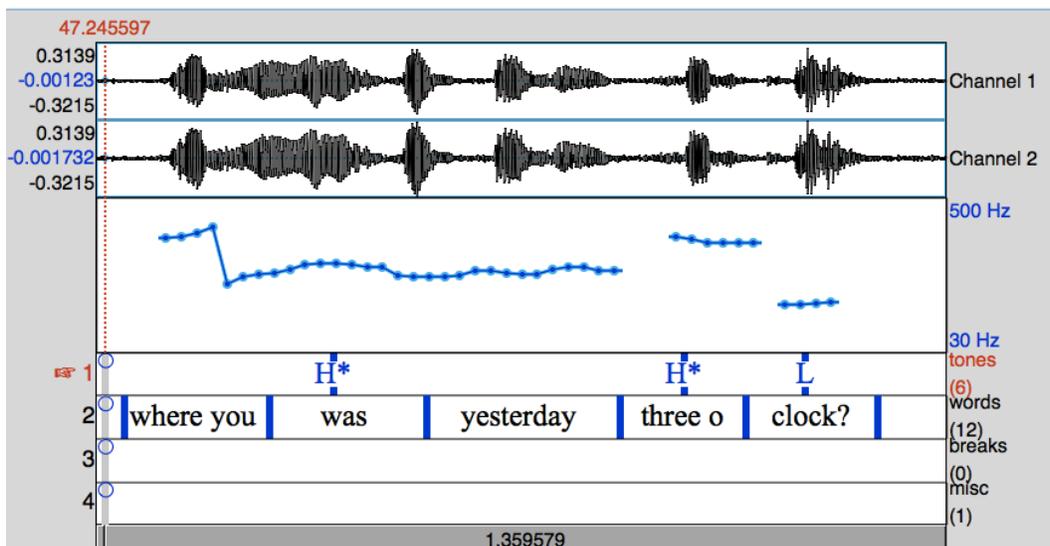
### BICKERTON Recordings

The recordings that Derek Bickerton recorded of Pidgin speakers in Hawai'i are housed and accessed through a Digital Archive, called Scholar Space at the University of Hawai'i .

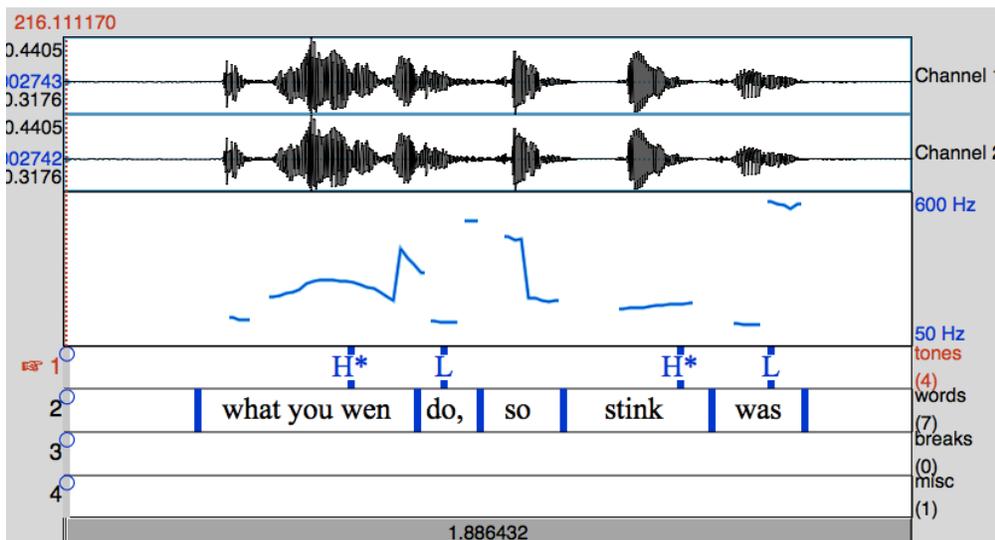
This first sample is taken from a recording from 1988. Kent Sakoda is the interviewer and in this example, it is Kent Sakoda speaking.



In this example, Kent is asking, “Can I have a glass of water?” in Pidgin, “I can have one glass water?”



In this next example, Kent asks, “Where were you yesterday at three o’clock?” in Pidgin, “where you was yesterday three o’clock?”



The utterance starts at 144 Hz

The next peak on WEN at 281 Hz

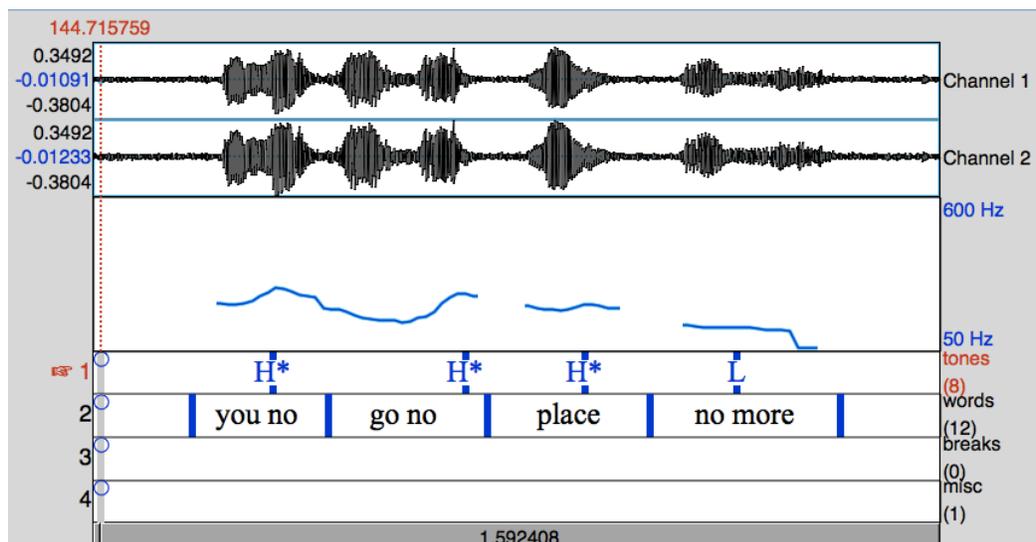
Then a fall on DO, 134 Hz

What you wen do, so stink was

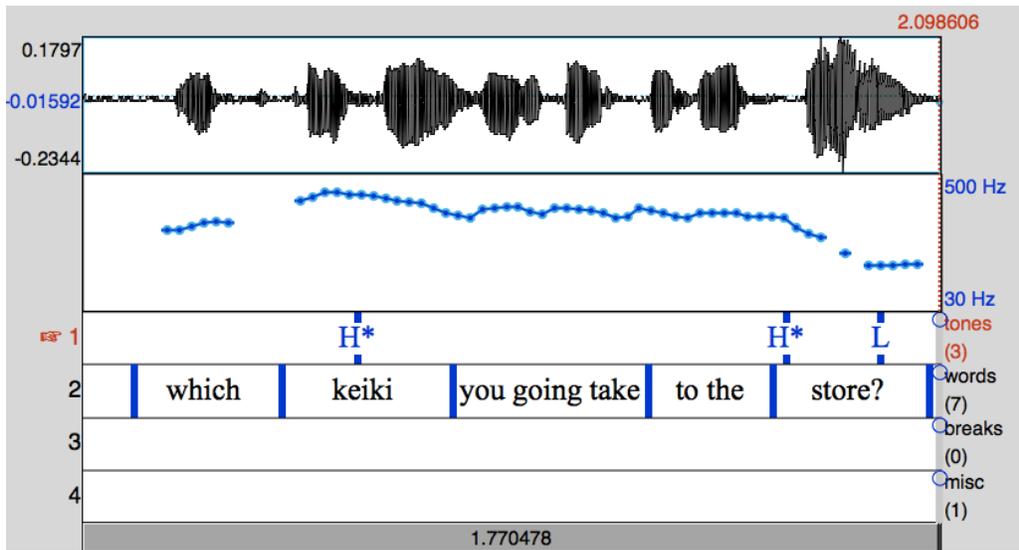
The next onset, at SO, 208 Hz

STINK at 202 Hz

WAS falls at 156 Hz.



The following Wh-question is also taken from Pidgin to da Max, Full On Pidgin. The speaker is female. “Which keiki you going take to the store?”



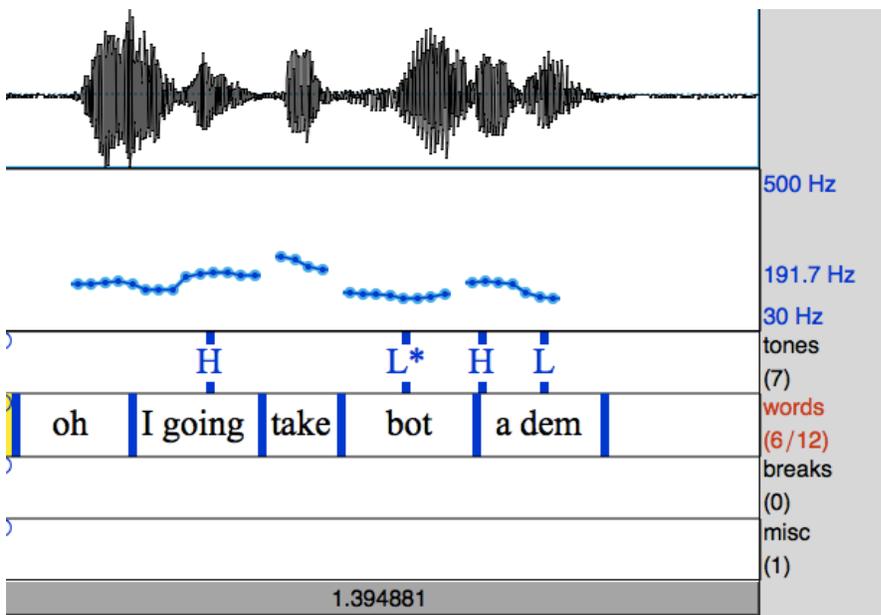
The onset starts at WHICH with 307 Hz.

Then the pitch rises to the first peak on KEIKI with 436 Hz

The plateau dips slightly and maintains a high pitch, at around 370 Hz.

STORE is the last stressed syllable, and has the fall. Starting at 356 and falling to 189 Hz.

The response of “Oh, I’m going to take bot a dem”



Male speaker.

Starting with the onset of this statement, 170 Hz at OH

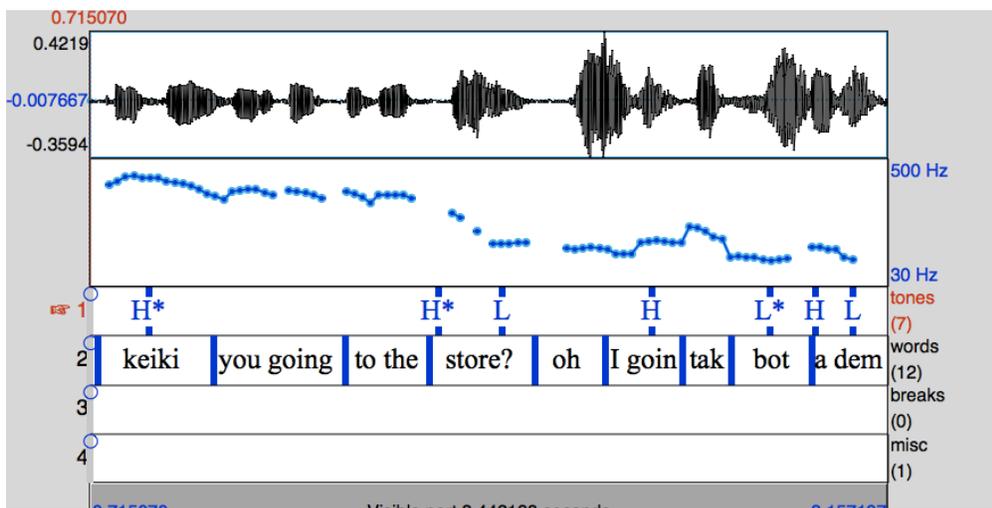
I GOING rises in pitch to 197 Hz

TAKE is slightly higher although it is not stressed- 244 Hz.

BOT lowers to around 132 Hz.

A has a peak at 174 and then falls on DEM at 129 Hz.

Side by side, question and response. The question is posed by a female speaker. The response is from a male speaker.



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