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**A Comparison of Intonation in St Croix English Lexifier Creole and Puerto Rican Spanish: West African Influences on Intonation Patterns in the Eastern Caribbean**

*Keyla Morales-Muñoz, Zelma Soto Rodríguez,*

*María Cristina Veliz Román, Nicholas Faraclas*

Universidad de Puerto Rico, Recinto de Río Piedras

**Introduction**

While much work has been done in the area of segmental phonology to document the influence of languages from the west of Africa over the Creole languages of the Caribbean and the Spanish of Puerto Rico, little has been done thus far to explore the possibility of similar influences at the suprasegmental level. In this work we compare the declarative intonation patterns that typify Crucian, (the English-Lexifier Creole spoken in Saint Croix), and three dialects of Puerto Rican Spanish: those of Vieques, Loíza and Aguada.

We chose the dialect from Vieques for this study because it shares a considerable history of migration with Saint Croix; the one from Loíza because, according to Álvarez Nazario (1974), the greatest concentration of liberated African slaves on the island settled there; and the one from Aguada, since it was a common destination for illegally traded African slaves.

In this study, recordings of spontaneous speech samples of speakers from Vieques, Loíza, and Aguada, are subjected to phonetic analysis, using the PRAAT program, to extract contours of intonation over declaratory sentences. We then compare the patterns of intonation found in the dialects of Vieques, Loíza and Aguada, with those found by Faraclas and Ramírez Morales (2005) for Crucian.

Some of the English-Lexifier Creole languages of Africa, such as Cameroonian Pidgin, Nigeria Pidgin, Saramaccan Sierra Leone Krio, and Aukan, have always been considered to be tonal languages (Faraclas and Ramírez Morales 2005). Many linguists, like Carter (1987), Sutcliffe (1998) and Holder (1999), believe that the other dialects of English-Lexifier Creole in the Caribbean, including Crucian, are also tonal.

In most of the English-Lexifier Afro-Caribbean Creoles there are minimal pairs of words which are distinguished only by tone, for example: *sístà* (H-L) ‘female sibling’ and *sistá* (L-H) ‘a nun.’ African English-lexifier Creoles (Faraclas 1996: 270-277), like Crucian and many other Caribbean Creoles (Sutcliffe 2003b: 280-281), exhibit intonational processes like downdrift and downstep. Such processes are typical of the tonal languages of the Niger-Congo family in West Africa.

The majority of the Spanish dialects have a final cadence (or final falling intonation) over declarative sentences. The rising contours found over some of the declarative utterances of our Puerto Rican informants could be attributed to African influences over suprasegmental patterns in Puerto Rican Spanish.

### ***Final cadence over declarative sentences***

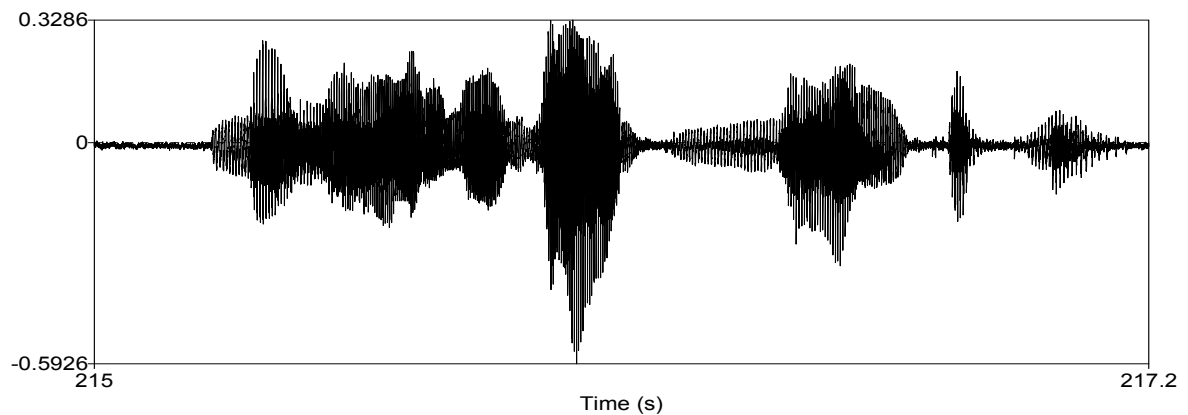
Final cadence over declarative sentences is realized as a falling contour over the final syllables of the sentence. In English and in most of Spanish dialects, declarative sentences have final cadence, unlike yes–no questions which end with a rising intonation.

As was mentioned previously, almost all the languages along the west coast of Africa are tonal languages. In these languages, the occurrence of a rising tone instead of a falling tone at the end of a sentence can function to distinguish minimum pairs of words. For this reason, although final cadence is found in many West African languages, it is sometimes overridden by tonal phenomena. Therefore, rises in pitch at the end of declarative sentences in Caribbean English-Lexifier Creoles and in Puerto Rican Spanish could be explained by influence from African languages.

The present study of Puerto Rican Spanish dialects confirms Faraclas and Ramírez Morales’ findings for Crucian in relation to final cadence over declarative sentences. In Puerto Rican Spanish and Curcian, declarative sentences are often realized with final cadence, as shown in examples 1, 2, 3, and 4:

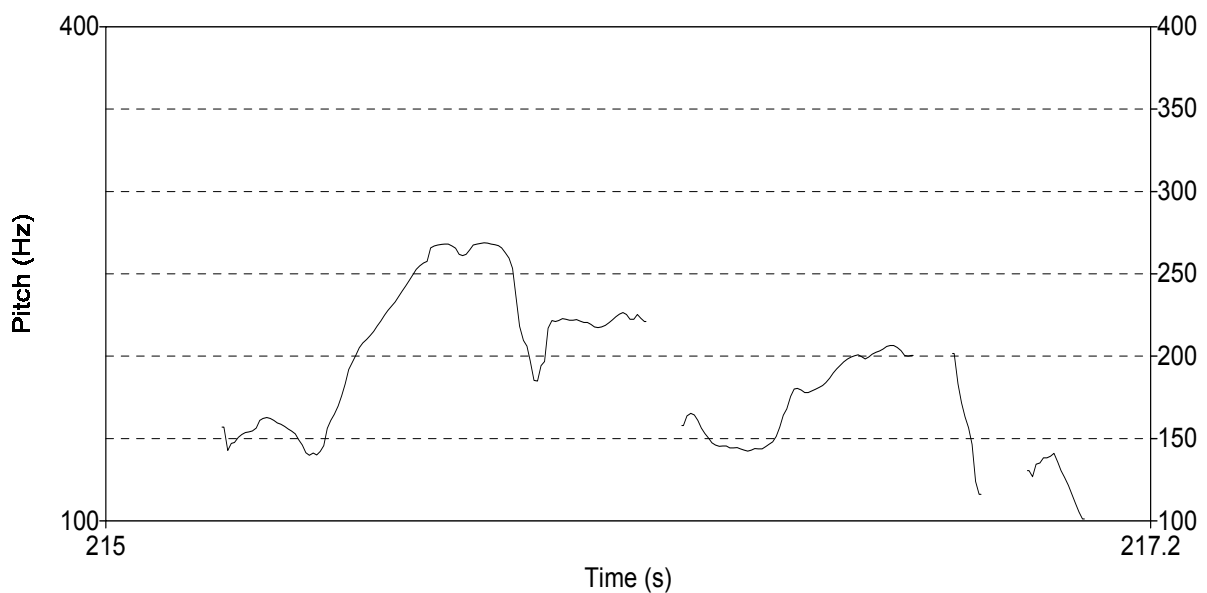
(1) Crucian (female, age 70, born/raised St. Croix, parents from St. Croix/St. Thomas):

Mì    ónlí    gát    wàn    píkni.  
 I        only    have    one    child  
 ‘I only have one child.’



**mi          on    li    ga    t w          a    n    pi    kni**

***L          H          HL H                          L                  HL    HL'***



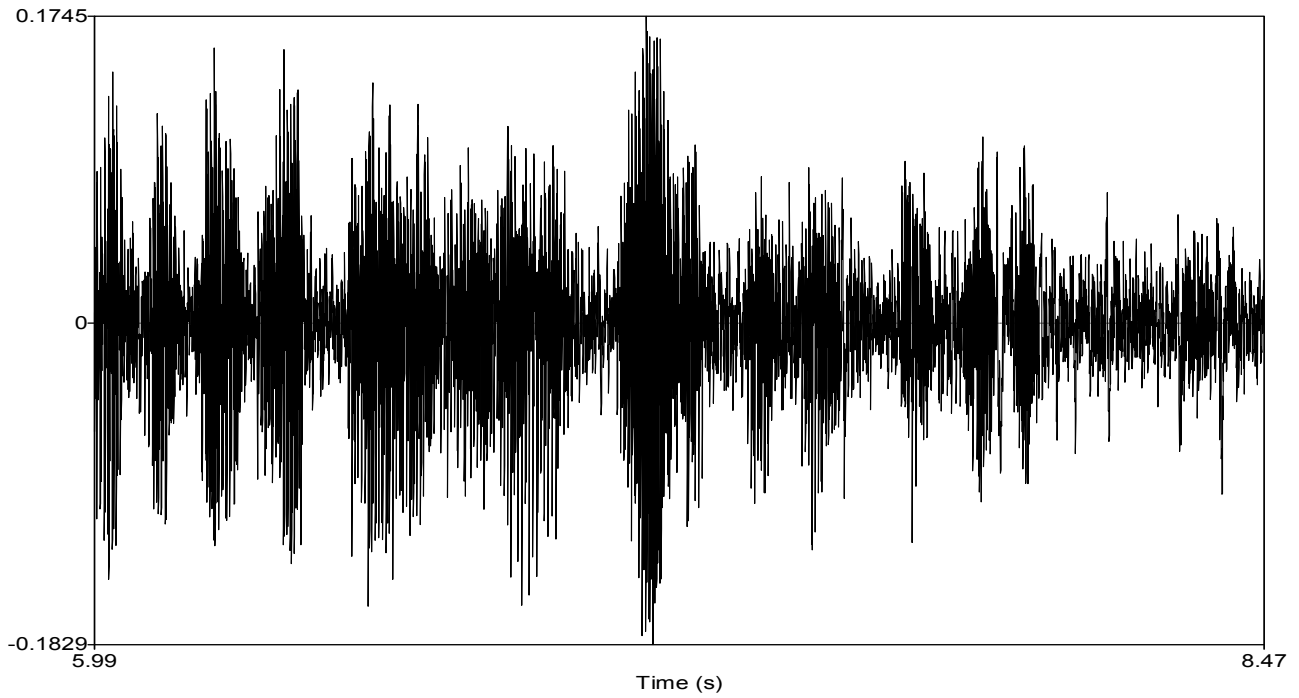
(2) Aguadeño (male, age 21, born/raised Aguada, parents from Aguada)

Al otro día pol'a mañana anteh que se monten yo loh inhpeciono

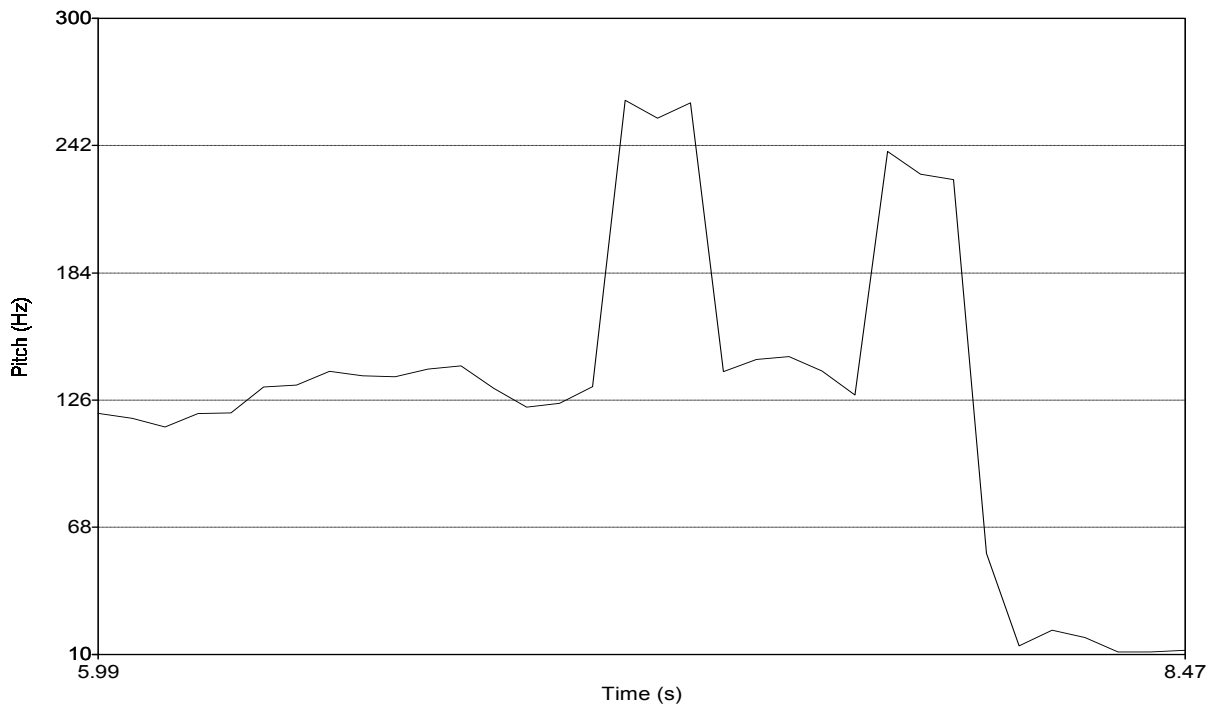
The next day in the morning before COMP get I it inspect

'The next day in the morning before they get in I inspect it.'

<sup>1</sup> Notational conventions such as H and L are used here with examples from Crucian because that language can be considered to be a tonal language, but H and L are not used in examples from Puerto Rican Spanish because that variety is not considered to be tonal. The uninterrupted pitch frequency tracing is an artifact both of the rapid pace of the speech in the sample as well as of the sampling and averaging functions of the pitch extraction program utilized in the study.



Al. o tro dí a pol'a ma ña na an teh que se mon ten yo loh inh pec siono  
 233 230 227 74 12<sup>2</sup>



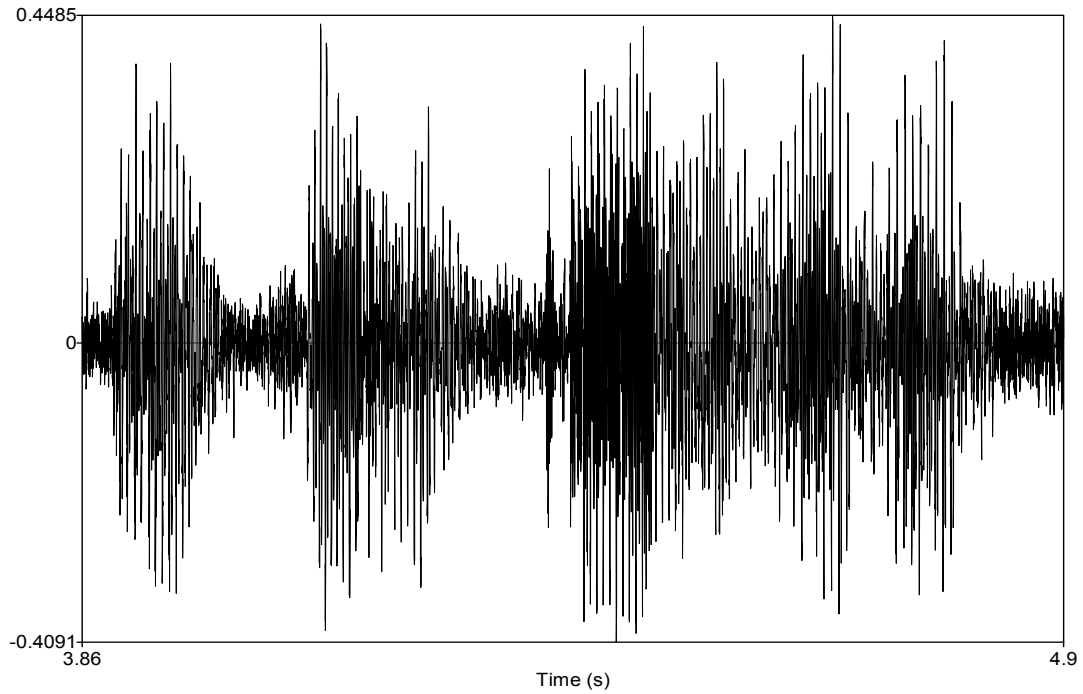
<sup>2</sup> This pitch is very low because the informant said the last part of the word with creaky voice.

(3) Loiceño (male, age 76, born/raised Loíza, parents from Loíza)

...se hizo calgo de so

...Refl took care of it

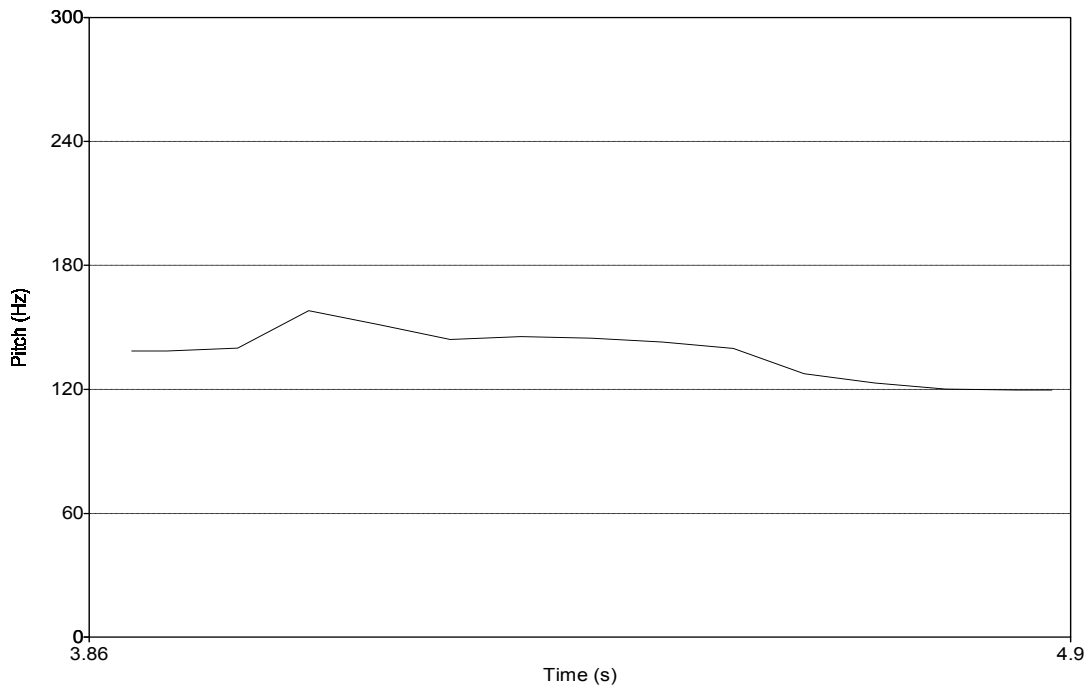
‘...he took care of it.’



se hi - zo

cal - go de so

128 120 119

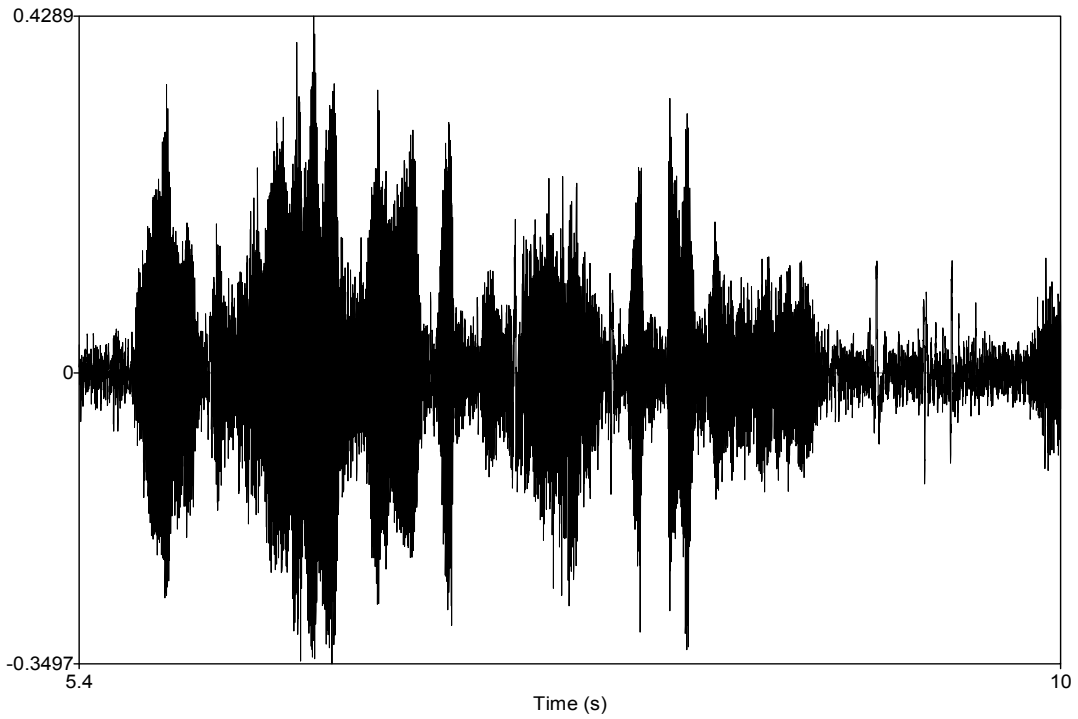


(4) Viequense: (female, age 39, born/raised Vieques, parents from Vieques)

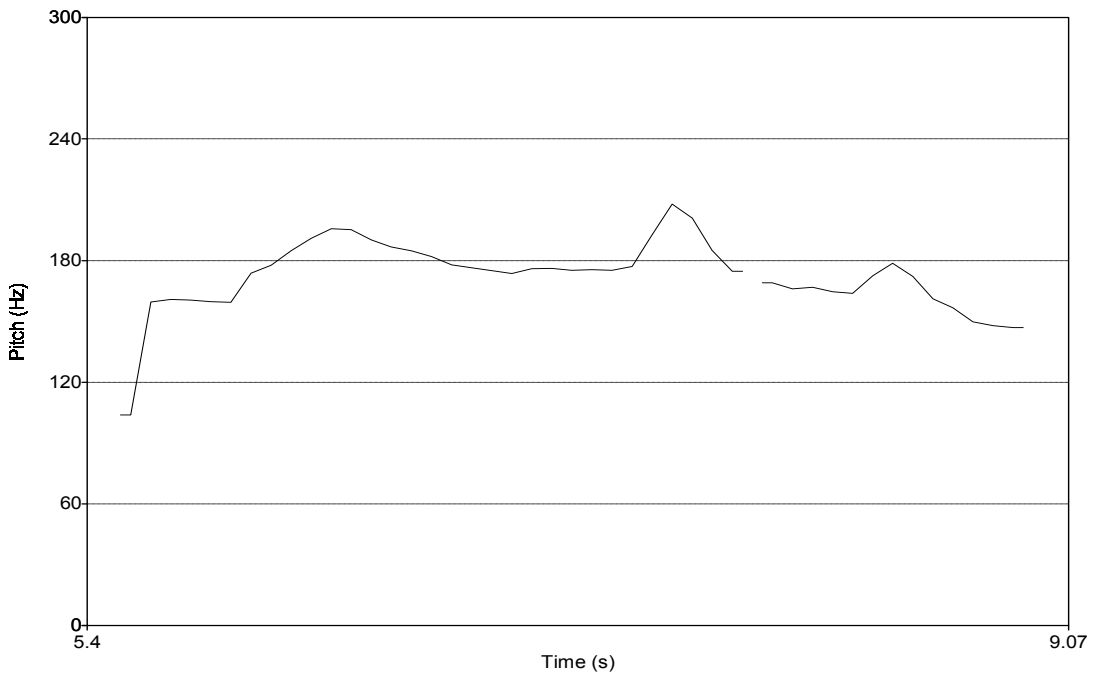
...pero yo he tenido la la oportunita de ehtar con elloh

...but I had have the the opportunity of been with they

‘...but I had have the opportunity of being with them.’



pe -ro yo he te-ni-do la la o- por-tu -ni- da de eh-tar con e-lloh



In example (1) from Crucian, a fall from 200 Hz to 150 Hz and then to 100 Hz is found at the end of a declarative sentence. In example (2) from the Aguada dialect of Puerto Rican Spanish a fall from 227 Hz to 74 Hz to 12 Hz occurs at the end of a declarative sentence. In example (3) from the Loíza dialect of Puerto Rican Spanish, the pitch at the end of a declarative sentence falls from 128 to 119 Hz. In example (4) from the Vieques dialect of Puerto Rican Spanish, the pitch falls from 180 Hz to 150 Hz at the end of a declarative sentence.

### ***Final Rise***

In most dialects of Afro-Caribbean English-lexifier Creole, there is a stylistic variation in which the final falling contour that constitutes final cadence is not assigned to declarative sentences, and therefore their final syllables retain the level high tones that they would normally bear in non-sentence final position. This divergent declarative intonation pattern is called *final rise* by Sutcliffe (2003), who says that it is used for stylistic effect instead of final cadence in Guyanese, Barbadian, Trinidadian, Jamaican, and Gullah.

Much of the distinctive auditory impression attributed to the Caribbean dialects of Spanish can be traced to the high frequency of use of final rise instead of final falling declarative intonation, as evidenced in our samples from speakers of Puerto Rican Spanish from Aguada, Loíza, and Vieques. In this respect, our results are very similar to those obtained by Faraclas and Ramirez (2007) for Crucian English-lexifier Creole.

In a study of the speech of communities of African origin in the Dominican Republic, Megenney (1982) observed that “many declarative sentences end with a medium tone or final rise”, and he attributed this tendency to the influence the African languages spoken by people of African origin during the time of colonization. Lipski (1985a) says that the same final rise pattern over declarative sentences also typifies both the Spanish spoken in the Afro-Colombian community of Palenque de San Basilio, as well as Palenquero, the Iberian-lexifier Creole language spoken in the same community, whose population is descended from runaway slaves.

It is important to mention these findings, because there were important concentrations of Afro-Caribbean peoples in Aguada, Loíza and Vieques, the



communities where we carried out our study. In communities such as Loíza and Vieques, African influences are still very evident in various cultural practices, including music, cuisine, dance, religion, etc.

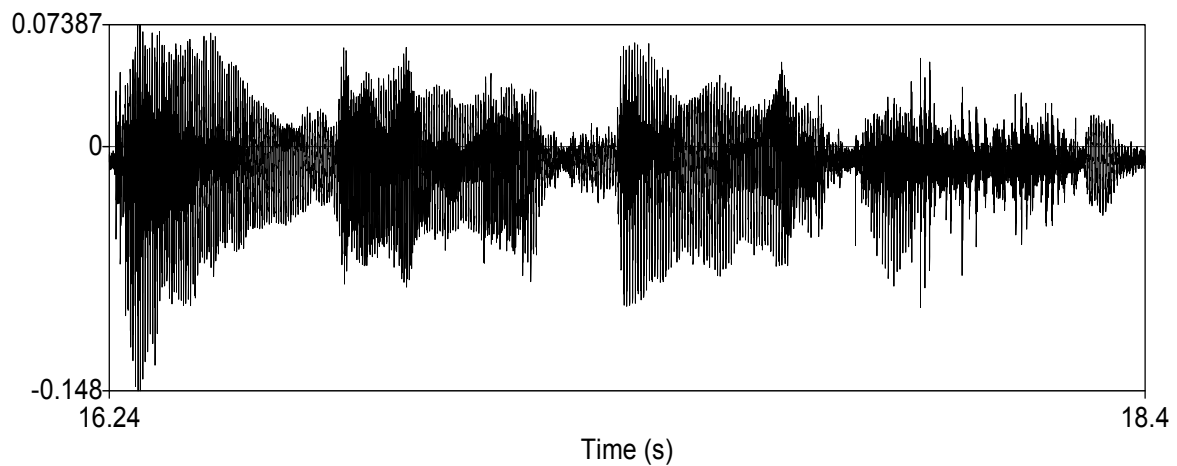
In example 5, we see an example of final rise from Crucian. At the end of this declarative sentence, the pitch over the final syllable rises and falls, but it both begins and ends at about 160 Hertz:

(5) Crucian (female, age 50, born/raised St. Croix, parents from St. Croix):

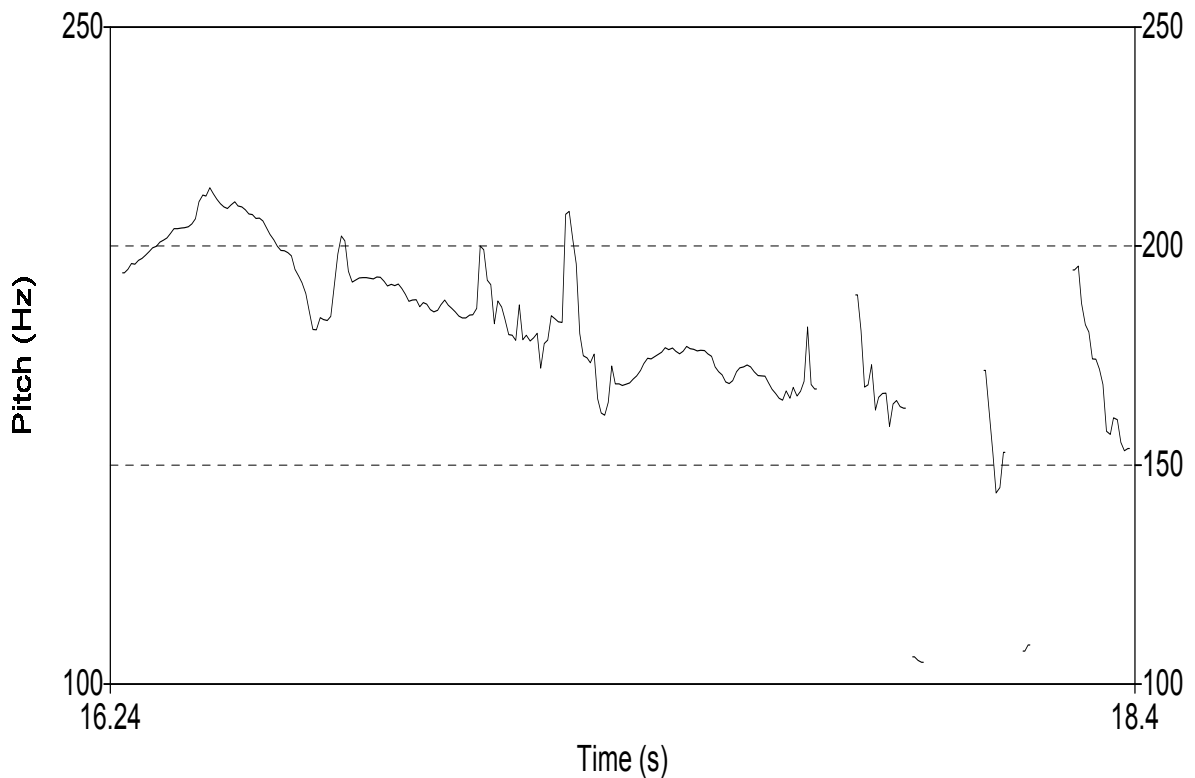
Áy wél láyk bín hyír wít àyú.

I well like being here with you (plural)

‘I really like being here with you (plural).’



ay w e l ay k b i n hy ir w i t a y u  
**H !H !H !H !H L L HLH(LHL)**



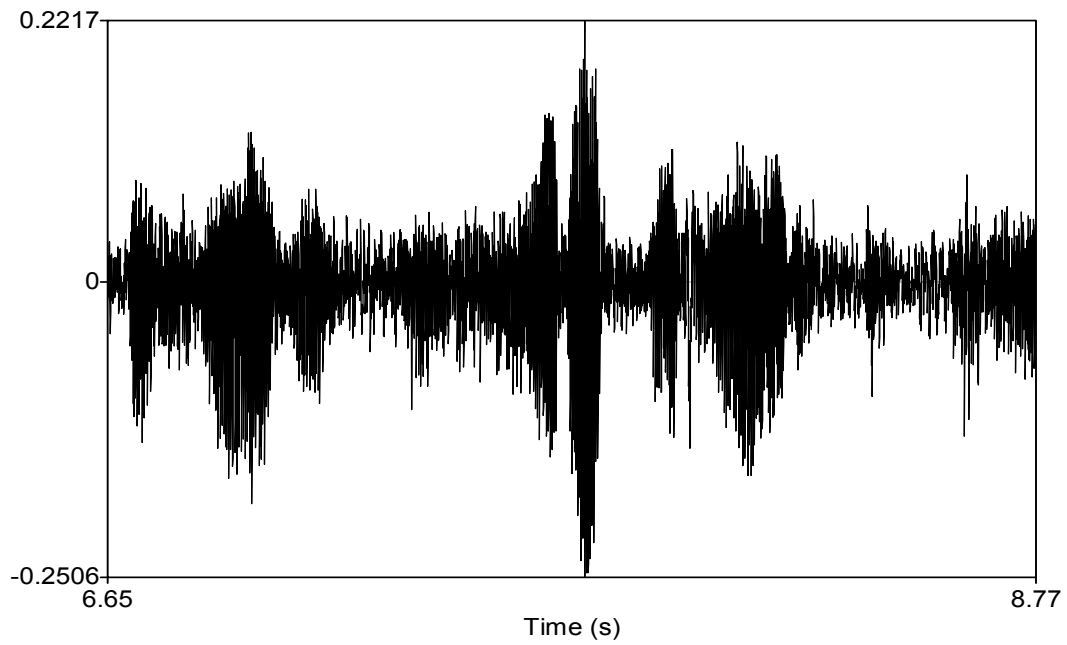
In example (6) from Aguada, final rise is realized as a level high tone at the end of the declarative sentence which remains steady at 187 Hertz:

(6) Aguadeño (female, age 49, born/raised in Aguada, parents from Aguada)

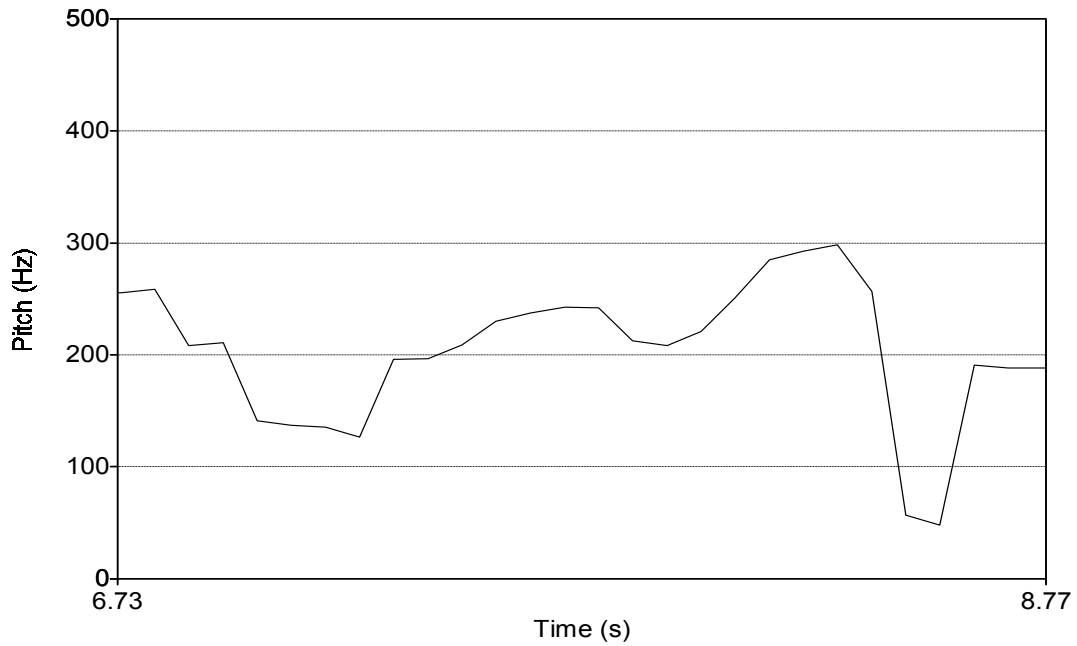
Nada lo mío era comer y comer

Nothing business my was to eat and eat

‘Nothing, my business was to eat and eat.’



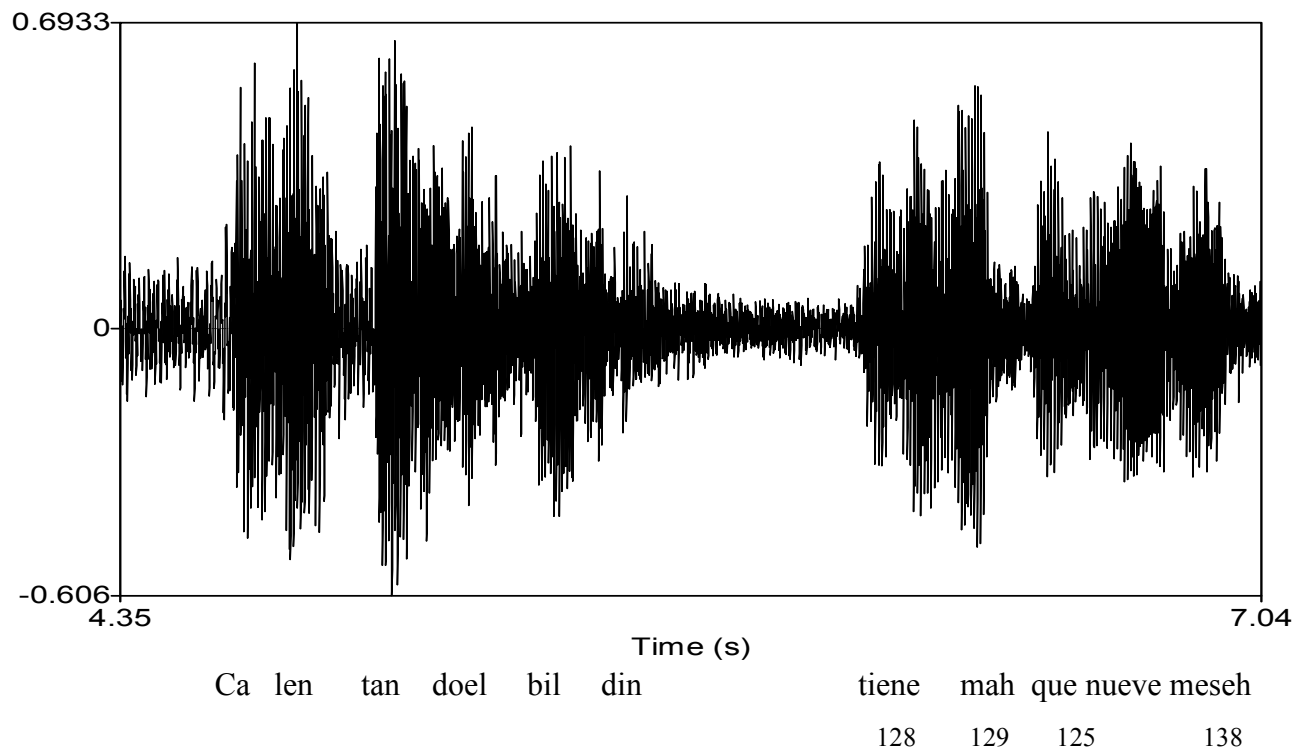
Na da lo mío era co mer y co mel  
 242 214 282 298 57 187

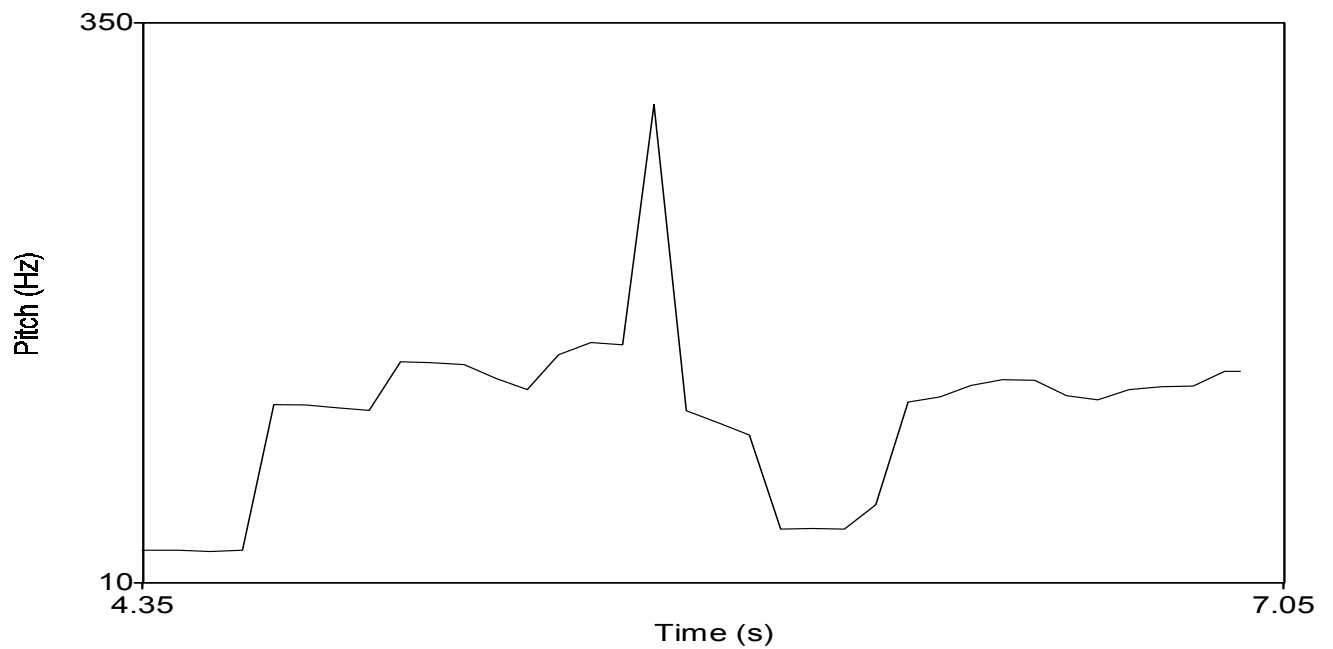


Example (7) from Loíza shows a final rise over a declarative sentence that is realized as a level high tone over the final syllable at 138 Hertz:

(7) Loiceño (male, age 76, born and raised in Loíza, parents from Loíza)

Calentando el bildin tiene mah que nueve meseh  
 ...warming the building have more than nine months  
 ‘...warming the building have more than nine months.’





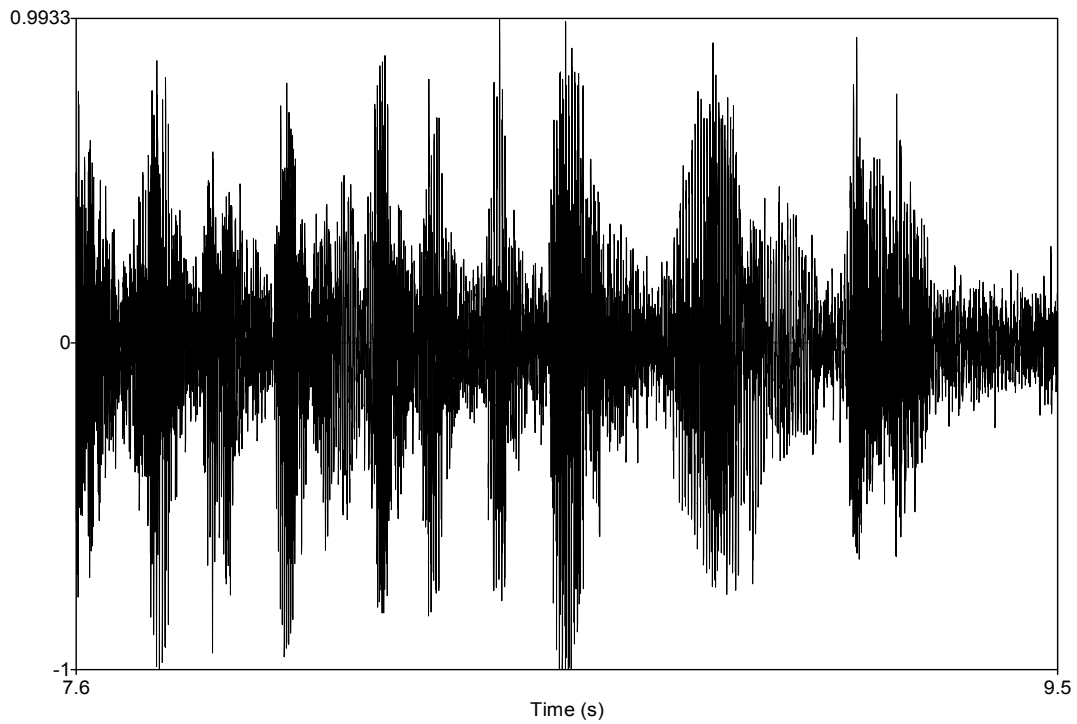
In example (8) from Vieques, the final syllable of the declarative sentence is realized as a steady level mid tone at 160 Hertz:

(8) Viequense: (female, age 47, born and raised in Vieques, parents from Vieques)

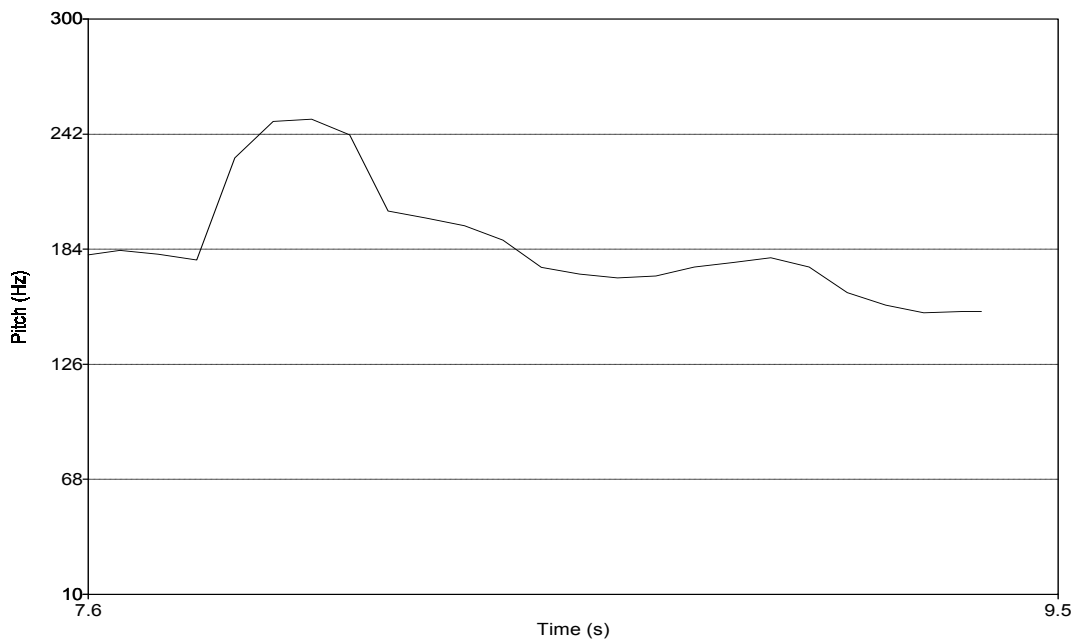
... la casa como que se partió en dos

...the house COMP REFL broke in two

‘...the house broke in two.’



la ca - sa co - mo que se par - tió en dos  
 173 176 180 160



In these examples, we observe a final rise instead of a final fall over declarative sentences in both the Afro-Caribbean English-lexifier Creoles such as Crucian and the Aguada, Loíza, and Vieques dialects of Puerto Rican Spanish.

***Final high rise***

Faraclas and Ramirez (2006) found that the final tone in Crucian English-lexifier Creole declarative sentences is not only realized as a level high tone or mid tone as in the case of final rise, but it also rises (and sometimes then falls) at the very end. According to Sutcliffe (2003b:284), this intonation pattern which he calls ***high rise*** is generally reserved for yes-no questions in Afro-Caribbean English-lexifier Creole as it is in English.

In Crucian, however, final high rise intonation is not restricted to yes-no-questions, it is also extremely common in Crucian declarative sentences. We have also found instances of final high rise over declarative sentences in our samples from Loíza and Vieques. Thus far, however, we have not found any instances of final high rise in our sample from Aguada.

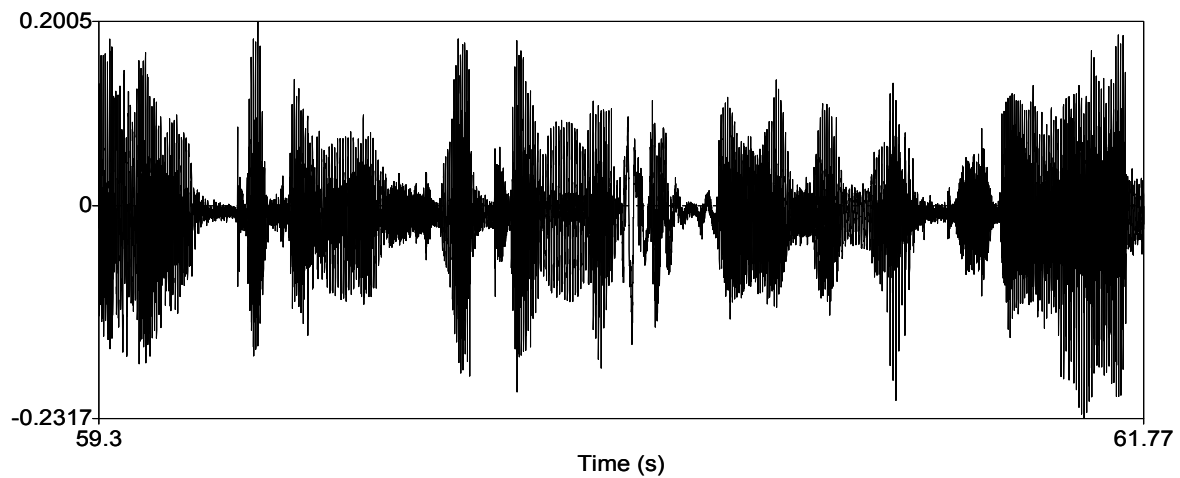
In example (9) from Crucian, high rise occurs at the end of a declarative sentence, where a final high toned syllable bears an HLH contour, rising from about 160 to 167 Hertz:

(9) Crucian (female, age 50, born/raised St. Croix, parents from St. Croix)

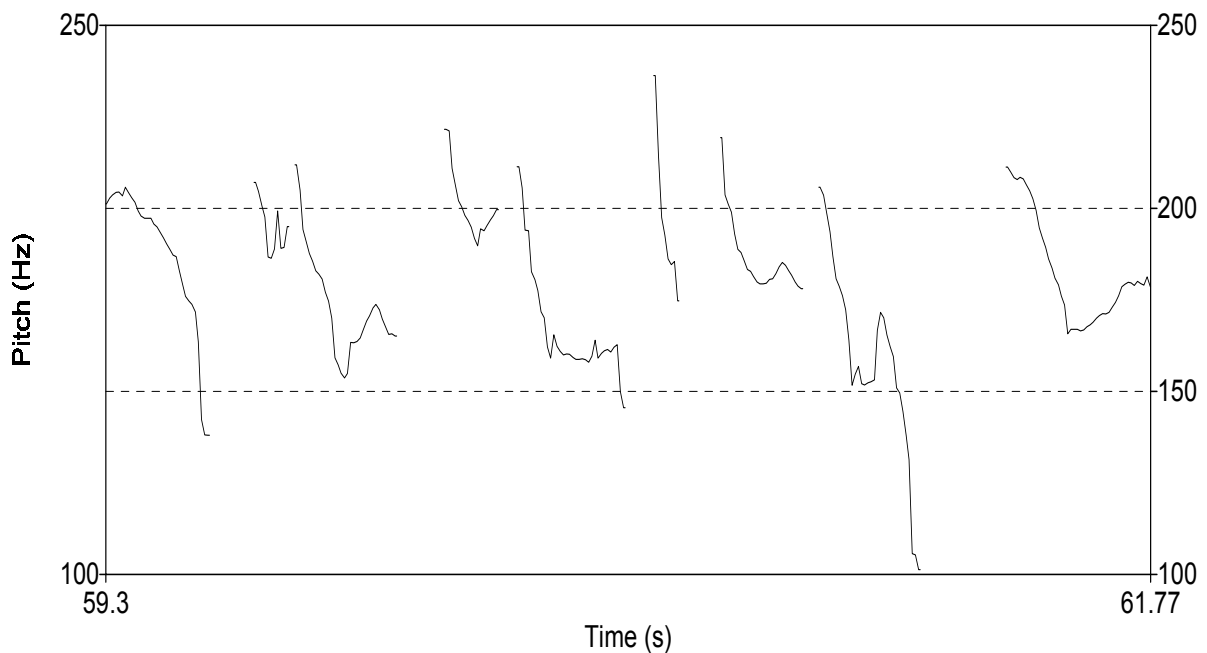
(-C = incompletive aspect):

Wén	dém	dà	ték	à	líl	swích	àn	nàk	yú
when	they	-C	take	a	little	switch	and	knock	you
krás	yò	báksáy.							
across	your	back							

‘...take a little switch and beat your buttocks.’



wedema t e k a l i l s w i c h a n n a k y u k r a s y o b a k s a y d  
 H H L H L H HL HL L HL HL HL HL HLH

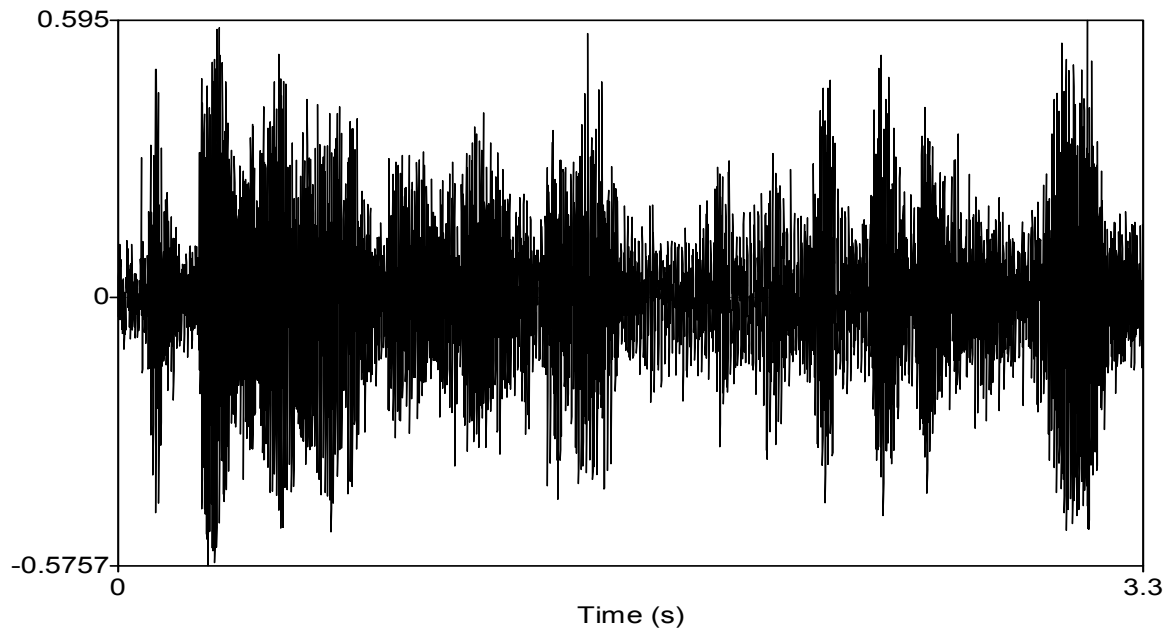


Example (10) from Loíza shows a dramatic rise over the final syllable of a declarative sentence, from 110 Hertz to 262 Hertz:

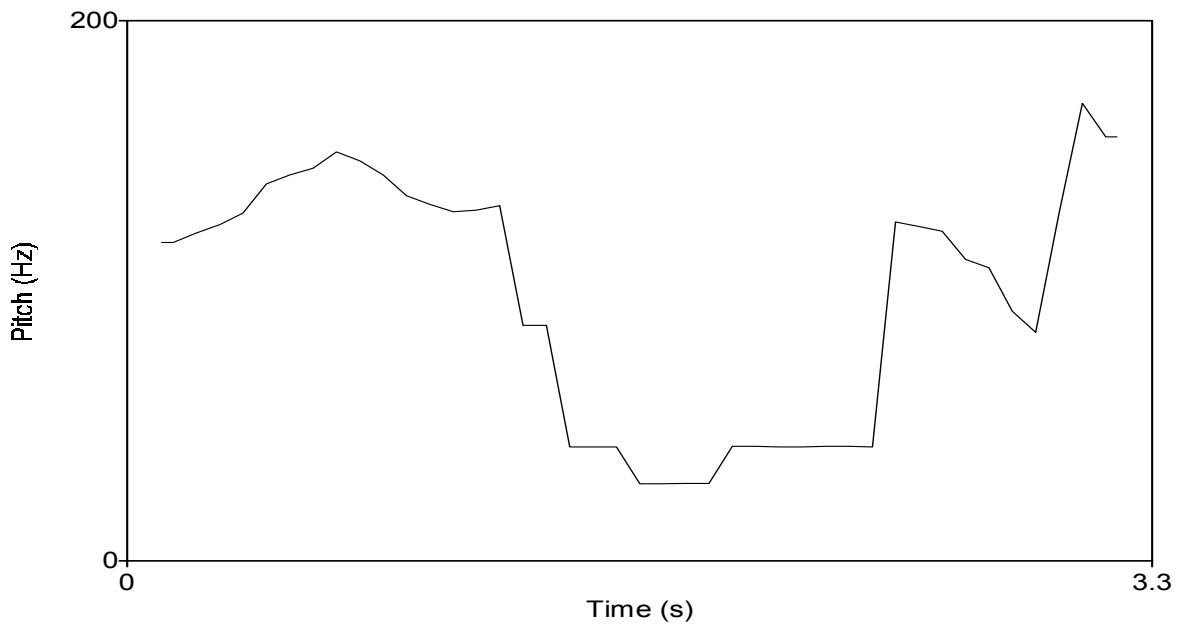
(10) Loiceño (male, age 76, born/raised Loíza, parents from Loíza)

El padre mío tuvo que desa deshaselse de la res  
 The father my had to get rid of the cow.  
 ‘My father had to get rid of the cow.’

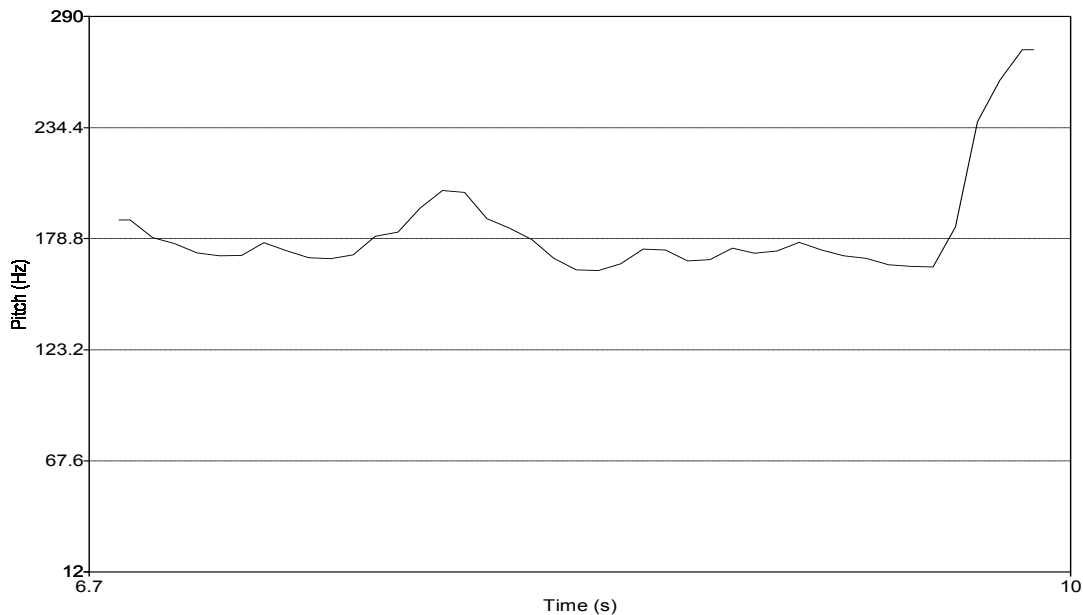




El pa dre mi o tu vo que de sa de sa sel se de la res  
 29 41 42 117 123 110 262







**Conclusion**

As we have shown, many of the intonation patterns over declarative sentences that differentiate the Afro-Caribbean English lexifier Creoles from European languages like English and Spanish are also found in the Puerto Rican Spanish dialects of Aguada, Loíza, and Vieques.

	West African Languages	Afro-Caribbean Creoles	Crucian	Loíza	Vieques	Aguada	Standard English and Spanish
Declarative Final Cadence	+	+	+	+	+	+	+
Interrogative Final High Rise	+	+	+	+	+	+	+
Declarative Final Rise	+	+	+	+	+	+	-
Declarative Final High Rise	+	+	+	+	+	-	-

Table 1. Comparison of Intonation Patterns over Declarative Sentences

In Table 1, we see that: Declarative Final Cadence and Interrogative Final High Rise are found in West African languages, Caribbean Creoles such as Crucian, the Puerto Rican dialects that we studied as well as in Standard English and Spanish.

- 1) Declarative Final Rise is only found in West African languages, Caribbean Creoles such as Crucian, and the Puerto Rican dialects of Aguada, Loíza, and Vieques, i.e. Declarative Final Rise is NOT found in Standard English or Spanish.
- 2) Declarative Final High Rise is only found in West African languages, Caribbean Creoles such as Crucian, and the Puerto Rican dialects of Loíza and Vieques, i.e. Declarative Final High Rise is NOT found in Standard English or Spanish or in the Puerto Rican dialect of Aguada.

Based on such data, Faraclas and Ramirez (2006) attribute the existence of the Declarative Final Rise and Declarative Final High Rise intonations in Caribbean Creoles to African influences. Using similar data, Megenney (1982: 193-4) attributes the existence of the Declarative Final Rise and Declarative Final High Rise intonations in Afro-Caribbean dialects of Dominican Spanish to the previous presence and influence of African languages in the Caribbean.

Our results seem to confirm the conclusions advanced by both Faraclas and Ramirez and Megenney that African languages in fact did influence intonation patterns in a number of language varieties spoken in the Caribbean. Based on our samples, we can extend this claim of African influence to several dialects of Puerto Rican Spanish. It is interesting to note that the dialects of Loíza and Vieques, the areas with the greatest concentrations of Afro-Caribbean peoples, BOTH of the typically West African Declarative Final Rise and Declarative Final High Rise intonations are attested in our data. In contrast in the dialect of Aguada, an area with less concentration of Afro-Caribbean peoples, ONLY Declarative Final Rise intonation is attested in our data.

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