Dominican Spanish Intonation

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1. Introduction

The Cibaeño variety of Dominican Spanish is known for a large number of segmental features that includes coda liquid vocalisation, extreme weakening or elision of final /s/, pre-breathy-voiced trills,\(^1\) nasalized vowels and coda nasal velarization. Compared to other varieties of Spanish there has been little intonation research conducted previously on Dominican Spanish. The small literature that exists on Dominican Spanish has primarily focused on a very small set of utterance signalling patterns or a very particular unique contour. For example, the double negative expression discussed by Jiménez Sabater (1975), no vamos no ‘we aren’t going, no’ is described as having a ‘brusque final fall’ on the final word no. Alba (2000: 22) describes a rising pitch accent in an inserted phrase within a larger utterance that also has a final fall on the final syllable of the utterance. Sosa (1999) reports on a particular contour of declaratives reportedly used in the case of exclamations and described as a falling nuclear pitch accent to a low tone in the nuclear tonic syllable followed by a final boundary rise. Willis (2003) also documents this contour, but finds it to be produced in cases of broad focus among educated college students in the Cibao region of the country.

Willis (2006-2007) provides the schematic shown in figure 1 to demonstrate the main contours of similar sentences in broad focus produced as declaratives, absolute interrogatives and pronominal or wh-questions.

![Figure 1: Schematic of the basic broad focus intonational contours of declaratives, absolute interrogatives and pronominal interrogatives in Dominican Spanish with targets for distinguishing tonal levels (reproduced from Willis 2006-2007: 197).](image)

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* The author wishes to express gratitude to the faculty and staff of the Pontificia Universidad Católica Madre y Maestra for providing facilities to perform the recordings, in particular, Professor Rafaela Carrasco and Patricia Álvarez, and to the wonderful Dominican speakers who participated so generously. This chapter has also benefited from comments from Meghan Armstrong, Mercedes Cabrera Abreu, Francisco Vizcaíno Ortega, Pilar Prieto and Paolo Roseano. The usual claims of error ownership apply in the present work.

\(^1\) See Figure 6 for an example of a pre-breathy-voiced trill on the word rico ‘rich’.
The alignment patterns of prenuclear pitch accents in Dominican Spanish are an area that varies from previous standard characterizations of Spanish rising pitch accents. Willis (2003) illustrates a rising prenuclear pitch accent with a low tone that is aligned late in the tonic syllable followed by a rise to a peak in the posttonic. This pitch accent pattern was later described for Peninsular Spanish yes-no questions with narrow focus (Face 2006) and was also found to be highly productive in Puerto Rican Spanish (Armstrong this volume).

Final boundary tones in Dominican Spanish also present a unique feature in the case of declaratives with a final rising boundary tone. This contour was illustrated by Sosa and Willis and was found by both authors in laboratory read speech. It was also found in a spontaneous speech corpus by Willis (2003). Nuclear pitch accents had been described as a falling H+L* tone. This falling nuclear pitch accent often had a low valley near the offset of the tonic syllable and was also produced with a low tone near the onset of the tonic syllable followed by a plateau until a final boundary rise beginning at the offset of the tonic syllable. Sosa (1999) claims that a final rise in Dominican Spanish declaratives was the result of a marked emphasis. However, Willis (2003) reports a near universal final rise in broad focus laboratory speech utterances. It should be noted that this declarative final rise bears considerable similarity to the High Rising Terminals noted in a variety of English dialects (see Warren 2005 for New Zealand English).

As can be seen from this brief review, only a few items have been studied with respect to Dominican Spanish intonation and the current exposition seeks to present a broader series of intonational situations in order to amplify the range of future research. The remainder of this chapter will proceed as follows. Section 2 provides the inventory of pitch accents and boundary tones found in the contextualized data set. Section 3 presents the F0 contours associated with the distinct utterance types and contexts from the corpus. The chapter concludes with a review of findings in Section 4 and includes a presentation of the nuclear pitch accents and boundary tones commonly referred to as tonemas in the Hispanic Linguistics tradition.

2. Dominican Spanish intonational phonology

2.1 The pitch accents

The following pitch accents and boundary tones were observed in the current corpus of Dominican Spanish based on the labelling conventions advanced within a Sp_ToBI notational system (Beckman et al. 2002, Estebas-Vilaplana and Prieto 2008).

Table 1: Inventory of monotonal and bitonal pitch accents in Dominican Spanish and their schematic representations

<table>
<thead>
<tr>
<th>Monotonal pitch accents</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This pitch accent was manifested as a high level tone through the tonic syllable. It was primarily found in question contours in prenuclear position.</td>
</tr>
</tbody>
</table>
The L* pitch accent was realized as a low steady tone over the tonic syllable. The low was typically preceded by a falling tone, but it is not clear if the fall is part of the pitch accent, or the result of reaching the low tone target.

**Bitonal pitch accents**

H+L*  This pitch accent was manifested phonetically as a falling pitch accent through the tonic syllable typically reaching a low valley tone at or just before the syllable boundary. This pitch accent was observed in statements and questions with focus, in both prenuclear and nuclear position.

L+>H*  This pitch accent was manifested phonetically as a rising tone through the tonic syllable typically reaching a high tone or peak in the posttonic syllable. It was observed in statements with more than one unit and focalized questions. There was also an upstepped variant, ¡L+>H*, with much higher tonal values of both the low and high tone compared to the previous similar tones in the utterance.

L+H*  This pitch accent had at least two variants, which are illustrated in the schematics. The pattern was characteristically produced as a rising tone during the initial portion of the tonic syllable and often reached a peak or high tone near the syllable boundary. In other cases, the high tone was aligned near the midpoint of the tonic syllable.

L*+H  This pitch accent was produced with a low tone or elbow turning point late in the tonic syllable, typically past the midpoint. The low or elbow was followed by a rise to a high or peak in the posttonic.

2 Variations on this falling tone included a valley or low tone reached near the midpoint of the tonic syllable. The high tone of this pitch accent could also be produced near the onset of the tonic syllable, or up to several syllables prior to the tonic.

3 This tonal specification for a rising pitch accent with an early aligned High tone was first proposed as a tonal label by Beckman et al.: “¡L+H* upstepped variant of L+H*, e.g. accent on mañana ‘morning’ in Figure 6c” (2002: 33).
2.2. The boundary tones

Table 2: Inventory of monotonal and bitonal boundary tones in Dominican Spanish and their schematic representations

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L%</td>
<td>The L% boundary tone presented a falling tone to the speaker’s lower threshold, or a plateau when the speaker had already reached his or her lower threshold, and occurred following both rising and falling nuclear pitch accents.</td>
</tr>
<tr>
<td>H%</td>
<td>This boundary tone was manifested as a tonal rise that would begin near the onset of the final unstressed syllable of the utterance and occurred in both statements and questions. The degree of rise varied considerably across the three speakers. The magnitude of rise was typically higher in the declarative utterances compared to the questions.</td>
</tr>
<tr>
<td>M%</td>
<td>The M% was phonetically realized as a plateau following a high tone of the nuclear pitch accent and seen in imperative yes-no questions. This tone is labelled MM% in other analyses.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LH%</td>
<td>From a preceding nuclear peak, this boundary tone was produced as a fall to a low tone at the offset of the nuclear tonic syllable followed by a rise.</td>
</tr>
</tbody>
</table>

3. Basic intonational patterns in Dominican Spanish

This chapter presents the basic intonational patterns in Dominican Spanish of the Cibaeño variety as produced primarily by educated speakers in response to the series of hypothetical situations as described previously in this volume. The current data set was recorded in Santiago, Dominican Republic, by the author using a Tascam DR-007 digital recorder and Shure WH-20A head-mounted microphone, and the analysis was carried out using Praat (Boersma and Weenik 2010). The guided questionnaire was essentially the same as that utilized by Armstrong for Puerto Rican comprising 69 utterances (this volume), which is based on (Prieto 1991) and adapted for the Atlas Interactivo de la entonación del español (Prieto and Roseano coords. 2009-2010), with occasional changes in vocabulary or situation to better fit the local context. Participants occasionally modified the lexicon and would

While Beckman et al. (2002) do use a M% in their paper, we draw attention to the fact that this was intended as a ‘temporary label’ until conclusive evidence could be provided: “Rather than commit prematurely to either analysis, the Sp_ToBI group chose to adopt, as a temporary measure, a mid-level boundary tone tag (M%) to differentiate the half rise from the full rise” (2002: 23).

While the instrument was essentially identical to that used by Armstrong (this volume), the elicitation was different. In the current corpus the author described the situation to the informant and then asked how they would respond. This approach avoided potential reading intonation but also introduced ‘creativity’ on the part of the informants with the result that some cases did not
We change instances of usted ‘you-formal’ to tú ‘you-informal’ and modify the pronoun system to the second person singular. The current speakers included one male and two females, all students at or recently graduated from the UTESA (Universidad Tecnológica de Santiago) or UAS (Universidad Autónoma de Santo Domingo), both public universities located in Santiago, Dominican Republic. The speakers were all residents of the Cibao region which comprises the northern and central-western part of the country. The Cibaeño dialect is one of two generally accepted dialects in the Dominican Republic, the other being Capitaleño, which is spoken in Santo Domingo. The notational system that is employed in the current Dominican Spanish description is based on previous work that sought to uniformly characterise Spanish intonation within an Autosegmental-Metrical framework, and draws specifically from two iterations of a Spanish ToBI system put forth originally by Beckman et al. (2002) and more recently by Estebas-Vilaplana and Prieto (2008). We will also provide measurements on the magnitude of tonal movements using the semitone scale (s.t.) for comparison across utterances and contexts (Rietveld and Gussenhoven 1985).

3.1. Statements

Declarative utterances presented a full range of pitch accent types and boundary tone types and variation within similar contexts, which poses a challenge for attempting to map a particular tune in Dominican Spanish to a specific contextual meaning.

3.1.1. Broad focus statements

The broad focus statement in figure 2 was produced with prenuclear rising pitch accents that reached a peak in the posttonic syllable, L+>/H+. The nuclear pitch accent is a rising variety, L+H*, but due to the final boundary tone that is also a rising tone, we cannot comment on the precise alignment of the nuclear pitch accent. The degree of final rise in this contour is somewhat higher than those seen in other utterances by this speaker, 4.5 s.t., suggesting the combination of a rising nuclear pitch accent plus the H% boundary to account for the magnitude of the rise. This pattern was similar for broad focus declaratives regardless of the number of lexical words.

Declaratives with enumerations were also produced with a rising boundary tone between each of the units and also demonstrated the final boundary rise. In figure 3, the majority of the days of the week were also produced with the L*+H late low aligned pitch accent in which the elbow of the low tone occurs near the offset of the tonic syllable. The L*+H pitch accent was found extensively in Puerto Rican Spanish (Armstrong this volume). We also note that the magnitude of the final declarative rise was 4 s.t.

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6 Following the convention adopted for this volume, the first tier presents a standardized orthographic transcription of the utterances and not the actual phonetics, which as stated, can be quite reduced or varied with respect to segmental manifestation in Dominican Spanish, especially in the case of coda /s/ and coda liquids.
Figure 2: Waveform, spectrogram and F0 trace for the broad focus statement Anoche yo vi a Marina la morena ‘Last night I saw Marina the dark-skinned one’ produced with rising pitch accents $L+\rightarrow H^*$ and a final rising boundary tone $H\%$.

Figure 3: Waveform, spectrogram and F0 trace for the utterance Lunes, martes, miércoles, jueves, viernes, sábado y domingo ‘Monday, Tuesday, Wednesday, Thursday, Friday, Saturday and Sunday’ produced with intermediate rises, a final falling nuclear pitch accent and a $H\%$ final boundary.
3.1.2. Biased statements

3.1.2.1. Narrow focus statements

In the Dominican corpus there were two pitch accents that conveyed narrow or contrastive focus. The L+H* accent was typically found in statements, while the H+L* in non-final position typically conveyed focus in questions. The L+H* contrastive focus pitch accent shown in figure 4 could also be upstepped giving it an even greater degree of emphasis or attention. The first example produced in response to a question concerning a choice of fruit is the utterance, *No, de limones* ‘No, of lemons’ which has a rising L+H* followed by a LH% boundary tone. The alignment of the nuclear pitch accent of both the low and high tones is somewhat different than previously described for other dialects of Spanish. For example, even though the pitch accent is focalized, the rise of the low tone does not begin until the end of the consonant and the high tone is reached 60 ms before the tonic syllable boundary, resulting in a relatively short rise with respect to the duration of the whole syllable. The boundary rise from the nuclear pitch accents is 2.2 semitones and within the range of a perceptible tonal movement. After the initial boundary rise, there is a plateau that is 60 ms long and is primarily produced on the aspirated /s/, raising the question of whether or not this is a final M% or a simple H% that is reduced.

In figure 5 there are two L+H* focus pitch accents in contiguous syllables with a peak produced within the tonic syllable in both cases despite the tonal clash context. The overall contour pattern is descending as previously reported for Spanish, with the difference that two phrase-internal prenuclear pitch accents have a high tone preceding the tonic syllable and low target in the tonic, resulting in a falling H+L* pitch accent instead of the rising pitch accent characteristic of previous reports of Spanish intonation. There is no final rise on this declarative contour.

3.1.2.2. Exclamative statements

The example of an exclamative contour in figure 6 is based on the context of responding to a great smell as you enter a bakery in figure 6. This exclamative contour was produced with multiple focus or contrastive focus pitch accents, namely L+H*.

As noted earlier, these nuclear pitch accents in the contrastive focus and emphatic contexts both have a high tone that is aligned well before the end of the tonic syllable. This high tone appears to occur considerably earlier than what is seen in comparable utterances illustrated for Castilian Spanish in figures 2 and 3 in Estebas-Vilaplana and Prieto (this volume). And again we note the H% final boundary that is produced with a 3 s.t. rise.

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7 There is a low tone between these two pitch accents, which suggests that the clash does not necessarily neutralize or truncate in cases of tonal clash of this type, or that low tone undershoot is not the only resolution possible.
Figure 4: Waveform, spectrogram and F0 trace for the narrow focus statement No, de limones ‘No, of lemons’ produced with contrastive focus and utilizing a L+H* pitch accent followed by a LH% boundary tone.

Figure 5: Waveform, spectrogram and F0 trace for the utterance Mi amor vengo ahora voy al mercado de un pronto ‘My love, I’ll be right back, I’m going to the store’ produced with two rising focalized pitch accents in a clash environment.
3.1.2.3. Statements of the obvious

In figure 7 we have two contours in response to the context requiring a statement of the obvious. The context for this utterance was a question regarding the identity of the child’s father. The first part is produced as an obvious question Pues, ¿quién más puede ser? ‘Well, so from whom else could it be?’ There is a rising pitch accent on the interrogative word and an intermediate boundary rise of 2 s.t. The obvious question is followed by the statement of the obvious Solamente he estado con él ‘I only have been with him.’ The first pitch accent of the obvious statement is a falling H+L* tone followed by a plateau until the nuclear pitch accent, which is produced as a rising tone and leads directly into the boundary tone which is also a rise, H%. The final boundary of the declarative statement has a rise of 9 s.t., which is considerably greater than the 2 s.t. in the immediately preceding question. The final rise in figure 7 does seem to correspond with the claim by Sosa that emphasis results in a final rise; however, we have seen the rise in numerous contours lacking any emphasis. It may be that an increased degree of emphasis potentially conditions a higher tonal rise. A final rise of this sort is also illustrated for Puerto Rican Spanish (Armstrong this volume).

3.1.2.4. Uncertainty statements

The uncertainty statement seen in figure 8 begins with a rising pitch accent. The second portion of the utterance contains an early rising L+H* pitch accent on the phrase yo no ‘I don’t’ with the peak centred on the negation, perhaps to put focus on the speaker’s doubt or uncertainty concerning the present that was purchased. The rise in this prenuclear pitch accent is 7 s.t. The nuclear pitch accent appears to be a H+L* but is somewhat difficult to characterise due to the voiceless segments. The nuclear pitch accent on the final word is followed by a L%.

3.2. Questions\(^9\)

3.2.1. Yes-no questions

In the corpus of Dominican Spanish there were two main types of questions, those with a falling nuclear pitch accent and those with a rising nuclear pitch accent. As boundary tone rises are found in declarative utterances in Dominican Spanish, questions must rely on some other mechanism to convey interrogativity. Additionally, as Sosa (1999: 240) notes, Dominicans never misinterpret a declarative with a final boundary rise as a question. The falling nuclear pitch accents were very similar to the yes-no patterns presented for Puerto Rican Spanish (Armstrong this volume) with the exception of the final rise. The basic pattern is also observed in some examples from Canarian Spanish (Cabrera Abreu and Vizcaino Ortega this volume) with a slight variation in the alignment of the nuclear pitch accent, which yielded a iH* instead of the falling H+L* seen in both Dominican and Puerto Rican Spanish.

\(^8\) We assume the nuclear pitch accent is a bitonal L+H* due to previous patterning when there is a rising nuclear pitch accent.
\(^9\) We have included the degree of final tonal rise in semitones (s.t.) throughout this chapter for the different utterance types to clearly document the degree of final rise in Dominican Spanish intonation and facilitate comparison. In most cases, when there was a final rise, the declaratives were produced with a larger final rise compared to interrogatives. We analyze a midtone M% as a final plateau above the low tonal threshold for the speaker. An example is found in the corpus following a pitch accent with a high tone.
Figure 6: Waveform, spectrogram and F0 trace for the exclamative statement ¡Mmm! ¡Qué rico huele! ‘How great it smells!’ which presents a L+H* prenuclear pitch accent on mmm and rico ‘great’ followed by a nuclear L+H* and LH% boundary tone.

Figure 7: Waveform, spectrogram and F0 trace for the statement of the obvious Pues, ¿de quién más puede ser? Solamente he estado con él ‘Well, so from whom else can it be? I have only been with him’ produced with a L+H* H% nuclear configuration.
Figure 8: Waveform, spectrogram and F0 trace for the utterance *Yo le compré una camisa, yo no sé si le va a gustar* ‘I bought him a shirt, I don’t know if he’ll like it’ produced with a H+L* L% nuclear configuration.

Figure 9: Waveform, spectrogram and F0 trace for the information-seeking yes-no question *¿Ustedes tienen mermelada aquí?* ‘Have you got jam here?’ produced with a H+L* falling pitch accent.
The most commonly occurring yes-no interrogative in the Dominican Spanish corpus had a rising pitch accent at the beginning of the utterance and remained at a high tonal level until a H+L* falling nuclear pitch accent on the final stressed syllable. The boundary tone could be either a high or a low. This pattern is illustrated in figure 9. The intent of the question in figure 9 is to determine whether a particular product is available in a shop, in this case, jam. The target word for the falling pitch accent H+L* has stress in the penultimate syllable, which permits us to see the alignment of the fall.

### 3.2.1. Biased yes-no questions

#### 3.2.2.1. Echo yes-no questions

The echo yes-no question, also known as reiterative yes-no question, was produced with a contour that matched the general pattern for yes-no questions in multiple contexts, namely, a rising pitch accent on the first stressed syllable followed by a high tonal level presumably due to a H* tone, and then a tonal fall H+L* to the final stressed syllable and boundary rise. This pattern is different than the example of the echo yes-no question provided for Puerto Rican Spanish (Armstrong this volume).

Figure 10 is an echo question with focus on the exact hour. In this production the nuclear pitch accent was produced as a falling tone that begins in the current example midway through the consonant of the nuclear tonic syllable. The boundary rise was 2 s.t. and clearly appreciable with a narrow band spectrogram.

There were also cases in which several elements of the question were focalized. In figure 11 there were actually several components of this counterexpectational yes-no question that were focalized and this focalization was manifest in the three H+L* falling pitch accents that were utilized on each of those words. It is interesting to note that in the case of multiple foci, the same focus pitch accent can be repeated with the sense that each word is important. The utterance begins with the late aligned L*+H pitch accent.

The magnitude of the H+L* tonal falls in all three cases was much greater than the rise produced to create the falling tone, whereas in the case of the declaratives this was not consistently the case. Because there was a rise to produce a fall, the alignment of the tones to the stressed syllable is vital to determining the type of pitch accent. In each case in figure 11, the high tone of the falling pitch accent occurs or is aligned with the pretonic syllable.

Figure 12 has a declarative statement followed by an echo question in the sense that the speaker is responding to a perceived state that goes against the general expectation, namely being cold when to others the temperature is warm.
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**Figure 10:** Waveform, spectrogram and F0 trace for the echo yes-no question ¿Tú me dijiste que son las nueve? 'You told me it was nine o’clock?' with a nuclear falling H+L* pitch accent and a compressed boundary rise H% (2 s.t.).

<table>
<thead>
<tr>
<th>¿Tú me dijiste que son las nueve?</th>
</tr>
</thead>
<tbody>
<tr>
<td>¿Tú me dijiste que son las nueve?</td>
</tr>
<tr>
<td>1 0 2 0 1 0 4</td>
</tr>
<tr>
<td>L*+H  L+&gt;H*  H*  H+L*  H%</td>
</tr>
</tbody>
</table>

**Figure 11:** Waveform, spectrogram and F0 trace for the counterexpectational yes-no question ¿Fue María que llegó ahí? 'Was it Maria that arrived there?' produced with multiple H+L* falling pitch accents and a L% boundary tone.

<table>
<thead>
<tr>
<th>¿Fue María que llegó ahí?</th>
</tr>
</thead>
<tbody>
<tr>
<td>¿Fue María que llegó ahí?</td>
</tr>
<tr>
<td>1 3 0 1 4</td>
</tr>
<tr>
<td>L*+H  H+L*  L-  H+L*  L%</td>
</tr>
</tbody>
</table>
The counterexpectational question in figure 12 is preceded by a statement regarding the warm temperature. The statement ends with a 4 s.t. rise on the word calor ‘heat’. On the question portion there is an upstepped rising pitch accent ¡L+>H* on the word tú ‘you’ which results in the entire pitch accent being produced at a higher level than previous rising pitch accents.\(^{10}\) There is also a contiguous tonal rise on tienes ‘have’, but due to crowding the alignment is tonally overlapped with the previous pitch accent. The nuclear falling H+L* on the word frio ‘cold’ still reaches the lower threshold for this speaker but with a slightly later alignment of the low than seen elsewhere, possibly due to the increased magnitude of the tonal fall. There is a final boundary rise of 2 s.t. which, while perceptible, is half the magnitude of the tonal rise of the immediately preceding declarative.

There was one counterexpectational context that prompted two different tonal patterns by the same speaker based on the types of prenuclear pitch accents employed. The first production shown in figure 13 has two consecutive rising L+H* pitch accents, while figure 14 begins with a rising pitch accent L+H* followed immediately by a falling H+L* pitch accent. Both versions have a rising pitch accent on the word postula ‘is running for’; however, the alignment is different. In figure 13 the high tone is aligned within the tonic syllable, L+H*, while in figure 14 the high tone is aligned in the posttonic resulting in a L+>H*.

Both figures 13 and 14 have a falling pitch accent on the word sindico ‘mayor’ H+L* and the negative particle and conclude with a low boundary tone L%.

3.2.2.2. Imperative yes-no questions

An imperative question can be produced with a degree of confirmation-seeking as in the production shown in figure 15. The first rising prenuclear pitch accent L*+H on the word vagamos ‘shall we’ provides a clear example of a late aligned low tone followed by a tonal rise. The high tonal level is maintained until the final word, which has a rising pitch accent that is upstepped ¡L+H*; the low tone of the nuclear pitch accent is considerably higher here than previous lows. This is essentially the pattern found in Willis (2003) for broad focus questions in laboratory speech except for the M% boundary tone. We posit a M% tone for this utterance as the final tonal level is maintained for a considerable duration, 125 ms.

\(^{10}\) Willis (2004) empirically examines this tonal specification in Dominican Spanish by comparing the tonal levels of similar contours produced as statements or yes-no questions and finds categorical differences in tonal height between the two utterance types.
Figure 12: Waveform, spectrogram and F0 trace for a question with contrastive focus on the final element, Yo me estoy asfixiando de calor. ¿Tú tienes frío? 'I am asphyxiating from the heat, and you are cold?!

Figure 13: Waveform, spectrogram and F0 trace for the confirmation question ¿Pero es Mario el que se postula para sindico, no? 'But it’s Mario who is running for mayor, isn’t it?'
Figure 14: Waveform, spectrogram and F0 trace for the confirmation question ¿Pero es Mario que se postula para sindico, no?! ‘But it’s Mario who is running for mayor, isn’t it?’

Figure 15: Waveform, spectrogram and F0 trace for the utterance Oye, ¿vamos a tomar una fria hoy? ‘Hey, shall we go have a cold drink today?’ produced as a confirmation question of an invitation.
3.2.2.3. Confirmation yes-no questions

Confirmation questions were often accompanied by a question tag, either ¿Es verdad? ‘Is it true?’, or a simple ¡No? ‘isn’t it?’

The utterance in figure 16 illustrates a rising pitch accent followed by an intermediate boundary H% tone with a tonal movement of 8 s.t. on the word comigo ‘with me’, and then a falling H+L* and L% boundary without any final rise. This tonal pattern may correspond to Jiménez Sabater’s report concerning the double negative construction, or in this case, a single final negative construction with a falling low boundary tone (1975). The focused word before the negative tag is produced with a rising L+H* accent and a H% intermediate boundary tone followed by a falling H+L* and L% boundary tone. This pattern was realized repeatedly within the elicited corpus and the Dominican informants tended to phrase the contextualized questions with a negative tag, in essence forcing a choice. An identical contour was produced for the disjunctive utterance, ¿Vamos a ir hoy, o mañana? ‘Are we going to go today, or tomorrow?’

Another confirmation utterance is shown in figure 17. The context for figure 17 is a second phone call to determine if María has arrived home (at the first phone call she had not arrived home from an errand). The first pitch accent is a rising tone L+>H* and contrasts with the prenuclear H+L* falling pitch accent in figure 11 on the same name, María.

The sense in this utterance is that of double confirmation: that Maria has not arrived, and particularly that she has still not arrived between now and the previous phone call. This focus is conveyed by the two H+L* falling pitch accents on these words. There is a final rise of 2 s.t. from the nuclear low tone to the end of the utterance that is also evident in the narrow band spectrogram.

The context for the utterance in figure 18 was intended to elicit a confirmation question. Additionally, following the production of the question, the informant also produced an emphatic declarative expressing that she was also from the same town. In the question portion the alignment of the high tone of the falling H+L* pitch accent on the name of the town Aguadilla is indicated by the placement of the tonal label to illustrate that the fall begins before the start of the tonic syllable. There is a 3 s.t. rise on the final word of the question. The declarative portion of the contour has a rising pitch accent on the first word yo ‘I’, and a rise that begins on the nuclear tonic syllable followed by a high boundary rise H%. The final boundary rise in the emphatic declarative portion of the phrase is the largest tonal excursion of the utterance (12 s.t.).

3.2.3. Wh- questions

The wh- questions in the Dominican Spanish corpus were consistently produced with a rising pitch accent on the pronominal and typically had a falling or low tone on the nuclear pitch accent syllable. In most cases wh-questions began at a considerably higher tonal level than either statements or yes-no questions. Wh- questions also typically were produced as a declining contour throughout the utterance as opposed to yes-no questions, which often had a final dramatic fall on the nuclear pitch accent.

11 See Willis (2003, 2006-2007) for empirical evidence of this distinction.
Figure 16: Waveform, spectrogram and F0 trace for the confirmation question with a negative tag ¿Tú vas a ir al cine conmigo, o no? ‘Are you going to go to the movies with me or not?’

Figure 17: Waveform, spectrogram and F0 trace for the utterance ¿María no ha llegado todavía? ‘María has still not arrived?’ produced with a H+L* H% nuclear configuration.
Figure 18: Waveform, spectrogram and F0 trace of a focalized and emphatic confirmation question ¿De verdad tú eres de Aguadilla? Yo también ‘Is it true you are from Aguadilla? I am too’ produced with a nuclear falling pitch accent H+L* on the interrogative and an emphatic nuclear pitch accent on the statement followed by a H% boundary tone.

Figure 19: Waveform, spectrogram and F0 trace for the information-seeking wh-question ¿Qué le digo al hombre de gas si vuelve mañana? ‘What shall I tell the gas man if he comes tomorrow?’
3.2.4.1. Echo wh- questions

There were several nuclear pitch accents for the echo or reiterative wh- question: a low tone, L*, a rising pitch accent ¿L+H* and a falling pitch accent H+L*.

Figure 21 presents another example of an echo wh- question with a falling nuclear pitch accent H+L*. This utterance begins with a %H boundary tone and contains multiple tones in a compressed environment. The words yo ‘I’ may have a H tone that is conflated with the rising pitch accent of dónde ‘where’ and iba ‘was going’, or the words yo ‘I’ and iba ‘was going’ are produced as a single unit with a nuclear falling pitch accent H+L*. The boundary tone shows some movement but does not exceed 1 s.t. at any point.

The contour for utterance in figure 22 has an upstepped rising nuclear pitch accent, ¿L+H*, followed by a H% high boundary tone. The contour of the echo yes-no question shown in figure 22 with a H% boundary tone contrasts with the similar upstepped nuclear pitch accent followed by a M% boundary in the request illustrated in figure 28. These two cases vary both in the direction of the tonal movement, rise versus plateau, as well as the height of the final tone (383 Hz in figure 22 compared to 275 Hz in figure 28).

In figure 23, and in contrast with the previous wh- question word in figure 22, the initial utterance portion prior to the pronominal wh- word, Quién ‘Who’, is produced at the normal beginning tonal level and then jumps dramatically at the onset of the wh- word to rise to a high tone within the word boundary. From this high tone there is a gradual tonal downdrift until what could presumably be a H+L* nuclear pitch accent on puerta ‘door’ with a low tone L* on the word hora ‘hour’ followed by a reduced final rise. The final boundary exhibits a slight rise of 1.3 semitones, which is near a perceptible level.
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Figure 20: Waveform, spectrogram and F0 trace for the wh-question ¿Para dónde tú vas y cuándo tú vuelves? ‘Where are you going and when will you get back?’

Figure 21: Waveform, spectrogram and F0 trace for the wh-question ¿Qué fue lo que tú me preguntaste, que adónde yo iba? ‘What was it that you asked me, where was I going?’
Figure 22: Waveform, spectrogram and F0 trace for the counterexpectational echo wh-question ¿Entonces qué fue lo que te dieron? ‘So what was it that they served you?’

Figure 23: Waveform, spectrogram and F0 trace for the exclamative wh-question Pero Dios mío. ¿Quién estará tocando la puerta a esta hora? ‘Goodness! Who could be knocking on the door at this hour?’
3.2.4.2. Imperative wh- questions

The imperative wh- question illustrated in figure 24 was produced with the standard high tonal level boundary start and a rise to a high tone within the pronominal word cuándo ‘when’. From the pronominal interrogative there is a downdrift until the pronoun yo ‘I’ which is produced with a L+H* and then a nuclear falling pitch accent that extends from the onset of the pretonic syllable in mandé ‘told’ and continues until the final tonic syllable hacer ‘to do’. The contour concludes with a L%.

An almost identical contour to figure 24 was produced for the context of an imperative wh- question demanding to know why someone wouldn’t be able to come for a special meal, ¿Y por qué que ustedes no pueden venir a comer? ‘And why can’t you guys come to eat?’

The contour in figure 25 is produced with an increased emotional force and is in response to an annoying person persistently trying to get the speaker’s attention. The increased emotion and initial boundary tone account for the high tonal level of the prenuclear rising pitch accent, which then falls 14 s.t. to the word quieres ‘want’. The contour in figure 25 also provides an example of a particular low tone over the course of the stressed syllable and corresponds to the monotone L* on the word quieres ‘want’. Following this low tone, there is a reduced H+L* on the word conmigo ‘with me’ and a final boundary rise at the end of the utterance of 5 s.t.

3.3. Imperatives: commands and requests

3.3.1. Commands

Imperatives can be produced as questions or as statements. In the case of the declarative command in figure 26, the nuclear pitch accent is a falling tone, H+L*, and the final boundary tone is assumed to be a low, L%. Despite an emphatic production, there is no final rise as suggested by Sosa (1999).

3.3.2. Requests

In the request question contour in figure 27, there is a rising pitch accent at the onset of the utterance followed by a sustained high tone until the beginning of the tonal fall just prior to the onset of the nuclear tonic syllable. There is a low plateau throughout the tonic syllable to a low boundary L%. The politeness marker, por favor ‘please’, is also produced with the same falling pattern as the preceding pitch accent and is followed by a reduced rising boundary tone H% of 2.5 s.t. This request contour is similar to the contour seen in the broad focus question in figure 9. The politeness marker has a falling pitch accent and a H% boundary tone that rises 2.5 s.t.

The second example of a request shown in figure 28 was produced in response to the prompt question, ‘How would you ask someone the time on the street?’ It should be noted that the context intended a wh- question as in ‘What time is it?’ but was converted by both female speakers into an imperative. The male speaker had a simple final rising boundary tone.

Whereas the request in figure 27 had a nuclear falling pitch accent similar to most questions, figure 28 does have a rising nuclear pitch accent (similar to the yes-no interrogative contour described by Willis 2003) The tonal specification for figure 28 is a rising L+H* pitch accent followed by a high tone H*, an upstepped IL+H* nuclear pitch accent and a M% boundary tone.
**Figure 24:** Waveform, spectrogram and F0 trace for the imperative *wh*-question ¿y cuándo que tú piensas hacer lo que yo te mandé hacer? ‘And when do you intend to do what I told you to do?’

**Figure 25:** Waveform, spectrogram and F0 trace for the *wh*-question expressing irritation, Y ¿qué es lo que tú quieres conmigo? ‘And what is it that you want with me?’ produced with an initial boundary on the *wh*-word and a rising L+H* pitch accent followed by a L* tone on the word quieres ‘want’ and a final H%. 

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**Figure 26:** Waveform, spectrogram and F0 trace for the utterance including an imperative *Yo vengo ahora, voy a buscar la cartera, ¡no te muevas!* ‘I’ll be right back, I’m going to get my wallet, don’t move!’

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**Figure 27:** Waveform, spectrogram and F0 trace for the request *¿Usted me puede decir la hora por favor?* ‘Could you tell me the time, please?’ with a falling H+L* on the words *hora* ‘time’ and por favor ‘please’.
3.4. Vocatives

The context designed to yield an imperative command in the case of calling a dog actually elicited a particular pattern for pets and was produced by all three informants as a frequent repetition of the dog’s name with a series of high tones, followed by a command to come. The vocative utterance used for calling humans employed a L+H* and LH% boundary tone and is shown in figure 29. The final rise was 4.5 s.t. This contour conveyed the idea of ‘Where are you?’ using a person’s name. The actual prompt used was ‘You enter the house of your friend Marina, but upon entering you don’t see her. How would you call for her?’

Although the conjecture was not tested, it is believed that this contour would be basically the same regardless of the length of the name.

4. Conclusions

The intonation patterns in Dominican Spanish elicited in this study demonstrated considerable variation in response to the task contexts. The same context would often result in a different contour the second time the speaker repeated it or would vary across speakers. This variation may in part be due to the elicitation procedure employed in the current chapter in which the author described the context and then asked the informant how they would respond. Stylistic variation due to task type has been recently demonstrated by Henriksen (2010), who shows that a broad focus declarative question could be produced with three different patterns, consisting of two versions of a final rise and a third pattern that was a final fall. These variations depended in part on the style of the task, that is, whether it was read speech or a personal identification task that was essentially a directed interview.

Dominican Spanish statements were produced with three different pitch accents and typically used the L+H* in cases of focus with a much earlier alignment of the high tone than what is reported for other dialects of Spanish. Question utterances also employed several different pitch accents and tended to use a H+L* falling tone in the case of focus. In yes-no questions we also found several examples of multiple H+L* focus tones used within a single utterance. The nuclear pitch accent in yes-no questions was typically a H+L* tone. Wh-questions were typically produced with a declining or downstepping F0 contour. The nuclear pitch accent was typically a H+L*. Tones in Dominican Spanish could also be upstepped in that both tones of a bitonal pitch accent were produced at higher levels than a preceding bitonal pitch accent. This upstepping occurred in both yes-no and wh-questions.

The nuclear pitch accent and final boundary tones could be produced in a variety of combinations, and except for a few stylized contexts did not correspond directly to a particular utterance type. All utterances could potentially be produced with a final rise, including statements. Across the sample, statements were consistently produced with much larger final tonal rises compared to questions. When there were two contiguous utterances with a final rise (statement and question), the statement was typically produced with twice the magnitude of final boundary rise in a semitone scale. The final rise in statements bears some similarity to the High Rising Terminal (HRT) described for New Zealand English. As Warren notes, “there is an implicit assumption that the HRT has a common meaning, and that there is therefore a definable form-context correspondence” (2005: 226); however, we did not find a particular meaning associated with the final rising boundary tone across the utterances observed.

12 Entras en la casa de una amiga tuya, Marina, pero al entrar, no la ves. ¿Cómo la llamarías con su nombre?
Figure 28: Waveform, spectrogram and F0 trace for the request Hazme el favor y dime la hora ‘Do me a favour and tell me the time’ with a final M% boundary tone.

Figure 29: Waveform, spectrogram and F0 trace for the calling vocative ¡Marina! produced with L+H* rising pitch accent and LH% boundary tone.
There are certain intonational similarities between Dominican, Puerto Rican and Canarian Spanish, which also share many segmental similarities. Both Dominican and Puerto Rican Spanish use a late low prenuclear pitch accent L*+H in declaratives and a L+H* pitch accent to express focus. Questions can be produced with a falling nuclear pitch accent in Dominican, Puerto Rican and Canarian Spanish, though it is attested in a greater variety of contexts in Dominican Spanish. The final declarative rise is only noted explicitly for Dominican Spanish.

In table 3 we list the combinations that were observed along with the utterance types in which they occurred in the corpus used in this study. There were additional configurations found in the corpus but are not described due to space considerations. Several of the patterns could also be upstepped; in these instances, the tonal alignment pattern was identical but the tonal levels were realized at a higher level (an upstepped low is higher than a low tone occurring earlier in the utterance).

**Table 3: Inventory of nuclear pitch accent and boundary tone configurations in Dominican Spanish and their schematic representations**

<table>
<thead>
<tr>
<th>Statements</th>
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<tbody>
<tr>
<td><strong>Broad focus</strong></td>
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<tr>
<td>Statements</td>
<td>H+L* H%</td>
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<tr>
<td></td>
<td>L+H* H%</td>
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<td>L+H* LH%</td>
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<thead>
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<tr>
<td>Information-seeking yes-no questions</td>
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### Biased yes-no questions

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<td>Counterexpectational echo yes-no questions</td>
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<td>Confirmation yes-no questions</td>
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### Wh- questions

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### Biased wh- questions

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**Imperatives: commands and requests**

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**Vocatives**

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References


