Canarian Spanish Intonation

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1. Introduction

In this chapter we describe the inventory of nuclear pitch accents and boundary tones found in Canarian Spanish using a restrictive approach to the Sp_ToBI labelling conventions proposed by Beckman et al. (2002) and later by Estebas-Vilaplana and Prieto (2008). Our analysis is more restrictive inasmuch as we dispense with the phrase accent altogether (as already argued in Vizcaíno et al. 2008) and limit bitonal boundary tones to LM%, HH% and HL%. In addition, we analyse the variety of contrastive pitch configurations present in the dialect together with their associated meanings. In order to do so, we describe the intonation tunes of statements, questions, imperatives and vocatives, as a device for encoding neutral and biased meanings.

Descriptions of Canarian Spanish intonation like Quilis (1989), Dorta and Hernández (2005), Dorta (2007) and Vizcaíno et al. (2007) coincide in their report on the intonation of statements as follows: the overall contour shows a rise to the first tonic (or posttonic) syllable followed by a gradual descending movement that lasts till the end of the utterance, in those cases in which the specific meaning of completeness is being conveyed. In the present study, we confirm these findings, and additionally note that when a nuance of uncertainty is being manifested the ending tune shows a descending movement to a mid pitch well above the speaker’s baseline.

As far as questions are concerned, both Quilis (1989) and Dorta (2004) claim that one of the most frequent contours for information-seeking yes-no questions in Canarian Spanish shows a circumflex shape which either extends across the question or begins on the last accented syllable. While the second part of this claim is confirmed, in the present study the first part is questioned, since the prenuclear contour presents mostly a high sustained pitch, or even a set of sustained descending terraces. In addition to final falls (including those in which there is truncation – see figure 12), we have also encountered tunes ending in a clear rising movement to transmit the nuance of counterexpectation, as illustrated in figure 11.

In the case of information-seeking wh- questions, Quilis (1989) claims that one overall shape of the F0 contour shows a gradual descent from the peak located in the first half of the utterance to the end. He adds that, sometimes, if the wh-word is far away from the end of the utterance, the last accented syllable may show a circumflex movement. From the evidence we present in this chapter, the first claim is observed to be true for rhetorical wh-

* This research was presented at the 4th Sp_ToBI Workshop: Transcription of Intonation of the Spanish Language (Las Palmas de Gran Canaria, June 2009). We are very grateful to Miguel Cuevas-Alonso, Meghan E. Armstrong, María Jesús López-Bobo, Pilar Prieto and Paolo Roseano for their valuable comments on an earlier draft of this chapter, which have improved our final description of Canarian Spanish intonation.
questions only, but this is by no means the intonation pattern for their neutral version, contrary to what seems to be implicit in Quilis’s description. Instead, as we shall claim in section 3.2.3, information-seeking wh- questions recurrently show the circumflex movement over the nuclear word (which he actually limits to cases where the wh- word is located far away from the end of the utterance). Thus, contrary to the intonation of, for example, Castilian Spanish, in Canarian Spanish both information-seeking wh- questions and information-seeking yes-no questions present the same circumflex nuclear configuration.

2. Canarian Spanish intonational phonology

In this section we illustrate the inventory of pitch accents and boundary tones attested in Canarian Spanish intonation, together with their phonetic manifestations, and provide a short description of their occurrence in different utterance types. This inventory is based on Beckman et al. (2002) and Estebas-Vilaplana and Prieto (2008) for Sp_ToBI; on Cabrera Abreu and Vizcaíno Ortega (2003, 2007 and 2009) and Vizcaíno Ortega and Cabrera Abreu (2009) for Canarian Spanish intonation.

2.1. The pitch accents

Table 1 shows the stylized F0 contour of the pitch accents found in our data, together with a short phonetic description of its manifestation in either the nuclear or prenuclear section of the intonation tune. We also specify the utterance types in which these contours are attested.

In this study we drop the former notation H+H* in favour of a new one, iH*, which we also treat as a phonologically distinct pitch accent, and not as a phonetic variant of H*. Following the initial inventory of pitch accents proposed by Pierrehumbert (1980), Sosa (1999) resorted to H+H* to account for the ‘accumulation’ of further high pitch in the vicinity of the nuclear syllable in information-seeking yes-no questions in Caribbean Spanish. Given that extremely similar contours were observed in Canarian Spanish intonation for the same type of utterances, we also adopted this representation in Cabrera Abreu and Vizcaíno Ortega (2003) and subsequent work.

However, as suggested by Elordieta (p.c.), further analysis of the interpretation of H+H* in terms of targets and their alignment leads to a set of predictions which are undesirable given that none of them are attested: (i) the presence of H as a leading tone predicts that there will be a delay in the alignment of the peak with the accented syllable, as typically observed in the interpretation of other pitch accents with a leading tone like, for instance, L+H*; (ii) the presence of H+H* (with a leading tone) as a phonological unit may result in the assumption that H*+H (with a trailing tone) is also included in the inventory of pitch accents, in the same way that both L+H* and L*+H are indeed predicted and attested in the data; (iii) the presence of the leading tone H in H+H* stands as an indication that pitch is relatively high before reaching a peak, which is not always the case, as we shall see for the pretonic syllable in the case of counterexpectational wh- questions (in section 3.2.4.1); and (iv) the sequence of two identical tonal units in the pitch accent countervenues the Obligatory Contour Principle (or OCP; see Leben 1973, McCarthy 1986) (which we do wish to subscribe to).
In view of this set of unconfirmed predictions, an alternative option is clearly called for. Beckman et al. (2002: 26) adopt iH*, as they claim that the leading tone in H+H* is ‘functioning merely to upstep the following peak’. This is the most descriptively adequate representation, as it fulfils its own predictions: (i) the peak is consistently aligned with the accented vowel, as there is no leading tone, and the phonetic manifestation of iH* as a rise to the aforementioned peak results from interpolation, and not from the phonetic manifestation of an alleged L leading tone; (ii) there is a noticeable high target, regardless of the pitch height of the pretonic syllable; and finally, (iii) since iH* is monotonal, we avoid violation of the OCP.

An allophonic variant of H*, !H* is phonetically interpreted as relatively high pitch which, if compared to the peak that typically precedes it, sounds clearly lower but is located a good distance above the speaker’s baseline. It is found in prenuclear contours and in the nuclear configuration of contradiction statements and exclamative statements.

Finally, L+!H* is likewise an allophonic variant of L+H*, and it is perceived as a rising movement over the accented syllable, except that the actual peak for the H* target is situated at a pitch level which is lower than the one for a preceding H.

**Table 1: Inventory of monotonal and bitonal pitch accents in Canarian Spanish intonation and their schematic representation**

<table>
<thead>
<tr>
<th>Monotonal pitch accents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>L*</td>
<td>This accent is phonetically manifested as extremely low pitch, towards the bottom of the speaker’s range. In our corpus, it is found in broad focus statements, counterexpectational yes-no questions, polite wh- questions, reprise echo wh- questions, imperative wh- questions, commands showing a nuance of encouragement and gentle vocatives.</td>
</tr>
<tr>
<td>H*</td>
<td>This accent is phonetically manifested as a high or downstepped plateau with no preceding F0 valley. It is found in both prenuclear and nuclear locations, and in the case of the latter, it is used in exclamative statements, contradiction statements and strong commands. Finally, it is also present in requests.</td>
</tr>
<tr>
<td>iH*</td>
<td>This accent is perceived as a noticeable rise over the onset of the accented syllable (or a drastic jump up) to a peak located in the accented vowel. In the marginal case of uncertainty statements, it is followed by M%. In questions (yes-no questions of the following types: information-seeking, echo, confirmation and imperative; and wh- questions of the following types: information-seeking and counterexpectational) it is followed by L%.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bitonal pitch accents</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>L+H*</td>
<td>This accent is perceived as a rising pitch movement over the accented syllable, with the peak located at its end. It is attested in our data followed by L% in narrow focus statements and followed by LM% only in statements of the obvious. It is followed by HH% in commands, followed by H% in vocatives calling over a long distance and, finally, followed by HL% in vocatives showing a nuance of expectation.</td>
</tr>
</tbody>
</table>
2.2. The boundary tones

The inventory of boundary tones initially proposed in Cabrera Abreu and Vizcaíno Ortega (2007, 2009) contemplated only two monotonal units, H and L. In the present study, however, following Estebas-Vilaplana and Prieto (2008), the inventory is expanded to include the following notations: L%, M%\(^1\) and H% in the set of monotal boundary tones; and LM%, HH%, and HL% in the set of bitonal boundary tones. These account respectively for the complex ending tones of the following utterance types: statements of the obvious; counterexpectational yes-no questions, reprise echo wh- questions, commands and commands with a nuance of encouragement; and finally, vocatives (with a nuance of expectation). They are all illustrated in table 2.

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

<table>
<thead>
<tr>
<th>Monotonal boundary tones</th>
</tr>
</thead>
<tbody>
<tr>
<td>L%</td>
</tr>
<tr>
<td>M%</td>
</tr>
<tr>
<td>H%</td>
</tr>
</tbody>
</table>

\(^1\) For the purposes of offering a unified model across the whole set of chapters in this volume, we have decided to incorporate M% into the inventory of boundary tones.
3. Basic intonational patterns in Canarian Spanish

Let us now turn to a sketch of the methodology followed in the data collection, together with a brief description of the subjects. Following Prieto’s (2001) inductive method, we presented subjects with a series of situations and asked them to respond accordingly. For instance, in order to elicit the typical intonation pattern of a polite wh-question, subjects were set in the following context: ‘You are just about to pay for all your goods in a shop, and want to know about the final cost. Ask politely how much you owe’. This procedure was performed with 6 female subjects aged between 40 and 45 and 1 male speaker aged 47, all from the island of Gran Canaria. They had all completed a secondary education. Perceptual and acoustic analyses of 75 utterances were performed using Praat (Boersma and Weenink 2010). Those cases in which there was a mismatch between our perception and the F0 display were followed up with two actions: (1) we checked the signal settings to exclude any interferences and identify any micro-intonation effects, and (2) we presented the F0 contours to a third trained phonetician for an independent analysis.

3.1. Statements

3.1.1. Broad focus statements

The nuclear F0 shape of broad focus statements in Canarian Spanish intonation is illustrated in figure 1. The prenuclear tonal configuration shows a single accent, L+>H*, which is responsible for the rise over the accented syllable and the delayed peak on the posttonic syllable.

The nuclear section of the contour observed in figure 1 looks rather flat due to the high degree of zooming performed in the analysis. The gradually descending pitch over the accented syllable is accounted for by L*, which is the same representation as that proposed by Estebas-Vilaplana and Prieto (this volume) for Castilian Spanish. However, in Cabrera Abreu and Vizcaíno Ortega (2007), we proposed L+!H* as the nuclear accent in another broad focus statement, more specifically, for the utterance La niña morena come mandarinas, since we observed that the downward trend of the F0 contour over the prenuclear syllable turned into a timid but clearly perceptible rise at the onset of the accented nuclear syllable. This representation resembles those proposed for some
Caribbean varieties of Spanish. For instance, in Venezuelan Andean Spanish, the nuclear contour proposed by Astruc, Mora and Rew (this volume) is represented as !H*, whereas in Dominican Spanish, Willis (this volume) puts forward L+H*.

This conflict in the representation of the nuclear accent in broad focus statements in Canarian Spanish may be resolved if we assume that the phonological representation is L+H*, and that tonal compression may affect the phonetic manifestation of such an accent to the extreme that the expected rise may be absent altogether, resulting in the F0 shape over the nuclear syllable just described in relation to figure 1. The use of L+!H* in Canarian Spanish against L* in Castilian Spanish may explain why Canarian Spanish speakers claim that Castilian Spanish speakers tend to sound too categorical in their statements. Until all this is confirmed with further data and perception tests, we shall assume that L* is the appropriate phonological representation for the nuclear accent in broad focus statements.

3.1.2. Biased statements

As the reader will note, we include a description of the prenuclear pattern of the tunes, since we suspect that these contribute to the achievement of the meaning desired by the speaker. Future research should undertake a more detailed analysis into the effects of changing the prenuclear pattern and keeping the nuclear configuration constant, in order to calculate the weight of the former against the latter in the manifestation of pragmatic meanings.

3.1.2.1. Narrow focus statements

Figure 2 illustrates a token of narrow focus statements, where we observe a rise-fall F0 nuclear contour, in which the peak is aligned with the end of the nuclear syllable. The sequence L+H* followed by L% accounts for this shape. This representation is similar to the one proposed for Venezuelan Andean Spanish by Astruc, Mora and Rew (this volume). Given this description for Canarian Spanish intonation, it seems that the difference between the nuclear pitch accents in broad versus narrow focus statements is a question of resorting to one or the other of two different accents, L* versus L+H*, as is the case in Castilian Spanish.

A close comparison with Puerto Rican Spanish (Armstrong this volume) reveals that H* stands as the representation of the nuclear pitch accent. After listening carefully to the same utterance in the two varieties, we note that the tunes are quite similar, but in the case of Canarian Spanish the rise (adequately accounted for by L+H*) is clearly perceptible (and there is no tonal compression), whereas in Puerto Rican Spanish tonal compression is active, and consequently, as claimed by Armstrong (this volume), the contour sounds rather monotonous over the nuclear syllable.

Narrow focus statements of the type illustrated in figure 2 are similar to contradiction statements like the one shown in figure 3 below. The typical tune used to convey the meaning that what the speaker says is definite and unequivocal shows the nuclear accent !H*, followed by the boundary tone L% in the second intonation phrase (henceforth IP). L+!H* stands as the prenuclear accent. We clearly perceive the drop in pitch from the first pitch accent (the peak is located at 245 Hz) to the nuclear one (230 Hz), together with a noteworthy extra lengthening of the nuclear vowel. The observed final sustained mid pitch of the first IP is represented by the boundary tone M%.
Figure 1: Waveform, spectrogram and F0 trace for the broad focus statement Bebe una limonada ‘She is drinking lemonade’. L+>H* accounts for the prenuclear contour and L* represents the nuclear accent, followed by L%.

Figure 2: Waveform, spectrogram and F0 trace for the narrow focus statement No, de limones ‘No, of lemons’. The two IPs show the same tonal sequence: L+H* L%.
M. Cabrera Abreu, F. Vizcaíno Ortega

Figure 3: Waveform, spectrogram and F0 trace for the contradiction statement ¡Que no! ¡Que irán a Lima! ‘No, that’s not the case, they are going to Lima for sure’. The nuance of certainty is conveyed by the sequence L+>H* !H* L% in the second IP.

This contour differs from that typically used in broad focus statements in terms of the nuclear pitch accent, which is !H* here but L* in broad focus statements. There is also a noticeable lengthening of the nuclear vowel in the case of the contradiction statement.

Further examination of this tune and the one described for the same type of utterance in Castilian Spanish (Estebas-Vilaplana and Prieto this volume) reveals that though they share equivalent prenuclear pitch accents, L+>H*, both the nuclear pitch accents and the boundary tones are different: !H* versus L* and L% versus HL%.

3.1.2.2. Exclamative statements

After examining the intonation of the utterance depicted in figure 4, our first tentative phonological analysis of exclamative statements was !H* M%. Initially, such an analysis seemed to us the most descriptively accurate.

However, the same utterance produced by a different speaker (speaker 2) unexpectedly resulted in a slightly different contour (figure 5), in which there is no perceptible final mid pitch.

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2 We are grateful to Martine Grice for her insightful comments at the 4th Sp_ToBI Workshop: Transcription of Intonation of the Spanish Language (Las Palmas de Gran Canaria, June 2009) about the phonetic shapes of all the contours discussed here, and their mappings to phonological representations.
Figure 4: Waveform, spectrogram and F0 trace for the exclamative statement ¡Fuerte simplón! ‘What a simpleton!’ produced with L*+H in the prenuclear section and !H* followed by L% in the nuclear section, as uttered by a female speaker (speaker 1). There is tonal truncation and tone shift leftwards of !H* and L%.

Figure 5: Waveform, spectrogram and F0 trace for the exclamative statement ¡Fuerte simplón! ‘What a simpleton!’ produced with H* in the prenuclear section and !H* followed by L% in the nuclear section, as uttered by a male speaker (speaker 2). Tonal truncation is apparent.

Although M% was the representation initially proposed to account for the observed mid pitch, a full investigation resulted in the choice of L% as the definitive phonological representation.
As trained phoneticians and native speakers of Canarian Spanish, we decided that the contour produced by speaker 1 sounded like a marked variant of the more natural variant produced by speaker 2.

In order to work out whether this difference was due to speaker variability or the lexical stress pattern of the nuclear word, a third speaker was asked to produce the same type of utterance, but this time also including nuclear paroxytone and proparoxytone words. We found that, in these cases, there was indeed a descending movement implemented on the posttonic syllables (as can be seen in figure 6 for ¡Fuerte estúpido! ‘What an idiot!’ This tune, phonologically represented as !H* L%, was then identified as the same irrespective of the different stress patterns, shown by the three speakers, who all agreed that this was the most natural rendering.

In relation to the exclamative nuance conveyed by the contour in figure 4, this is achieved by means of two factors (the second one not being exclusive to Canarian Spanish intonation): (i) final sustained mid pitch, and (ii) tone shift to the left of both !H* and L%. According to Ladd (1996: 59), in rather emphatic statements of French, word-final ‘pitch accents may associate to syllables which are not necessarily stressed’, so that they end up being shifted to the left. The phenomenon observed in the case of speaker 1 is similar to the situation just described: the metrically strong syllable in the word simplón is the last one (-plón). However, we notice that the metrically weak syllable (sim-) is clearly lengthened, rather high and followed by a drop in pitch. Thus, following Ladd’s (1996) analysis for French, we suggest that both !H* and L% are shifted to the left.

From all this analysis we conclude that, in the intonation of exclamative statements in Canarian Spanish, speakers may resort to one of two phonetic strategies in the implementation of phonological representation whenever there is insufficient segmental material to support the manifestation of a string of tones: (i) truncation of L% (speaker 2), or (ii) partial truncation of L% (as some drop in pitch is present) and tone shift to the left of both !H* and L% (speaker 1).

There are striking similarities between the tune illustrated in figure 6 and the one offered by Armstrong (this volume) from Puerto Rican Spanish for the utterance ¡Está riquísimo! They both show a prenuclear rise followed by what may be informally described as a compressed circumflex movement over the nuclear word which persists to the end of the utterance.

3.1.2.3. Statements of the obvious

Figure 7 illustrates a statement in which the speaker conveys the meaning of obviousness by means of the observed complex pitch movements from the nuclear configuration to the end of the tune. Thus, the rising movement and the peak on the accented syllable are followed by a dip in the postnuclear syllable, which is subsequently followed by another rise. Given L+H* for the pitch accent, and an alleged H% for the final rise, we are confronted with a phonological representation which falls short of a satisfactory account, since the observed dip is not captured. Estebas-Vilaplana and Prieto (2008) resort to bitonal boundary tones as the units responsible for the manifestation of such complexity at the end of tunes. This is an excellent solution, since it introduces no new element into phonological representations but instead assumes that the well-attested nature of pitch accents as bitonal units can be extended to boundary tones, too. Thus, the aforementioned dip together with the rise can be described in terms of the bitonal boundary tone LM%.
Figure 6: Waveform, spectrogram and F0 trace for the exclamative statement ¡Fuerte estúpido! ‘What an idiot!’ produced with L*+H in the prenuclear section and !H* followed by L% in the nuclear section, as uttered by a second female speaker (speaker 3). The interpolation between !H* and L% is present.

Figure 7: Waveform, spectrogram and F0 trace for the statement of the obvious ¡De Guillermo! ‘Guillermo’s [of course]!’ produced with a L+H* in the nuclear accent followed by the bitonal LM% boundary tone.
In Puerto Rican Spanish (Armstrong this volume) and Castilian Spanish (Estebas-Vilaplana and Prieto this volume), the same utterance type yields tunes that sound very similar, and they are consequently accounted for by the same tonal configuration.

### 3.1.2.4. Uncertainty statements

The tune of statements in which the speaker shows a clear degree of uncertainty or hesitation is illustrated in figure 8. Note that the F0 starts from rather low pitch followed by a long continuously rising movement over the first section of the prenuclear contour (puede que no le gus- in guste), and then, during the second section, it remains high and sustained (over -te el regalo que le he com-), until it reaches an extra-high peak on the nuclear syllable (-pra-). This is followed by a falling movement to a point well above the low pitch level shown at the beginning of the utterance. It is precisely this final mid pitch, in addition to the previously described rising movement, which conveys the nuance of hesitation. As far as the phonological representation of this tune is concerned, this is our first instance of iH* M% in the nuclear stretch, and in the prenuclear one we find the tonal sequence L+>H* iH* iH* for the first section and H* for the second section.

Uncertainty statements share the same nuclear pitch accent (iH*) with information-seeking yes-no questions and information-seeking wh- questions, as we shall see later in sections 3.2.1. and 3.2.3. However, these statements deviate from both types of questions in as much as the boundary tone is different in each case, M% versus L%.

Evidence in support of iH* against L+iH* as the preferred nuclear representation for uncertainty statements is the fact that it is descriptively adequate, as it confirms the absence of a low target. The presence of such a dip in the same utterance type in Castilian Spanish, on the other hand, justifies the phonological representation L+iH* in the rather different tune that variety presents (see chapter 2 in this volume).

Another rendering of Puede que no le guste el regalo que le he comprado, this time in Venezuelan Andean Spanish intonation, shows a different contour altogether, albeit split up into two IPs. As illustrated in chapter 7 of this volume, the overall contour shows a set of downstepped Hs (either in bitonal or monotonal pitch accents), together with final low pitch, which is transcribed as L%.

### 3.2. Questions

#### 3.2.1. Yes-no questions

A constant characteristic across all questions (including the biased variants) has turned out to be the speakers’ use of a pitch range which is higher here than in statements. Figure 9 illustrates the tune of an information-seeking yes-no question.

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4 The following description of tunes for questions in Canarian Spanish is based on ongoing research in which we study the relationship between such tunes and the pragmatic meanings with which they are associated following the notion procedural meaning as used in current Relevance Theory studies (see Escandell Vidal 1998 for Standard European Spanish). Obviously, this falls out of the scope of the present volume, but it has allowed us to deepen our understanding of how interrogatives work in Canarian Spanish to the extent that we are now able to offer their systematic analysis and description.
In Canarian Spanish intonation, a monotonal phonological representation, \( \grave{i}H^* \) L\%, accounts for the observed circumflex nuclear contour in information-seeking yes-no questions. Note that the extra-high peak is aligned with the nuclear vowel (without there being any dip before it). As already claimed above, since the F0 curve before this nuclear accent mostly exhibits high pitch and there is also no dip before the extra rise, there is, then, no justification for postulating L+\( \grave{i}H^* \). The observed rise in figure 9 is due to interpolation between the prenuclear accent (L+H*) and the nuclear one (\( \grave{i}H^* \)). After this last rise, pitch falls sharply to the end of the utterance. As already described in Cabrera Abreu and Vizcaíno Ortega (2003), the falling interpolation between \( \grave{i}H^* \) (or, for that matter, H+H* in Cabrera Abreu and Vizcaíno Ortega 2003) and L\% may be absent if the nuclear word is oxytone, since there is no segmental material on which to implement the falling movement (i.e. there is tonal truncation). This is illustrated in figure 12 below.

For Puerto Rican Spanish, Armstrong (this volume) proposes \( \grave{i}H^* \) (as an allophonic variant of H*) to capture the nuance of an ‘extra degree of involvement’ on the part of the speaker. By contrast, in Canarian Spanish, \( \grave{i}H^* \) sounds neutral, that is, it is free of the nuance which Armstrong mentions in her analysis.\(^5\)

Although the circumflex shape just described is also observed in Venezuelan Andean Spanish intonation for the same type of utterance, as described in chapter 7 of this volume, note that its phonological description nicely captures a difference between them. In the case of Canarian Spanish, \( \grave{i}H^* \) accounts for the systematic drastic jump up in pitch to the accented syllable, whereas in Venezuelan Andean Spanish L+H* is responsible for the observed dip followed by a rise which is not systematically higher than a preceding H. The question that then arises is whether \( \grave{i}H^* \) L\% is attested at all in questions in Venezuelan Andean Spanish, and if so, what type of meaning is associated with it. The answer is that in this variety \( \grave{i}H^* \) L\% is used in wh- questions which convey the meaning of a very polite request.

According to Willis (this volume), in Dominican Spanish H+L* L\% is responsible for information-seeking yes-no questions with narrow and/or contrastive focus. Thus, Canarian Spanish information-seeking yes-no questions share with Dominican Spanish the fact that they both resort to L as the boundary tone, although the nuclear accent is different. This last observation, however, may be the result of different focal structures—broad focus in our case, and narrow/contrastive focus in Dominican Spanish.

Finally, the nuclear contour in Castilian Spanish shows a completely different tonal configuration: L* HH%. Thus, in this respect, Canarian Spanish intonation patterns with some Caribbean varieties, and not with Castilian Spanish.

\(^5\) In Canarian Spanish intonation, any biased meaning in an information-seeking yes-no question whose utterance shows \( \grave{i}H^* \) L\% as the phonological representation of the nuclear contour is inferred from the context in which the utterance is inserted, and not from the combination of the starred tone with the boundary tone.
Figure 8: Waveform, spectrogram and F0 trace for the uncertainty statement *Puede que no le guste el regalo que le he comprado* ‘S/he may not like the present I have bought him/her’. It is transcribed as \( L^+\to H^* \, jH^* \, jH^* \, H^* \, jH^* \, M\% \).

Figure 9: Waveform, spectrogram and F0 trace for the information-seeking yes-no question ¿Tiene mermelada? ‘Have you got any jam?’ with the sequence \( L^+\to H^* \) in the prenuclear section and \( jH^* \) followed by \( L\% \) in the nuclear section.
3.2.2. Biased yes-no questions

In this section, we introduce echo questions and imperative questions, all of which display the nuclear pattern iH* L% mentioned above. Other biased yes-no questions like, for instance, those showing counterexpectation or incredulity present a different nuclear configuration: L* HH%.

3.2.2.1. Echo yes-no questions

The utterance illustrated in figure 10 is an example of yet another prenuclear contour shape, while the nuclear configuration is already familiar to us. L*+H is responsible for the initial rise. !H*, associated with the last syllable of aprender, is responsible for the subsequent shallow descent up to that syllable, together with the non-high sustained stretch up to the offset of -ta-. At this point, pitch rises sharply in order to reach the following target ¡H*, which is already in the nuclear section. Finally, pitch drops again to L%.

The ending of this tune is similar to that proposed by Armstrong (this volume) for an echo-surprise yes-no question in Puerto Rican Spanish, which she transcribes as L+H* L%. The fact that Armstrong shows a bitonal nuclear accent while we resort to the monotonal accent ¡H* may be due to the manifestation of a perceptual effect of greater involvement on the speaker’s part in the former, that is, the implementation of the surprise. We suggest further that this effect may also be encoded in the shape of the prenuclear section, which presents a sequence of peaks and valleys in this Caribbean variety, each one of them accounted for by L*+H.

Another type of echo question can be called counterexpectational question. Such questions convey a degree of counterexpectation or incredulity which results from the speaker’s confrontation with a state of affairs different from the expected one. The tune responsible for this meaning is illustrated in figure 11 over the utterance ¿Aquí no había un cine? ‘Didn’t there use to be a cinema here?’ Both echo and counterexpectational questions share the fact that the situational context is somehow reactivated: in the former, by means of the repetition of a previous utterance, and in the latter, through the use of a set of words which somehow convey information that is common ground to both interlocutors and that clearly conflicts with what they are actually observing.

This is the first final rising contour we encounter in Canarian Spanish questions which reaches an extra-high target and is transcribed as L* HH%. As can be seen, this ending tune is used by speakers to convey this biased meaning of finding out that a previous assumption has, surprisingly, proved to be false. The prenuclear pattern is accounted for by L* and H* for the rise over -gui no and H+L* for the fall over habia un, thus yielding a complex pitch configuration which is unattested in previous studies.

Canarian Spanish intonation shares with Puerto Rican Spanish (see chapter 6 in this volume) the fact that they both resort to L* as the nuclear tone, and that this is followed by a rise. However, they differ in the fact that in the former variety, HH% is present in the phonological representation to account for the sharp rising trajectory after the nuclear syllable, while in the latter, HL% is responsible for the falling section over the postnuclear syllable.
Figure 10: Waveform, spectrogram and F0 trace for the echo yes-no question ¿Que si voy a aprender italiano? [Did you ask me... ‘If I’m going to learn Italian?’] produced with L*+H !H* in the prenuclear contour followed by ¡H* and L% in the nuclear contour.

Figure 11: Waveform, spectrogram and F0 trace for the counterexpectational yes-no question ¿Aquí no había un cine!? ‘Didn’t there use to be a cinema here?’ produced with L* H* H+L* in the prenuclear contour followed by L* HH% in the nuclear contour.
Figure 12: Waveform, spectrogram and F0 trace for the imperative yes-no question ¿¡Se quieren callar!? ‘Would you please be quiet?’ produced with $L^{+}>H^*$ in the prenuclear contour followed by $iH^*$ and $L^\%$ in the nuclear contour (with truncation of $L^\%$).

Figure 13: Waveform, spectrogram and F0 trace for the confirmation yes-no question ¿Vienes a merendar? ‘Are you coming for tea?’ produced with $L^{+}>H^*$ in the prenuclear contour followed by $iH^*$ and $L^\%$ in the nuclear contour (with truncation of $L^\%$).
3.2.2.2. Imperative yes-no questions

Figure 12 illustrates the typical intonation of a yes-no question formulated with the nuance of an order.

The peak in the nuclear contour is accounted for by jH*, and although L% is included in the phonological representation, its manifestation is truncated due to the fact that the tune is implemented on an oxytone word. Had this word been paroxytone or proparoxytone, the fall would have been manifested over the posttonic syllable(s), exactly in the same fashion as the contour illustrated in figure 9. Interestingly, this is what we observe in the same utterance type in Venezuelan Andean Spanish, with which Canarian Spanish coincides once more.

3.2.2.3. Confirmation yes-no questions

In Canarian Spanish, the contour typically used to convey the meaning of a confirmation in a yes-no question is the same as the one just described above for an imperative yes-no question, and also for the information-seeking yes-no question, L+>H* ¡H* L%. Furthermore, it also displays truncation of the final pitch movement in this particular utterance. In view of these findings, hearers are forced to resort to the context of the situation in which the question is embedded in order to identify the meaning intended by the speaker, since this tonal configuration is also typical of information-seeking yes-no questions.

This nuclear contour differs from those found in other varieties of Spanish intonation. In Castilian Spanish, both H+L* L% and L*H% are used (Estebas-Vilaplana and Prieto this volume). In Dominican Spanish, two tonal configurations are also attested, though in this case H+L* L% and H+L* H% (Willis this volume).

3.2.3. Wh- questions

Information-seeking wh- questions share with information-seeking yes-no questions the circumflex nuclear contour already described in section 3.2.1., namely jH* L%. Although the prenuclear section in both types sounds very similar, the beginning is slightly different in the following respects: the prenuclear section of a yes-no information-seeking question begins with L+>H*, whereas in the information-seeking wh- question the prenuclear section begins with H*, possibly because of the presence of a wh- word.

Unlike the nuclear contour just described in Canarian Spanish information-seeking wh-questions, nuclear contours in Castilian show either the sequence L* L% or L* HH%. This is not to say that these sequences are absent in Canarian Spanish, but rather that they are used to convey biased meanings. Thus, the configuration L* L% is used in imperative wh-questions (see section 3.2.4.2.) and L* HH% in rephrase echo wh-questions (see figure 16 in section 3.2.4.1.).

When compared with Caribbean varieties like Puerto Rican, the different trend followed by Canarian Spanish becomes apparent. Thus, the nuclear accent H+L* stands in sharp contrast with jH*. However, as far as the boundary tone is concerned, they both share L%. If we further set the Canarian Spanish jH* L% representation against Dominican, another Caribbean variety, we detect yet another tonal difference in the same type of utterance, since Dominican resorts to the phonological string L* H% (or even H+L*).

In contrast to the aforementioned nuclear descending movement for information-seeking wh-questions in Canarian Spanish, there is a nuclear rising tune for interrogatives showing politeness, as can be observed in the token illustrated in figure 15, in which the final rise is accounted for by the sequence L* M%.
Figure 14: Waveform, spectrogram and F0 trace for the information-seeking wh-question ¿Qué te parece la excursión que estamos haciendo? 'How do you like the trip we are taking?' $H^* H^* H^* H^*$ is the sequence of pitch accents in the prenuclear contour, and $iH^*$ followed by $L%$ occurs in the nuclear section.

Figure 15: Waveform, spectrogram and F0 trace for the polite wh-question ¿Cuánto le debo? 'How much do I owe you?' transcribed as $L+>H^*$ in the prenuclear contour followed by $L^*$ and $M%$ in the nuclear contour.
It is precisely M% which transmits the nuance of politeness, since, had the contour ended instead in HH%, this utterance would have been understood as a reprise echo wh-question. By contrast, in Puerto Rican Spanish (Armstrong this volume) the nuclear accent is H* followed by HH% in this sort of utterance.

3.2.4. Biased wh-questions

As already stated for biased yes-no questions, biased wh-questions present both the recurrent nuclear pattern iH* L%, and other nuclear phonological representations, namely, L* HH%, L* L% and H+L* L%.

3.2.4.1. Echo wh-questions

The tunes for echo wh-questions show the same nuclear tonal configuration as echo yes-no questions, that is, iH* L%.

A special type of echo question also found in Canarian Spanish intonation is the one Sosa (2003) refers to as reprise. He investigates the shape and meaning of wh-questions in four Latin American varieties (Mexican, Colombian, Puerto Rican and Caracas Venezuelan) and adds a fourth tonal configuration to the three contours described in Navarro Tomás’s (1944) account. In Venezuelan Spanish, it is described by the author as a rise throughout the utterance, which he interprets as the speaker’s request to be reminded of something he or she already knew, either implicitly or explicitly. As is the case with echo questions, reprise questions reactivate a piece of information which is already in play.

Given that Canarian Spanish intonation shows similarities with Caracas Venezuelan Spanish intonation (such as the circumflex nuclear configuration of information-seeking yes-no questions), we expected to find affinities in reprise questions as well. The results of our investigation are illustrated in the token illustrated in figure 16.

These two varieties of Spanish, Caracas Venezuelan and Canarian, have in common the fact that pitch in this utterance type ends rather high. However, the overall prenuclear contour together with the nuclear configuration seem to differ. While in Caracas Venezuelan Spanish the rise takes place throughout the utterance, in Canarian Spanish there are at least two separate rises: one at the very beginning of the utterance (which is accounted for by L*H*), and another extending from after the nuclear syllable to the end of the utterance (which is accounted for by HH%). Further investigation into Canarian Spanish intonation, with a more extensive set of utterances and speakers, may reveal whether the tune attested in Caracas Venezuelan Spanish is also present in Canarian Spanish.

As far as Puerto Rican Spanish (Armstrong this volume) is concerned, the prenuclear contour is rather sustained, unlike Canarian Spanish but similar to Caracas Venezuelan Spanish. The nuclear contour shows a tonal sequence identical to that seen in Canarian Spanish, L* HH%.

Another type of biased wh-question we illustrate in this section is counterexpectational wh-questions, which signal the speaker’s confrontation with an unexpected situation. This displays the tune illustrated in figure 17, in which the widening of the pitch range in the area of the nuclear accent is the result of such counterexpectation.
Figure 16: Waveform, spectrogram and F0 trace for the reprise echo wh-question ¿Cómo me dijiste (que) se llamaba el fenómeno? ‘What did you say the phenomenon was called?’ transcribed as L+>H* H* !H* in the prenuclear pattern followed by L* and HH% in the nuclear pattern.

Figure 17: Waveform, spectrogram and F0 trace for the counterexpectational wh-question ¿¡A qué hora acabó llegando!? ‘What time did she finally arrive?!’ transcribed as L+>H* !H* in the prenuclear contour followed by ¡H* and L% in the nuclear contour.
Canarian Spanish speakers resort to the nuclear sequence $\text{iH}^* \text{L}^\%$ to convey a counterepectational meaning in wh- questions. Also, the prenuclear contour shows a delayed rise ($L^+H^*$) followed by a shallow descent to a point in pitch which is still well above the baseline ($H^*$). The transition from the prenuclear to the nuclear section (i.e. from $H^*$ to $L^\%$) shows an abrupt rise in pitch. This abruptness provides further evidence that there can be no L target in the vicinity, for this would result in a gradient rise over the accented syllable, and possibly the vowel would be elongated. Given the tonal string $\text{iH}^* \text{L}^\%$, we note that the final tune is extremely similar to that seen in information-seeking yes-no questions, information-seeking wh- questions and also biased echo yes-no questions.

### 3.2.4.2. Imperative wh- questions

Figure 18 illustrates a wh- question which conveys the speaker’s intention to force the hearer into doing something. In order to do so, Canarian Spanish speakers select $L^* \text{L}^\%$, which is different from what we presented in the case of imperative yes-no questions: $\text{iH}^* \text{L}^\%$. In imperative wh- questions, the hearer infers the meaning of the order directly from the form of intonation, while in the case of imperative yes-no questions, the imperative nuance is inferred from the context in which the utterance is embedded.

In this tune, we wish to highlight once again the abrupt transition across the prenuclear and nuclear sections. If in the case of counterepectational wh- questions this transition showed an abrupt rise, here we encounter a sharp drop in pitch. The sequence $L^* \text{L}^\%$ stands as the vehicle used to convey the sense of the command, while the rise at the beginning of the utterance together with sustained descending pitch terraces contribute the meaning of interrogation.

### 3.2.4.3. Rhetorical wh- questions

Rhetorical wh- questions, those used by speakers to trigger the hearer’s interest in an answer which the speaker himself is about to offer, typically show $H+L^* \text{L}^\%$ in the nuclear configuration. Figure 19 illustrates this type of interrogative.

As can be seen, the tunes for an imperative and a rhetorical wh- question are accounted for by the same tonal sequence, except that the nuclear pattern in the latter case shows $H+L^*$ instead of $L^*$.

### 3.3. Imperatives: commands and requests

The different degrees of illocutionary strength in commands which are illustrated in this chapter are as follows: command, strong command and command showing a nuance of encouragement. We will see that, as speakers are requested to increase further the strength of the command (in the first two cases), they resort increasingly to the high end of their frequency range (as shown in figures 21 and 22) together with extra-long sustained vowels and a very staccato-type of rhythm.
Figure 18: Waveform, spectrogram and F0 trace for the imperative wh-question ¿Cuándo lo vas a hacer!? ‘So when are you going to do it?’ accounted for by $L+\rightarrow H^* \uparrow H^*$ in the prenuclear pattern followed by $L^*$ and $L\%$ in the nuclear pattern.

Figure 19: Waveform, spectrogram and F0 trace for the rhetorical wh-question ¿Por qué necesitamos saber idiomas? ‘Why do we need to know languages?’ accounted for by $L+\rightarrow H^* H^* \uparrow H^*$ in the prenuclear pattern followed by $H+L^*$ and $L\%$ in the nuclear pattern.
3.3.1. Commands

Let us turn to the most typical tonal configuration for a command in Canarian Spanish, which shows a final rise to an extra high pitch (L+H* HH%), as can be seen in figure 20. If, unexpectedly, the hearer decides to ignore the order, then the speaker most probably will resort to the tune illustrated in figure 21 to assign extra force to the command.

The tune just described sounds very similar to that proposed for Castilian Spanish for the same utterance (see chapter 2 in this volume), in as much as the same L+H* nuclear accent is proposed. However, in Canarian Spanish, the postnuclear section of the contour continues rising (hence HH% in the phonological representation), whereas in Castilian Spanish, it drops to mid pitch (M%). This falling tendency is also present in Dominican Spanish (Willis this volume), although here the descent clearly reaches low pitch. Hence, it is accounted for by H+L* L%. From the point of view of Canarian Spanish intonation, both the Castilian and the Dominican intonation patterns for commands would be interpreted as a very sharp order.

Figure 21 exhibits the common configuration for a strong command. Though in this case the prompt context required a more forceful imperative, we presented speakers with the same utterance in order to keep constant the lexical stress patterns of words and consequently to allow for a transparent comparison between them.

A set of changes is evident between the prosody of commands and strong commands: (i) all potential landing sites for pitch accents are accented in strong commands; (ii) all the accented syllables tend to be lengthened; (iii) the body of the prenuclear contour is raised and sustained in pitch; (iv) the nuclear pitch accent changes from L+H* in a command into H* in a strong command; and (v) the boundary tone changes from HH% in the former to L% in the latter, thus showing opposite interpolations: a rise in a command, and a sharp fall in a strong command. This strong command tune is similar to the one described for Venezuelan Andean Spanish (Astruc et al. this volume), except that our speaker assigns pitch accents to all potential landing sites instead of breaking up the utterance into a set of IPs.

When asked to increase the illocutionary force still further, speakers produced intonation tunes closely resembling that illustrated in figure 21, and now shown in figure 22. Note that, in the specific token we offer here, the speaker herself modified the wording of the response, but as far as the prosody is concerned, it is quite similar to that seen in the strong command. Thus, we observe a high sustained prenuclear configuration accounted for by the already attested sequence of H*’s (except for the first accent, which is L+H*), and the nuclear configuration is yet again accounted for by H* L% (only here, due to the fact that the last word is oxytone, there is no segmental material onto which the fall in pitch can be implemented, with the result that it is not observed).

Finally, the tune in figure 23, which shows a wide valley followed by a final sharp rise in pitch, is used by speakers to encourage someone to do something; this can be interpreted as a suggestion which the hearer treats as the obvious action to perform. This utterance was elicited following the prompt ‘Your son has to draw an animal typically found in the desert, and cannot think of one. Encourage him to draw a camel’. We propose L* HH% as the phonological representation responsible for this tune. L* accounts for low pitch over the accented syllable (-me-). Then pitch rises sharply, which is phonologised as HH%.
Figure 20: Waveform, spectrogram and F0 trace for the command ¡Ven aquí ahora mismo! ‘Come here at once!’ accounted for by L+>H* H* in the prenuclear contour and L+H* followed by HH% in the nuclear contour.

Figure 21: Waveform, spectrogram and F0 trace for the strong command ¡Ven aquí ahora mismo! ‘Come here at once!’ [and don’t you dare disobey me!] accounted for by L+>H* H* in the prenuclear contour and H* followed by L% in the nuclear contour.
Figure 22. Waveform, spectrogram and F0 trace for the (insistent) strong command ¡Que te he dicho que vengas aquí!! ‘I told you to come here at once!’ accounted for by L+>H* H* H* in the prenuclear contour and H* followed by L% in the nuclear contour (with tonal truncation of L%).

Figure 23: Waveform, spectrogram and F0 trace for the command with a nuance of encouragement ¡Pues dibuja un camello! ‘Then draw a camel!’ accounted for by H+L* L*+H in the prenuclear section and L* HH% in the nuclear contour.
3.3.2. Requests

The cajoling request ¡Andal ¡Vente al cine! ‘Come on! Come to the cinema with us!’ in figure 24 shows two IPs. The first one contains a single word and shows a gradient rise followed by a fall, which is accounted for by L+H* L%. The second IP shows a gradient rise-fall as well, only the contour is mapped onto a longer stretch of words. The rise is accounted for by the sequence L+>H* H*, and the fall by the interpolation between H* and L%.

After setting Canarian Spanish requests against Puerto Rican Spanish (Armstrong this volume), we note that, although they both end in a falling movement, there is also a two-way contrast: H* versus L*, and L% versus HL%.

Finally, having compared this contour with the one used in Castilian Spanish intonation (see chapter 2 in this volume), it seems that there are at least three strategies to encode a gentle request in the prosodic components of an imperative utterance: (i) by means of different nuclear pitch accents (H* versus L*); (ii) by means of different boundary tones (L% versus HL%); or (iii) by means of adding extra length to different syllables (e.g. the tonic ci- in cine versus the posttonic -bre in hombre).

3.4. Vocatives

In Canarian Spanish, the typical tune of a vocative in which the speaker’s intention is to demand attention gently is modelled as L* H* M%. In the example shown in figure 25, we see that the speaker accentuates the name twice (even though the second syllable is lexically unstressed). This unstressed syllable also shows a noticeable degree of lengthening.

Figure 26 illustrates the standard configuration used for calling over a distance. Note that all the vowels are lengthened, as if the speaker were trying to project her voice across a long distance.

After the gradient rise and the peak at the offset of the accented syllable, pitch remains high and sustained over the last posttonic syllable, which is extra long. We assume that this tune corresponds to the interpolation between H* (of L+H*) and H%, and that an expected rise is not observed since speakers reach the highest point in their pitch range too early, and consequently by the time they reach a point towards the end of the utterance, their physiology prevents them from ascending any further. The only strategy they can resort to in these circumstances consists in keeping their pitch sustained.

Figure 27 exhibits the usual tune used by speakers to catch the attention of someone who is nearby. It can be understood as a vocative with a nuance of expectation. In fact, the context set as a prompt to elicit this utterance is the following: ‘Your son is sitting opposite you reading a book; call him in such a way that you create some type of expectation, as if you were going to request something, or you were going to inform him about something unexpected.’ In the description of the resulting tune over the same vocative, ¡Javi!, we resort to the bitonal boundary tone HL% to account for the sustained pitch and fall over the unstressed syllable -vi.
Figure 24: Waveform, spectrogram and F0 trace for the request ¡Anda! ¡Vente al cine! ‘Come on! Come to the cinema with us!’ with the first IP accounted for by $L+H^*\ L%$ and the second by $L+>H^*\ H^*\ L%$.

Figure 25: Waveform, spectrogram and F0 trace for the gentle vocative ¡Javi! accounted for by the tonal configuration $L^*\ H^*\ M%$ (with double accenting of the nuclear word).
Figure 26: Waveform, spectrogram and F0 trace for the vocative calling over a long distance ¡Gustavo! accounted for by the tonal configuration L+H* H%.

Figure 27: Waveform, spectrogram and F0 trace for the vocative showing a nuance of expectation ¡Javi! accounted for by the tonal configuration L+H* HL%.
The tonal inflection captured by the presence of H in the sequence HL% is responsible for the transmission of the desired meaning, to the extent that, had it been absent, the perceived meaning would have been loaded with a strong illocutionary force, like the strong command illustrated in figure 21 (which in fact is modelled as H* L%).

In relation to whether other varieties of Spanish resort to similar tunes, Estebas-Vilaplana and Prieto (this volume) put forward the same phonological representation for a contour in Castilian Spanish which is interpreted as an insistent call. Armstrong (this volume) also resorts to this tonal sequence for a type of vocative in Puerto Rican Spanish. Lastly, while Willis (this volume) presents L+H* as the nuclear accent, thus coinciding with the analysis of Canarian Spanish, he proposes LH% to account for the ending of the tune, which is the mirror image of the sequence HL% illustrated in our figure 27.

4. Conclusions

In the course of this chapter, we have observed that Canarian Spanish intonation shares some features with Castilian Spanish and other features with Caribbean Spanish. We note these similarities in the following summary of the typical characteristics of Canarian Spanish.

a) The nuclear contour of broad focus statements presents either L* L% (as in Castilian Spanish) or L+IH* L% as the allophonic variant of L+H*, which is proposed for Dominican Spanish. We suggest that broad focus statements with L* L% may sound more categorical than those with L+IH* L%, though this requires further research.

b) Canarian Spanish intonation coincides with Castilian and Puerto Rican Spanish in the description of statements of the obvious as L+H* LM%.

c) While Castilian Spanish shows L* HL% in contradiction statements, Canarian Spanish prefers IH* L%, together with assigning extra length to the nuclear syllable.

d) The contrast between uncertainty statements, information-seeking wh- questions and information-seeking yes-no questions on the one hand, and all other utterance types on the other is established by the presence of iH* in the former, but not in the latter. Furthermore, the contrast between uncertainty statements on the one hand and wh- and information-seeking yes-no questions on the other derives from the presence of M% in the former versus L% in the latter.

e) The sequence iH* L% shows tonal truncation if the nuclear word is an oxytone.

f) iH* L% is similar (but not exactly the same) to what is attested in Andean Venezuelan and Puerto Rican Spanish for information-seeking yes-no questions, but clearly different from what is seen in Castilian Spanish (L* HH%) and Dominican Spanish (H+L* L%) for the same type of question.

g) Rises at the end of tunes over questions in Canarian Spanish are limited to the following two types: counterexpectational yes-no questions (HH% - interestingly, like information-seeking yes-no questions in Castilian Spanish) and polite wh- questions (M%).

h) While the nuclear contour in a typical command in Canarian Spanish intonation is represented as L+H* HH%, the nuclear contour in the same utterance type in Castilian Spanish is represented as L+H* M%. Thus, they exhibit equivalent nuclear pitch accents but different boundary tones. The falling trend found in Castilian Spanish is also present in Dominican Spanish, though as H+L* L%. In view of this finding, it seems that Canarian Spanish intonation stands on its own.
i) In relation to vocatives, we select L+H* HL% (figure 27, a vocative with the nuance of expectation) as the most representative of Canarian Spanish intonation. We have noted earlier that this tune is used in Castilian Spanish to convey the meaning of an insistent call, whereas in Puerto Rican Spanish it typifies a vocative chant.

A summary of stylized diagrams of prenuclear pitch patterns in questions is included in table 3.

**Table 3: Summary of stylized representations of prenuclear patterns in Canarian Spanish and the questions in which they are attested**

<table>
<thead>
<tr>
<th>Prenuclear configurations</th>
<th>Questions</th>
</tr>
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<tbody>
<tr>
<td>High sustained</td>
<td>Information-seeking yes-no questions</td>
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<tr>
<td></td>
<td>Imperative yes-no questions</td>
</tr>
<tr>
<td></td>
<td>Information-seeking wh- questions</td>
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<tr>
<td>Complex - circumflex</td>
<td>Yes-no incredulity questions</td>
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<td></td>
<td>Polite wh- questions</td>
</tr>
<tr>
<td>Complex - with descending terraces</td>
<td>Counterexpectational wh- questions</td>
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<tr>
<td></td>
<td>Wh- imperative questions</td>
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<tr>
<td></td>
<td>Wh- rhetorical questions</td>
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<tr>
<td></td>
<td>Reprise echo wh- question</td>
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</tbody>
</table>

In table 4 we include the combinations of nuclear accents and boundary tones for the different utterance types.

**Table 4: Inventory of nuclear pitch configurations in Canarian Spanish and their schematic representations**

<table>
<thead>
<tr>
<th>Statements</th>
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<tbody>
<tr>
<td>Broad focus statements</td>
<td>L* L%</td>
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<tr>
<td>Biased statements</td>
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<tr>
<td>Narrow focus statements</td>
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<td>Contradiction statements</td>
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<tr>
<td>Category</td>
<td>Type</td>
<td>Pitch, Loudness, %</td>
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<td>Reprise echo wh- questions</td>
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<td><strong>Counterexpectational wh-questions</strong></td>
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### Imperatives: commands and requests

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<td>H* L%</td>
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### Vocatives

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<td>Gentle vocatives</td>
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<tr>
<td>Vocatives showing a nuance of expectation</td>
<td>L+H* HL%</td>
</tr>
</tbody>
</table>
References


