On the intonation of Afro-Bolivian Spanish declaratives: Implications for a theory of Afro-Hispanic creole genesis

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Abstract

This paper analyzes the spontaneously produced intonation of Afro-Bolivian Spanish (ABS) declaratives. ABS is an Afro-Hispanic language of the Americas (AHLAs) spoken in the region of Los Yungas, Department of La Paz, Bolivia. The main findings indicate the presence in ABS of certain intonational features that diverge from those of other native varieties of Spanish. In line with recent hypotheses on the genesis and evolution of ABS and other AHLAs (Sessarego, 2013a,b), we propose that our results reflect advanced second language acquisition processes, which do not imply any previous (de)creolization phase for these Afro-Hispanic varieties.

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Keywords: Afro-Bolivian Spanish; Declarative intonation; Pitch accent; Boundary tone; Second language acquisition process

1. Introduction

Afro-Bolivian Spanish (ABS) is an Afro-Hispanic dialect spoken in the region of Los Yungas, Department of La Paz, Bolivia. This variety was originally brought to the attention of linguists through Lipski’s (2006a,b, 2008) detailed description of its grammatical features. The origins of ABS are not completely clear yet. On one hand, some authors have suggested that ABS might have been a creole language that gradually decreolized due to more recent contact with Highland Bolivian Spanish (HBS) (Lipski, 2008; Pérez-Inofuentes, 2015). On the other hand, other studies have suggested that the sociohistorical, linguistic, and demographic evidence available for this vernacular seems to indicate that ABS is probably the result of untutored second language (L2) acquisition strategies, which could have crystallized in the form of an advanced inter-language in this remote Bolivian region not affected – until recently – by the normative linguistic pressure imposed by urban society (Sessarego, 2011a,b, 2014a,b, 2016). Therefore, according to this latter view, ABS may be seen as an advanced, conventionalized L2 that did not go through any (de)creolization phase (Sessarego, 2013a,b).

The contrasting views on the status of ABS are perfectly in line with the long-lasting debate on the genesis and evolution of other Afro-Hispanic languages in the Americas (cf. Granda, 1970, 1978; Schwegler, 1996, 1999; Lipski, 1993, 2005; Díaz-Campos and Clements, 2005, 2008; Sessarego, 2013c, 2015). In fact, Lipski (2008) and Pérez-Inofuentes (2015) are not the first to claim a possible creole stage, followed by a decreolization phase, to account for the current nature of the Afro-Hispanic languages of the Americas (AHLAs). Indeed, Granda (1970, 1978) was one among the first...
linguists to claim a genetic link between Afro-Portuguese creoles formed on the Western African coast in colonial time and current AHLAs. According to his view, the present-day paucity of Spanish creoles in the Americas would be due to a systematic process of decreolization driven by standard Spanish normative pressure and language standardization. Several authors followed Granda and suggested that certain linguistic traits currently found in the popular varieties of Spanish spoken in Cuba (Granda, 1971; Megenney, 1984, 1985; Oftegui, 1973; Perl, 1982, 1985), Puerto Rico (Granda, 1968) and the Dominican Republic (Schwegler, 1996) should be seen as indicators of a previous creole stage (e.g., high rates of overt pronouns, non-inverted questions, etc.; see Sessarego, 2013a for a different analysis of such features).

Clements (2009), Laurence (1974), Lipski (1987, 1993), and Mintz (1971) offer a different account of the Caribbean. They suggest that the socioeconomic conditions in the region during the first centuries of Spanish colonization did not lead to creole formation. It was only later, during the Cuban sugar boom of the 19th century, that the conditions for language decreolization might have been in place at some of the biggest sugarcane plantations; nevertheless, by that point, the majority of the blacks already living in Cuba could speak Spanish, and as such, the new captives, recently imported from Africa, did not creolize the local dialect, and their offspring learned Spanish natively.

The Barlovento dialect of Venezuela has been at the center of the same debate as well. Given the presence of certain features in this vernacular, Álvarez and Obediente (1998) have claimed a (de)creolization stage to account for them. However, a deeper historical analysis has also shown that the constraints on slave importation into the region were quite strict and a big part of the enslaved population was locally born. Moreover, a linguistic inspection of all the ‘creole-like’ structures proposed by Álvarez and Obediente (1998) has also shown that they are actually common vernacular features that do not necessarily imply any previous creole phase (Díaz-Campos and Clements, 2005, 2008).

An Afro-Portuguese creole origin has also been proposed for the Afro-Hispanic dialect spoken in Chota Valley, Ecuador. Schwegler (1999), in fact, argues for the presence in this vernacular of a Portuguese third person pronoun, ele, which, in his view, would be hard to explain unless we assume that the slaves who entered Chota Valley in colonial times could speak a creole-like Afro-Portuguese contact variety. Lipski (2009) offers a different perspective on the nature of ele. He suggests that ele should be seen as the result of a paragogic process of –e insertion that is quite widespread across the lexicon (e.g., ayere < ayer, ele < é, etc.). Pérez-Inofuentes (2015) paper represents yet another claim that tries to link a partially restructured Afro-Hispanic dialect, ABS, to a more creolized Afro-Portuguese variety. In this case, a decreolization process is also proposed to account for the current status of ABS. Contrary to the three studies cited in this paragraph, Sessarego (2013c, 2014b) provides additional data that cast some doubts on the creole hypothesis by showing how a variety of demographic, economic, social, and religious factors may have favored Spanish language acquisition over creolization in colonial Chota Valley.

African slavery officially ended in Bolivia in 1826, immediately after the country’s independence from Spain. However, in practice, black Bolivians continued to work as unpaid peons until the Land Reform of 1952. After the Land Reform, the majority of Afro-Yungueños remained in the region and became the new owners of small land parcels that once belonged to the hacendados. Basic public education was introduced in Yunguan communities in 1957; this factor, in addition to the higher degree of mobility achieved after the Land Reform, exposed Afro-Bolivians to other varieties of Spanish. As such, some features of traditional ABS – both at the morphosyntactic and phonological levels – have gradually been displaced by more prestigious HBS ones (Sessarego, 2012a, 2013b; Sessarego and Gutiérrez-Rexach, 2011).

In the realm of phonetics and phonology, Lipski (2008:69–80) identifies several segmental and suprasegmental features that distinguish traditional ABS from its surrounding HBS dialects, and make it more similar to other Afro-Hispanic varieties spoken in Latin America. As far as segmental features are concerned, he mentions: (1) aspiration/loss of syllable-final /s/ (tre < tres ‘three’); (2) loss of word-final /r/ (mujé < mujer ‘woman’); (3) yeismo (calle < calle ‘street’); (4) conversion of /l/> [h] (juerte < fuerte ‘strong’); (5) realization of prevocalic /i/ as [i] or [r] (toro < todo ‘all’); (6) neutralization of flap /l/ and trill /r/ (hora < hora ‘hour’: carreta < carreta ‘cart’); (7) paragogic vowels (ayere < ayer ‘yesterday’); (8) raising of final unstressed mid vowels (viejo < vieju ‘old’); (9) sporadic onset cluster reduction (costumbi < costumbre ‘custom’); (10) possible prenasalized consonants (this feature appears to be quite unlikely since it only appears in the word anchano, a mythical creature that belongs to the Afro-Bolivian oral tradition); (11) possible vestigial neutralization of /l/ and /r/ (negro < negro ‘black’) (this feature is not widespread and can only be found in a few nicknames, for example, Nolberto < Norberto). The information available on the suprasegmental features of ABS phonetics and phonology is more limited. Lipski (2008) points out the following patterns: (1) multiple high intonational peaks, or a series of early-aligned H* tones and minimal peak decay across non-exclamatory non-focused declaratives; (2) elongated main phrase stressed vowels with circumflex intonation, or phrase-final stressed syllables with elongated vowels, where a sharp rise-fall contour is found. Lipski (2008:69–80) points out that these prosodic features of ABS make the dialect highly recognizable to the ear of non-Afro-Bolivians in the country. In fact, the intonation of surrounding dialects – in line with standard Spanish – departs from the patterns cited for ABS intonation. For example, the neutral declaratives of these surrounding varieties generally favor post-tonic alignment of peaks associated with words in prenuclear position and the gradual decay of peaks across utterances.
Casting light on these issues is a highly complex task that requires deep levels of both linguistic and sociohistorical investigation. In the current paper, we do not provide a detailed sociohistorical account of ABS (cf. Sessarego, 2013b for an analysis); rather, we focus on the linguistic side of this task by presenting novel data on ABS intonation. In particular, we offer a preliminary and exploratory analysis of the word- and phrase-level phonological targets of ABS declaratives coming from a corpus of spontaneous speech. After identifying some of the more striking features that differentiate ABS from other native varieties of Spanish, we provide our initial thoughts on their origin (i.e., decreolization phase versus advanced L2 acquisition processes) and discuss what future work needs to address in order to build upon this study.

This paper consists of six sections. Section 2 offers an overview of the Autosegmental-Metrical model (Ladd, 1996, 2008; Pierrehumbert, 1980) adopted in this study. Section 3 provides a description of the methodology we used to collect and analyze the data. Section 4 presents our findings on ABS declarative sentences. Section 5 summarizes our results and sheds light on the potential origin of the prosodic features analyzed. Section 6 presents our concluding remarks.

2. Overview of intonational phonology in Spanish

The study of prosody deals with the intonational, rhythmic and stress patterns of languages. Stress, which describes the relative metrical prominence of lexical items, phrases, and utterances in discourse (Ladd, 1996, 2008; Liberman, 1975; Liberman and Prince, 1977), is of particular importance for the tenets of intonational theory. In individual words, syllables that are lexically specified for stress at the phonological level, which, in Spanish, belong to content rather than function words (Quilis, 1993), are realized with increased acoustic prominence compared to those that are not. One method of signaling such prominence is through accent, which, in this context, refers to fundamental frequency (F0) movement located in or near lexically stressed syllables (Face, 2003; Garrido, 1996; Hualde, 2006/2007, 2009; Quilis, 1993). While those such as Face (2003), Garrido (1996) and Rao (2009) claim that accent is the most important indicator of stress, other recent experimental work has demonstrated that duration and intensity at times play a role in cuing stress, regardless of the presence or absence of accent (Ortega-Llebaria, 2006; Ortega-Llebaria and Prieto, 2007, 2010).

Accent is particularly central to the Autosegmental Metrical (AM) approach to intonational phonology, in which individual or sequences of high (H) and low (L) F0 targets (i.e., tones) associated with stressed syllables form pitch accents, which are surrounded by intervening phonetic interpolation (Hualde, 2003). Above the syllable, AM also proposes that F0 is associated with other metrically prominent phonological targets at the edges of the hierarchically organized constituents in (1).

\[(1) \quad \text{Phonological constituents}^2\]

<table>
<thead>
<tr>
<th>IP</th>
<th>Intonational Phrase</th>
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<tbody>
<tr>
<td>ip</td>
<td>Intermediate Phrase</td>
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<tr>
<td>PW</td>
<td>Prosodic Word</td>
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<tr>
<td>F</td>
<td>Foot</td>
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<td>σ</td>
<td>Syllable</td>
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Intonational phrases (IPs) are generally demarcated by longer, easily perceptible pauses at their left and right boundaries. They are non-isomorphic with regard to syntactic structure and are considered to be meaning-bearing groups (von Heusinger, 2007). In general, declarative utterances used in previous work on Spanish from a lab perspective are regarded as containing one IP whose right edge is cued by F0 suppression corresponding with an L% boundary tone, lengthening effects, and a clear disjuncture in speech (i.e., >400 ms; Rao, 2010). However, the termination of an IP can show variation; for example, circumflex movement, or a final rise-fall configuration, is attested in the declaratives of some varieties (Butragüeño, 2004, 2006; Prieto and Roseano, 2010; Sosa, 1999). In the present paper, we view this configuration as preboundary cases in which F0 rises through the stressed syllable, peaks near the end of this syllable, and descends mainly through the post-tonic syllable (if there is one). We distinguish it from a faster preboundary contour in which both excursions occur within the confines of the stressed syllable (even when post-tonic syllables are present),

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1 Beckman et al. (2002) initiated an application of AM that is specific to Spanish, Spanish in the Tones and Break Indices Framework (Sp_ToBI), based on which a series of modified phonological notations have been proposed in more recent years (Estebas-Vilaplana and Prieto, 2008; Face and Prieto, 2007). In this paper, we will adopt some pitch accent and boundary tone transcriptional conventions that emerged from Sp_ToBI, but will not incorporate a breaks tier.

2 Details on the prosodic hierarchy in both AM and Prosodic Phonology are found in Gussenhoven (2004), Ladd (1996, 2008), Nespor and Vogel (1986), and Selkirk (1984, 1995, 2000). The clitic group and the mora are levels of constituents found in older, more syntax-based work (e.g., Hayes, 1989). However, more contemporary studies have deemed their inclusion unnecessary.
which has been attested in intonational studies on varieties such as Argentinian Spanish (Gabriel et al., 2010). Furthermore, intermediate phrases (ips) are shorter phrases housed within IPs that do not always contain completed thoughts. In Spanish, the boundaries of ips, which are typically transcribed as H- or L- boundary tones, are mainly cued by F0 continuation rises to the final syllable of words, sustained pitch, longer duration of words, stressed syllables and vowels, drastic modifications to the F0 range, and short pauses (D’Imperio et al., 2005; Elordieta et al., 2003; Prieto, 2006; Rao, 2007a,b, 2010; Toledo, 2006, 2007). Lengthening effects at both the IP and ip level are expected since this is arguably a universal phenomenon at prosodic boundaries (Rao, 2010). H- boundaries clearly indicate the continuation of an idea, while the L- variety often occurs after a non-terminal circumflex movement, often associated with narrow focus, which is facilitated by lengthening effects, or increased time for F0 to descend. Below both phrase levels is the PW, which is a domain associated with main stress in content words. A lexical item achieves PW status if it displays one or more of the previously mentioned acoustic cues to stress through its lexically specified stressed syllable. In particular, those who claim that F0 is the most salient cue to stress in Spanish employ methods in which deaccented (i.e., failure to bear a pitch accent) words also lose their status as PWs (Rao, 2009).

We will now further elaborate on the major prosodic characteristics of Spanish declaratives with an emphasis on pitch accent differences between prenuclear (i.e., non-final) and nuclear (i.e., final) phrase or utterance positions. Most of these results come from controlled studies conducted in a lab setting and most focus on broad and/or narrow focus conditions. With regard to prenuclear positions, in the majority of dialects of Spanish, PWs in phrase-initial position generally manifest an accent in F0 through their stressed syllable, resulting in the highest peak of the phrase, which is followed by gradual peak decay (i.e., downstepping) across the utterance (Prieto, 1998; Prieto et al., 1995, 1996). In prenuclear words in general, F0 valleys are typically anchored to the stressed syllable onset and are followed by a rise to a peak in the post-tonic syllable. This tendency is phonologically transcribed as an L + >H* sequence, where > denotes post-tonic peak alignment and * references the tone more strongly associated with the stressed syllable. Another prenuclear pattern identified in previous work is F0 staying low through the stressed syllable, beginning its rise at the offset and peaking post-tonically (Face, 2001; Hualde, 2002). This sequence is labeled L* + H. Only recently have perceptual studies called for a declarative/interrogative distinction, based on where the rise originates, between L + >H* and L* + H (Prieto and Roseano, 2010). Overall, post-tonic alignment characterizes situations in which there are enough intervening unstressed syllables to temporally facilitate F0 transitions between the excursions associated with stressed syllables. In cases in which a stressed syllable’s peak is closely followed by another stressed syllable, the second movement can be a high F0 plateau (i.e., H*) or deaccenting in one of the stressed syllables may be observed. Finally, it should be noted that both syllable structure (i.e., open versus closed) and speech rate can influence prenuclear peak alignment (Prieto and Torreira, 2007). In sum, we note that F0 has a very active role in and around stressed syllables of prenuclear PWs, especially in phrase-initial position.

Concerning nuclear position, Romance languages closely follow the Nuclear Stress Rule (Chomsky and Halle, 1968) in constituents of the prosodic hierarchy, meaning the right-most element of a prosodic domain is the most prominent. However, the cue to such salience can vary by constituent. For example, in IP-nuclear position of declaratives, word salience is often achieved through final lengthening, with F0 being reduced to a relative low (i.e., final lowering). While such low F0 levels correspond with deaccenting in prenuclear position, a phonological sequence transcribed as an L* pitch accent followed by an L% IP boundary tone is attached to words in IP-nuclear position due to this position’s prominence (Prieto and Roseano, 2010). Furthermore, the fact that F0 continuation rises or plateaus cue H-, and rise-fall contours can cue L-, shows that F0 is more active in nuclear position of the ip level than the IP level in declaratives. In phrases that are non-IP-final, H- is the more commonly cited boundary tone in the declaratives described in previous work, while the infrequent L- has been attested in specific declarative structures such as dislocations (Aguilar et al., 2009). Finally, in nuclear position in general, when F0 peaks are present, they are typically pushed leftward into the stressed syllable, due to an upcoming phrase boundary, and thus do not show the delay in alignment seen in prenuclear position. This pattern is phonologically denoted as L + H*. When it is followed by an L phrase boundary, the pitch accent + boundary sequence is deemed a circumflex tonal configuration. It is noteworthy that the L + H* pitch accent, or peak alignment within the stressed syllable, has been reported as occurring in prenuclear position in both broad and narrow focus in words with oxytonic stress (Hualde, 2002; Listerri et al., 1995) and in situations of Spanish in contact

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3 Studies focusing on the syntax–prosody interface refer to this lower level phrase as a phonological phrase (PPH). PPHs refer to major syntactic phrases (XPs) in which heads dominate lower constituents, such as noun phrases (NPs), verb phrases (VPs), and adjectival phrases (APs), while IPs are associated with larger syntactic clauses (Nespor and Vogel, 1986; Selkirk, 1984; Truckenbrodt, 1999).
4 For a list of less common ip and IP boundary tones, which are not described here, see Aguilar et al. (2009).
5 Main prominence may fall in prenuclear phrase position of utterances or phrases in cases of narrow focus, though the unmarked method of conveying such emphasis in Spanish is via syntactic reconfiguration (Face, 2001). Beyond this, another way of conveying narrow focus is by housing words in their own ips, which has the same effect as being in nuclear position because in both cases, words occur just before a phrase boundary.
with a wide range of other languages, such as Basque (Elordieta, 2003), Italian (Colantoni, 2011; Colantoni and Gurlekian, 2004), Quechua (O'Rourke, 2004, 2005), Veneto (Barnes and Michnowicz, 2013), and Yucatec Maya (Michnowicz and Barnes, 2013).

The majority of the studies outlined to this point are based on data collected in a controlled setting. As such, the intonation of naturally occurring speech is a research area that remains relatively unexplored, namely due to the pragmatic complexity involved in this speech style, related to issues such as emotion, relationship between interlocutors, communicative context, and negotiating turn-taking strategies (Face, 2003). These types of uncontrollable variables make coding and categorizing the pragmatic functions of spontaneous speech very challenging. Hidalgo Navarro’s (1998, 2001) studies on colloquial varieties of Peninsular Spanish focus on pitch rises and falls and their relationship with pragmatic uses such as humor, communicating an order, and emphasis. Furthermore, Face (2003) details differences between lab and spontaneous speech in Spanish. His comparison reveals a lesser degree of final lowering and downstepping in spontaneous speech, but more instances of earlier peak alignment and deaccenting in this speech style. In an effort to expand upon Face (2003), Rao’s (2006) speech act data set, which comes from semi-spontaneous speech, suggests that information structure and emotion are core reasons for the trends cited in the former study. Additionally, Rao’s data show a correlation between increased emotion and fewer words in prosodic phrases. Furthermore, specifically connected to the deaccenting point made by Face (2003), Rao (2009) examines deaccenting in the spontaneous speech of Barcelona Spanish. His rates of deaccenting approximate those of Face (2003), with statistical models uncovering that effects such as word length, frequency, recent repetition in discourse, grammatical category, and position within the phrase all significantly contribute to this phenomenon.

In terms of linguistic varieties tied to the Afro-Hispanic tradition or Bolivian Spanish as a whole, very little is known about their intonational systems. Lipski (2007) observes sequences of H* pitch accents, and thus, a lack of valleys and downstepping, at least in his data from Chocó (Colombia), Tacarigua (Venezuela), Curundú (Panama), and Afro-Cuban bozal Spanish. Hualde and Schwegler (2008) also attest this same trend in their intonational analysis of spontaneous speech in Palenquero, arguing that the series of H tones is an artifact of Palenqueros’ reinterpretation of Spanish stress at some point during the evolution of this creole. Correa (2012) compares Palenquero’s intonation with that of the Spanish (i.e., kateyano) spoken in this region of Colombia through spontaneous corpora. He reports an absence of phonological differences between the two varieties, which he claims have simpler intonational systems than most related varieties documented in previous studies. Finally, regarding phonological targets, the inventory he mentions contains allotones of H* that are higher or lower than preceding peaks, L + H* in narrow focus conditions, and L% and H% boundary tones.

A summary of frequently occurring pitch accents in Spanish, illustrating F0 movement in relation to stressed syllables, is shown in Fig. 1. The only one not previously detailed is H + L*, which is most common in nuclear position of some interrogatives, but can occur in declaratives in some dialects based on pragmatic variation (Prieto and Roseano, 2010). Additionally, when individual H and L tones in any of these pitch accents are associated with an abrupt F0 increase or decrease from their preceding identical tone in the same ip, upstep (i) or downstep (!) notation, respectively, can be
implemented. An example of peak upstep is seen in Fig. 1 for L + jH+. Such upstep can break the expected downstepping in a declarative in order to convey narrow focus of a word, at times prior to a phrase boundary.

3. Methodology

We analyzed several recorded sociolinguistic interviews that were carried out during the summers of 2008 and 2009, and the winter of 2010 with two male ABS speakers residing in the community of Tocaña, North Yungas. The informants were native speakers of the dialect who did not speak any other language spoken in Bolivia, such as Quechua or Aymara. At the time of the interviews, the speakers were in their late 80s. They grew up and lived their entire lives in Tocaña and, even after the Land Reform of 1952, remained in this rural village, where they continued to carry out agricultural activities. Their speech is therefore among the most traditional varieties of ABS and is quite divergent from the speech of younger generations, which generally tends to converge more significantly toward HBS due to recent contact with this more prestigious Spanish dialect.

The interviews were conducted by letting the informants talk about any topic of their liking and asking them follow-up questions, in line with the principle of Tangential Shift (Labov, 1984:37). The goal was to reduce the Observer’s Paradox (Labov, 1972) as much as possible. A subset of 1016 stress bearing words belonging to declarative utterances in the collected spontaneous interviews was acoustically analyzed in Praat (Boersma and Weenink, 2013). As previously noted, this study is one of the first of its kind when considering variety of Spanish and speech style, and therefore, we decided to solely focus our exploratory analysis of ABS declaratives on inventoring prenuclear and nuclear pitch accents, as well as phrase boundary tones. Due to the complications involved in distinguishing pragmatic meaning in spontaneous speech, only declaratives that sounded relatively neutral, which were mainly targeted based on being responses to interview questions that were less emotionally loaded, were selected for inclusion in the data set.7 First, we parsed the discourse into ips and IPs by identifying previously cited phonetic cues to each boundary. Recall that for ips, this involves some combination of F0 rises, rises to a plateau, lengthening effects, and short pauses, while IP cues are typically signaled by final lowering, decreased intensity, final lengthening, and/or longer pauses. Once we determined where phrase boundaries were located, we coded stressed words as being in ‘initial’, ‘medial’, ‘nuclear’, or ‘single’ (i.e., a subcategory of ‘nuclear’ with just one PW/phrase) at the ip level. We further distinguished nuclear and single cases that ended ips versus those that were also at terminal, IP boundaries in order to facilitate the analysis of nuclear configurations at both phrasal levels of the prosodic hierarchy. A generic representation of this description of word- and phrase-level coding is illustrated in (2), where we show six PWs unevenly distributed across three ips, all of which are embedded in one IP.

(2) Sample coding of phrases and words

\[
\begin{array}{c|c|c|c}
\text{PW} & \text{PW} & \text{PW} & \text{PW} \\
\hline
\text{IP} & \text{IP} & \text{IP} & \text{IP} \\
\text{IP} & \text{IP} & \text{IP} & \text{IP} \\
\text{IP} & \text{IP} & \text{IP} & \text{IP} \\
\end{array}
\]

Next, we located the valleys and peaks of all stressed words with respect to the onset and offset of stressed syllables, respectively (vertical lines of schematics in Fig. 1). A rise from a valley was considered as culminating in a peak if the rising F0 movement was at least 7 hertz (Hz) (O’Rourke, 2005, 2006; Rao, 2009).8 The same value was used to determine if a peak or valley exhibited downstep or upstep with respect to its preceding peak or valley (O’Rourke, 2005). This particular value for examining F0 height differences is inspired by the findings of Klatt (1973) and Pierrehumbert (1979) and has been employed in both controlled (e.g., O’Rourke, 2006) and spontaneous (e.g., Rao, 2009) Spanish intonational data. Finally, the aforementioned phonetic evidence observed in or near stressed syllables and at phrase junctures was utilized as a basis to transcribe pitch accents and boundary tones associated with stressed syllables and right edges of breaks in

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7 The perception of utterances as more or less neutral is difficult to quantify. We discarded entire declaratives in which an acoustic measure such as F0, intensity and/or duration were clearly higher than what we estimated as the relative norm for each speaker. However, cases in which just one word may have been perceived as emphasized were maintained in hopes of potentially providing some degree of insight on effects of narrow focus on our findings.

8 O’Rourke (2006) provides detailed comments on the 7 Hz threshold value. It is worth noting that other thresholds are attested in work on Spanish; for example, Robles-Puente (2011) uses 5 Hz. However, such a minute difference would not affect the current data analysis at all.
discourse, respectively. Coding the word-level data by position allowed us to comment on prenuclear and nuclear pitch accent inventories, while looking at both phrase levels helped us examine whether or not our participants phonetically and phonologically distinguished terminal and non-terminal junctures in speech. Finally, the stress pattern (i.e., oxytone, paroxytone, proparoxytone) of all tokens was also noted since, as previously mentioned, peak alignment in oxytones has been shown to behave differently than that of words with other stress patterns.

4. Pitch accents and phrase boundary tones observed

This section details the phonological targets found in our ABS data through a series of frequency tables. The results for the two speakers are grouped together because there were no major differences between their individual trends. In terms of stress patterns of the 1016 tokens, 65.1% are paroxytones, 33.1% are oxytones, and 1.8% is proparoxytones. Additionally, adjacent lexical stresses, which impede potential displacement of the first of two peaks, are observed in just 2.7% of the entire data set. Given the differences between prenuclear and nuclear position previously overviewed, the pitch accent results are divided into two position-based sections. The shape of F0 excursions supporting the proposed phonological targets is also addressed. Finally, once the overall intonational patterns are discussed, characteristic F0 contours, accompanied by pitch and phrase accent transcriptions, are provided.

4.1. Prenuclear position

Recall that in most varieties of Spanish, broad focus declaratives demonstrate prenuclear peaks, derived from an F0 rise from a valley anchored to the stressed syllable onset, that are typically realized in the post-tonic syllable. This trend is phonologically labeled L* + H in relatively older work on Spanish intonation and L + >H* in newer work (e.g., Prieto and Roseano, 2010). Early alignment within the stressed syllable, or an L + H* pitch accent, in prenuclear position is often interpreted as narrow focus, or emphasis on a word. In our ABS data, the prenuclear broad focus peak alignment pattern is clearly broken; that is, prenuclear peaks are located within stressed syllables at a 96% rate. However, as attested in previous literature, valleys are categorically manifested at stressed syllable onsets. Furthermore, in 16.7% of tokens prenuclear items, F0 appears flattened and at a relatively low level compared to its range in an utterance. Outside of nuclear position, such suppression corresponds with a stressed word being deaccented. The patterns mentioned to this point are shared by F0 movements in words in both initial and medial phrase position; however, the distinct nature of these positions, in particular, due to the lack of preceding F0 activity in initial position, and thus, the inability to exhibit upstep or downstep, leads us to divide the presentation of prenuclear pitch accents into two subsections.

4.1.1. Initial position

As expected based on our observations of alignment trends, Table 1 illustrates that the predominant phonological target in initial phrase position is the bitonal L + H* pitch accent, where the valley is anchored to the stressed syllable onset and the peak is manifest within the confines of the stressed syllable. Interestingly, of the minority phonological options, the most frequent is to not implement a pitch accent, or to deaccent initial words. In the data, deaccented items are relatively short in length, frequent across the Spanish language and/or a recently repeated item in discourse (e.g., forms of haber (‘there is’), otro (‘other’) ese (‘that’)). The final noteworthy, yet relatively infrequent, pitch accent produced is the monotonal H*. This configuration is associated with an F0 plateau, meaning in such cases, F0 begins an ip at a high point in the tonal range and maintains its level through the stressed syllable without manifesting a preceding valley. In sum, while deaccenting and plateaus do exist in our ABS data, we emphasize that the L + H* pitch accent with peak alignment within the stressed syllable that is often tied to nuclear position and prenuclear narrow focus is clearly the preferred tonal sequence here.

4.1.2. Medial position

Phrase internal words show increased complexity due to the potential influence of F0 activity on either side. The first trend of note in the current ABS data is that the prenuclear downstepping in the ip domain commonly found in the broad

<table>
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<tr>
<th>Pitch accent</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>L + H*</td>
<td>76.0%</td>
</tr>
<tr>
<td>None</td>
<td>14.7%</td>
</tr>
<tr>
<td>H*</td>
<td>7.4%</td>
</tr>
<tr>
<td>Other</td>
<td>1.9%</td>
</tr>
</tbody>
</table>
focus declaratives of many varieties of Spanish is exhibited in less than 10% of our data. Interestingly, in this ABS speech, medial peaks occur at either the same F0 level as their respective preceding high or, in some cases, at higher levels, demonstrating evidence of upstep. The pitch accent listing in Table 2 suggests that there are three general phonological outcomes in phrase medial position. As expected based on the introductory comments to this section, a rise to a peak in the stressed syllable is the most observed sequence, as seen in the first row of Table 2. When considering the results of rows four and six, we see that allotones of L + H* are also attested, albeit at a cumulative frequency of just 11.6%. Of these two allotones, upstepping the valley, or jL + H*, which subsequently triggers a higher peak as well, is observed slightly more than beginning at a valley comparable to or lower than the preceding one and rising to a peak higher than its predecessor, or L + jH*. Given that our data include declaratives judged as being non-emphatic as a whole, but with certain cases of specific items demonstrating increased salience, we suggest that tonal upstep is a strategy of communicating increased prominence in phrase medial position. Overall, combining types of L + H* in Table 2 informs us that, once again, this tonal sequence is preferred (53.8%), but not as favorably as in initial position. Additionally, examining rows three and five sheds light on the second most frequent pattern, a plateau corresponding with H*, which occurs at a rate of 24.5%. In general, this plateau is a continuation of the F0 high from the previous word (H*); however, to a lesser extent, it first demonstrates an F0 drop relative to the previous peak before plateauing (!H*), though this activity still takes place at the higher end of the phrasal F0 range. Regardless of where the plateau is exhibited, it is worth noting that the data do not reveal evidence of a series of plateaus, but rather individual plateaus produced for temporal reasons related to the few cases of stress clashing we found or to having relatively few intervening syllables between adjacent stresses. Finally, the third finding of note is deaccenting, which we find for the same types of words as described in initial position, but at a higher rate of 19.2% in medial position. In such examples, F0 drops drastically after its phrase initial excursion and then rises again for its nuclear configuration, resulting in a period of F0 sag. However, we do not find prolonged F0 sags with consecutive items being deaccented.

4.2. Nuclear position

This section contains the results for the analysis of nuclear pitch accents, as well as ip and IP boundary tones. The break down of these word and phrase level phonological targets is done for preboundary words in general and, when significant, the findings for words housed in their own ips are separated from cases of ips with two more words due to potential pragmatic differences between the two patterns (i.e., individual phrasing as a narrow focus strategy).

4.2.1. Nuclear words in ips with two or more words

From the outset of this section, it should be noted that the pitch accent outcomes in nuclear position of non-IP-final ips, as well as IP-final ips are nearly identical, and thus, these two contexts are not presented separately. This in and of itself is a peculiar phenomenon when compared to previous work on Spanish, where non-terminal junctures generally exhibit significant F0 activity and terminal moments often contain a level of suppressed F0 corresponding with the monotonal L*. As previously mentioned, in nuclear position, peaks rising from valleys always align within the stressed syllable in our data, which is the expected trend due to following phrase boundaries that impede displacement in order to avoid tonal crowding. Three of the pitch accents in Table 3 reflect this result; the cumulative total of rows one, two, and five demonstrates that L + H* and two of its allotones are manifested in 73.2% of nuclear words. The most common sequence is L + H*, where the peak occurs at a similar level to its preceding peak. The two upstepped allotones were also discussed as relatively infrequent targets in medial position but here, the variant with an upstepped peak is actually the second most frequent. The increased rate of upstep, which, to reiterate, we view as a focal strategy in the speech of our speakers, in this phrase position when compared to medial position could be attributed to Spanish’s default tendency of nuclear position
bearing the highest degree of relative prosodic prominence. The boost in F0 level to convey emphasis in nuclear position is needed in order to distinguish emphasis on a nuclear word from simply natural nuclear prominence on a word. Furthermore, since there are no instances of peak displacement in our nuclear data, L + >H* and L* + H are completely absent in this position. Finally, the monotonal L* and H* are attested in both IP-internal and IP-final ips; that is, at terminal and non-terminal points in discourse, albeit at very low frequencies compared to variants of L + H*.

4.2.2. Nuclear words in an individual ip

When words are housed in their own ips, the analysis is much clearer than that of the previous section because upstep or downstep do not need to be considered. Once again, the results at terminal points in discourse resemble those of non-terminal points, which is why these two junctures are not treated separately here. An examination of Table 4 shows that the L + H* pitch accent is preferred at a strikingly high frequency. When comparing these results with those of the previous section, one could conjecture that of the two cases of words in nuclear position (displaying relative prominence as phrase heads), individual phrasing is a narrow focus strategy on the one hand, while some type of nuclear upstep is used to cue a similar, emphatic meaning when at least one prenuclear word shares an ip with such nuclear items. Finally, at this point, we note that the main takeaway from the first four tables of this section is that our data provide evidence implying that L + H* is the favored underlying pitch accent in both prenuclear and nuclear phrase positions in the speech of our ABS speakers.

4.3. Boundary tones

Recall that most previous studies on Spanish declaratives have typically found that H- or L- signal non-terminal junctures, or ip boundaries, while L% is commonly associated with terminal breaks, or IP boundaries.\(^9\) Table 5 displays our findings for both phrase boundaries. At the ip level, our ABS data favor an L- boundary tone in almost exactly two-thirds of ips. This is almost triple the frequency of the H- variety. On the other hand, at the IP level, final lowering to L% is the overwhelming preference, as anticipated. In sum, the same tone type is typically implemented at longer and shorter phrase boundaries generally associated with different discursive functions. Coupling the high frequency of L + H* pitch accents with the high frequencies of L- and L% indicates that circumflex configurations are common at the ends of both phrase types.

Unlike the previous section detailing nuclear pitch accents, our phrase boundary results do yield differences based on number of words per ip. Table 6 illustrates boundary tone frequencies for ips with multiple words. The findings are divided by position within the IP; the level denoted ‘ip’ deals with non-IP-final ips, while the ‘IP’ level is tied to an ip that represents the end of the larger IP. Examining Table 6 alongside Table 5 reveals that the main disparity exists in the ip category. When two or more words are in an ip, the rate of the L- phrase accent (and thus, rise-fall contours) increases, while that of

\(^9\) Following Prieto and Roseano (2010), in IP-nuclear position, the ip boundary is simply assumed to be present and of the same type as the IP boundary. As such, ip boundaries were not transcribed at IP-terminal junctures (e.g., we provide L% rather than L–L%).
Table 5
Overall phrase boundaries in nuclear position (n = 250 ip, 204 IP).

<table>
<thead>
<tr>
<th>Phrase level</th>
<th>Boundary tone</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip</td>
<td>L-</td>
<td>66.8%</td>
</tr>
<tr>
<td></td>
<td>H-</td>
<td>24.8%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>8.4%</td>
</tr>
<tr>
<td>IP</td>
<td>L%</td>
<td>88.7%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>11.3%</td>
</tr>
</tbody>
</table>

Table 6
Boundaries in ips with more than one word. For IPs, this refers to the boundary after an IP-final ip with more than one word (n = 161 ip, 152 IP).

<table>
<thead>
<tr>
<th>Phrase level</th>
<th>Boundary tone</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip</td>
<td>L-</td>
<td>70.8%</td>
</tr>
<tr>
<td></td>
<td>H-</td>
<td>20.5%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>8.7%</td>
</tr>
<tr>
<td>IP</td>
<td>L%</td>
<td>88.2%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Table 7
Boundaries in ips with one word. For IPs, this refers to the boundary after an IP-final ip with one word (n = 89 ip, 52 IP).

<table>
<thead>
<tr>
<th>Phrase level</th>
<th>Boundary tone</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip</td>
<td>L-</td>
<td>59.6%</td>
</tr>
<tr>
<td></td>
<td>H-</td>
<td>32.6%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>7.8%</td>
</tr>
<tr>
<td>IP</td>
<td>L%</td>
<td>90.4%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>9.6%</td>
</tr>
</tbody>
</table>

H- decreases. On the other hand, the frequencies linked to boundaries concluding an IP are virtually identical in this table and the preceding one.

Finally, Table 7 accounts for boundary conditions when ips contain just one word. Once again, the primary difference between this table and the previous two is in non-IP-final ips. The upper half of Table 7 conveys that while L- is still the most frequent boundary tone, it is less frequent compared to non-IP-final ips with multiple words. The reduction of L- (and thus, rise-fall contours) in this context is offset by an increase in instances of H-. Additionally, at terminal junctures, an increase in L% frequency is found when one word is present in nuclear ips, but the rate of this boundary tone is almost the same in this table and Table 6. Overall, the number of words in non-IP-final ips does seem to have a slight effect on ip boundaries in that the individual phrasing of such ips increases the manifestations of H-; however, we must not take attention away from the most notable result of this section, which is that low boundaries predominate at both levels of phrases.

4.4. Sample F0 contours

This section provides and describes four figures that illustrate the trends that emerged in our pitch and phrase accent analyses for prenuclear and nuclear contexts. Fig. 2 displays a production of Ha vivido muchos años ese (‘That guy has lived many years’). Here, the valley-to-peak rise of 21.7 Hz that occurs within the stressed syllable of vivido (‘lived’) is indicative of an L + H* label. Similar excursions of 24.7 Hz and 21.1 Hz within the stressed syllables of muchos (‘many’) and años (‘years’; the coda /s/ has resyllabified with initial /a/), respectively, are also associated with L + H*. The peaks of
these three words are manifested between 138 and 142.3 Hz, demonstrating a lack of downstep across prenuclear items across this ip. In fact, even the valleys of these three words are located within just a 9 Hz range. Finally, the word in nuclear position, ese (‘that guy’), exhibits rising F0 activity of less than 7 Hz and is located in a lower F0 region relative to prenuclear items. As such, we see a case of final lowering in this ip head, associated with L*. This nuclear pitch accent is followed by an L- phrase accent, after which the speaker briefly pauses before continuing the same thought.

In Fig. 3, we see a contour reflecting an articulation of Después había que hacer camani (‘Later one had to do work’). The first three, prenuclear content words of this ip all show the same phonetic and phonological patterns revealed in Fig. 2: peaks located within the stressed syllable and peaks and valleys occurring at relatively close levels. This main distinction to be drawn between this figure and the previous one deals with nuclear position, where in Fig. 3, there is a drastic F0 rise of 134.9 Hz (170.6–305.5) within the stressed syllable rather than flattening. The large increase in peak height relative to that of hacer signals the upstepped variant L + iH*. The peak of this nuclear word, camani, is reached near the border of its stressed syllable and is followed by a fall throughout the post-tonic syllable, ending at the low juncture of 106.3 Hz. This final low point corresponds with an L- phrase accent and is followed by the speaker moving along in his discussion of the same idea. This sharp nuclear circumflex movement suggests additional emphasis on the word camani.

Next, Fig. 4 contains a contour of the utterance El patrón no sirve para nada (‘The owner is useless’). The words patrón and sirve mirror our prenuclear observations in the previous two figures; they have a 26.8 Hz and 25.5 Hz rise to a peak within the stressed syllable, and are thus phonologically transcribed as L + H*. The peaks of these two words are also manifested at similar heights (only 4.1 Hz difference), meaning there is not evidence of downstep here either. The valleys across the utterance are also realized within just a 10 Hz range. However, one difference between the contour of Fig. 4
and those of Figs. 2 and 3 is that in the latter we see a plateau, or an H* pitch accent. While our review of previous work on relevant creoles described H* as being a dominant characteristic, we must distinguish such cases from the present data, where this monotonous pitch accent is not the rule but an exception. That is, it is specifically conditioned by stress clash environments, such as between *patrón and no*, where there is not enough time to realize a rise-fall excursion through no, which is resolved by high F0 maintenance through this monosyllabic word. The duration of the /o/ in no allows for a drop to a valley just after the onset of *servé*. Ultimately, in nuclear position, we observe the highest peak of this ip, aligned within the stressed syllable of *nada* (thus the upstep notation on L + H*). This pitch accent is followed by a sharp drop in the post-tonic syllable terminating in an L- phrase accent, followed by a short pause and the continuation of the speaker’s thought. Comparing this figure to Fig. 3 reveals that the nuclear configurations are phonologically the same, which is our point of emphasis; however, it merits noting that the rise-fall activity in Fig. 3 is much longer and sloped, presumably in order to convey increased emphasis or emotion.

The last representative contour we address is in Fig. 5, which deals with a production of *Yo siempre más harto que todo ellos* ('I am always much more than all of them') that is divided into two ips. The first feature of interest is the valley upstep that takes place in the second L + H*, associated with *siempre*. After a relatively long rise through *yo*, the stress clash with *siempre* prevents F0 from descending closer to its previous valley level. The slight F0 drop between these two words is evidence of a valley, but one that is much higher than that of *yo*, or upstepped. The F0 then remains high until another monosyllabic word, *más*, through which there is sharp downward movement. This reversal of the typical F0 movement we have seen in our data is associated with the highly infrequent H + L* pitch accent. Upon comparing Figs. 4 and 5, one idea that arises is that monosyllabic words create temporal issues that result in the appearance of certain less frequent pitch accents. Next, *harto* is in nuclear position of the first ip and displays another L + H* pitch accent before descending to an L- boundary that precedes a very short pause. Even though syllable structure was not a primary variable of interest in our analysis, it is worth highlighting that the words *siempre* and *harto* in Fig. 5, which contain closed stressed syllables, and the words *vivido, mucho* and *años* in Fig. 2, which all have open stressed syllables, all bear an L + H* pitch accent. As such, we could preliminarily posit that prenuclear intonational alignment in our ABS data is not altered by syllable
structure, which differs from what one might expect based on Prieto and Torreira’s (2007) findings for Peninsular Spanish. Finally, after F0 reset in the second ip, back up to a higher level, and two more L + H* sequences, there is a second descent in the post-tonic syllable of the IP-nuclear ellos. At this point, the speaker pauses for a longer duration, indicating that he is done with the description of an event. A crucial observation in nuclear position of the two ips is that regardless of whether the juncture is terminal or non-terminal, the configuration of L + H* preceding a low boundary tone is the same. Overall, the unique phenomenon of extending similar phonological activity across all discourse domains in our data is an important concept that we will return to and reinforce in the upcoming section.

5. Summary of features and suggestions on their origin

This paper has provided an analysis of pitch accents and boundary tones in the intonation of ABS, whose patterns seem to diverge from those of other native varieties of Spanish. The most salient features we identified are summarized in the following list:

(a) Earlier prenuclear peaks corresponding with higher frequencies of the L + H* pitch accent, which seems to be the default declarative word-level target.
(b) The L tone commonly appearing at both ip and IP boundaries.
(c) Evidence of frequently occurring circumflex movement at the ip and IP levels.
(d) A general lack of downstep and some observed uses of upstep as a means of signaling emphasis.
(e) Combining (a–d) implies the potential perception, by speakers of dialects that do not implement these features, of a generalized use in ABS of narrow focus intonational tendencies.

Of all these features, the one that has been reported for a number of contact varieties of Spanish is (a): earlier prenuclear peaks (Barnes and Michnowicz, 2013; Colantoni and Gurlekian, 2004; Elordieta, 2003; Michnowicz and Barnes, 2013; O’Rourke, 2004, 2005). In some relevant studies, such a pattern has been ascribed to a potential substrate influence. Indeed, Hualde and Schwegler (2008) suggest that Palenqueros reinterpreted Spanish stress as a lexical H tone, in line with Bantu patterns, while O’Rourke (2004, 2005) has suggested a similar substrate effect for the Spanish of Cuzco in contact with Quechua. In this Andean Spanish dialect, in fact, high tones coincide with prenuclear stressed syllables, a pattern also encountered in the regional variety of the indigenous language. Similarly, prenuclear peaks are commonly observed within Italian stressed syllables, which has been a reason mentioned behind the unique alignment patterns found in Argentine Spanish (Colantoni, 2011; Colantoni and Gurlekian, 2004). On the other hand, other investigations have repeatedly reported the same feature for varieties of Spanish in contact with languages that do not present such a prosodic pattern in their tonal inventory: Veneto, Basque, and Maya (Barnes and Michnowicz, 2013; Elordieta, 2003; Michnowicz and Barnes, 2013). In particular, Michnowicz and Barnes (2013) suggest that earlier prenuclear peaks could be thought of as a sort of default strategy, generalized from nuclear position, or prosodic phrase heads, which tends to appear in contact varieties of Spanish and that should not be necessarily ascribed to any specific substrate effect (cf. Gooden et al., 2011 for a broader-scoped discussion of closely related issues). In the case of ABS, as well as for the rest of the AHLAs, it is tempting to claim that such a feature may be seen as the result of some African substrate effect. Nevertheless, if we approach this issue from a broader perspective, which acknowledges the linguistic findings of this latter group of researchers, the hypothesis of a general default/simplification (of pitch accent inventory) strategy may provide some interesting insights. If we look at the L + H* pattern in this way, we may tentatively hypothesize that it consists of an advanced L2 feature, which was conventionalized and nativized by following generations of ABS speakers, along with many other advanced SLA strategies that left an undeniable imprint on the morphosyntactic system of ABS and of many other AHLAs (Sessarego, 2013a).

In addition, if we contextualize this feature within the list of the other patterns identified in the current study, the default strategy hypothesis acquires further momentum. In fact, the proficient use of the inventory of pitch accents and phrase boundary tones of native varieties outlined earlier in this paper by L2 speakers requires the mastery of the (intonational) phonology/pragmatics interface, since both phonological and discourse features are involved. Our data may indicate that,

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10 An anonymous reviewer correctly points out that claims on potential African substrate effects should be very cautious since there is far from sufficient research on the effects on the prosody and intonation in Spanish from contact with African languages. On the other hand, in this study we preferred to account for the phenomena observed in ABS as the results of advanced L2 acquisition processes, which are – to a certain extent – independent from the specific L1s involved in the contact situation. We decided to parallel these prosodic patterns with well-known morphological reductions, which are commonly found in Afro-Hispanic dialects (cf. Lipski, 2005). Nevertheless, we would like to say that some caution has to be used also in this case, since not much research has been conducted on analyzing the relation between the evolution of prosodic and morphological features in contact situations.
at a certain point in the evolution of this dialect, Afro-Bolivians did not acquire a perfect command of such a linguistic interface and that the resulting intonational patterns were subsequently conventionalized and nativized by the following generations. What we observe in ABS is a lack of differentiation between prosodic patterns that are usually employed in Spanish to indicate certain pragmatic contrasts. Indeed, our traditional ABS data points to a simplified set of intonational phonological targets: its pitch accent inventory is reduced, as L + H* is preferred in prenuclear context and not just in the prosodically salient nuclear phrase position; it appears that phonetic upstep, rather than phonological contrast through tonal alignment modifications, seems to be the main method of conveying increased emphasis, although this is based on a relatively low frequency of tokens; L + H* occurs at both terminal and non-terminal junctures, rather than distinguishing between L + H* at ip boundaries and final lowering to L* at IP boundaries, as many varieties of Spanish do in their declaratives; the L boundary tone is preferred in both phrase types (ip and IP), rather than clearly using H- at ip junctures to indicate the continuation of a thought; temporally speaking, the preference for L boundaries preceded by L + H* pitch accents suggests considerable preboundary lengthening effects that facilitate a rise-fall excursion; and, finally, the cumulative phonological results pragmatically translate to what speakers of many other varieties of Spanish could perceive as an overgeneralization of narrow focus or emphatic intonational strategies. Furthermore, based on the differences between lab and spontaneous speech pointed out by Face (2003), one could argue that the disparate trends we uncovered are simply an artifact of the more natural speech style of our data. One potential counterargument to this stance is that our data show much lower rates of downstepping than those of Face, indicating that what we observe is an intonational preference dictated by more than just speech style. Claiming a primary influence of speech style would also suggest that our speakers had high levels of emotion, and thus, narrowly focused speech in the entire data set or that they employed a very high degree of specific pragmatic intents that are accompanied by emphasis. Based on the subset of data taken from the large corpus of interviews we had to work with, we do not believe that the hypothetical arguments just pointed out are completely accurate. In terms of stress pattern, recall that oxytones have been cited as generally having peaks located within the stressed syllable. While oxytones did comprise one-third of our data, and thus could have had some degree of influence on the high frequency of L + H* pitch accents, we view the general tendency to produce this pitch accent, regardless of the stress pattern of words, as our most important observation with regard to stress pattern. Finally, it is highly unlikely that stress clash played a role in our results since it was rarely found in the data.

All these prosodic features, which may be interpreted as the result of imperfect advanced L2 acquisition strategies, are perfectly in line with a number of other elements that are widely encountered in ABS, as well as in other AHLAs, which in some cases have been ascribed to a previous creole stage (e.g., Perl and Schweger, 1998): (1) use of non-emphatic, non-contrastive overt subjects (Sessarego and Gutiérrez-Rexach, 2016); (2) invariant verb forms for person and number (Sessarego, 2012b); (3) lack of gender and number agreement in the Determiner Phrase (Sessarego, 2013d; Sessarego and Gutiérrez-Rexach, 2011); (4) lack of subject–verb inversion in questions (Sessarego, 2013a); (5) bare nouns in argument position (Gutiérrez-Rexach and Sessarego, 2011). Such phenomena have been described as advanced conventionalized L2 acquisition strategies, which appear to be hampered by processability and language interface constraints (e.g., syntax/pragmatics, syntax/morphology and syntax/semantics interfaces) (Sessarego, 2013a; Sessarego and Gutiérrez-Rexach, 2016; Sessarego and Romero, 2016).

We would like to propose a preliminary analysis of the intonation patterns found in ABS as well as the morphosyntactic features commonly reported for the AHLAs that builds on recent theoretical models on the nature of the language faculty, its modularity, and the difficulties that certain constructions may pose for the interaction between different language modules. In particular, we adopt the widely used model of linguistic interface architecture proposed by Jackendoff (1997, 2002), which is shown in Fig. 6. Jackendoff’s architecture allows for a parallel dialog among different modules, without
necessarily assuming the primacy of syntax on the others (for different views cf. Burkhardt, 2005; Reinhart, 2006); thus, it appears particularly suitable to account for the phonology/pragmatics interface phenomena we described in the current study.

In recent years, several studies on L2 acquisition, first language (L1) attrition and bilingualism have focused on the so-called “interface hypothesis” (Sorace, 2005; Tsimpli et al., 2004) and its subsequent reformulations (Sorace, 2011; Sorace and Serratrice, 2009; Tsimpli and Sorace, 2006), all of which essentially maintain the core idea that certain constructions involving high processing demands on the interface between different linguistic modules may be more difficult to master in L2 acquisition and are the first to be eroded in L1 attrition. Along these lines of reasoning, we analyze the prosodic and morphosyntactic features commonly ascribed to a previous creole phase for the AHLAs as the result of advanced L2 acquisition strategies. For this reason, we claim that such grammatical elements do not necessarily imply any previous (de)creolization stage. What we would like to tentatively propose, therefore, is that ABS, as well as many other AHLAs, can actually be seen as an advanced, conventionalized L2s (Sessarego, 2013a, 2015), and that the prosodic features found in ABS lend further support to this perspective.

This proposal breaks with the traditional creole life-cycle adopted by some authors, according to whom pidgins become creoles and then eventually decolize. On the other hand, we support the idea that the aforementioned path (i.e., pidginization → creolization → decolization) is only one of many potential forms of contact-induced restructuring. Indeed, if we look at the contact varieties that emerged in the Americas due to contact between African and European languages, we may observe a wide number of linguistic outputs. Alleyne (1980:181) reminds us that:

Afro-American dialects can be plotted on a scale representing different degrees of transmission of West African elements, and differentials in degrees of transmission that are to be explained by differences in sociolinguistic circumstances in each area.

Alleyne’s (1980) words can be rephrased by saying that these dialects may be placed on a continuum, ranging from close approximations to lexifiers, to radical creoles. This is graphically represented in Fig. 7.

It is a well-known fact that contact-induced restructuring is a matter of degree (Siegel, 2008; Thomason and Kaufman, 1988); nevertheless, it is often assumed in the literature that a variety currently encountered on the left side of the continuum of Fig. 7 should be analyzed as the result of a progressive decolization process, thus implying that at a certain point in its history, such a language must have been more radical. This theoretical position may not be the best way of analyzing the data. In fact, in a number of situations, it clearly contrasts with the documented development of some contact varieties, which seem to have become more ‘radical’ during the last couple of centuries (e.g., Haitian French, as shown in Lefebvre, 1998; and Sranan Tongo, as seen in Migge, 2003).

In recent years, Creolistics and L2 acquisition have developed stronger connections leading to a very productive interdisciplinary dialog (cf. Kouwenberg and Patrick, 2003; Siegel, 2008). This cooperation has tried to cast light on the genesis and evolution of contact varieties by highlighting the role played by L2 acquisition processes in their formation. Plag (2008), in particular, has stressed how L2 acquisition processes in creolization do not necessarily imply substrate transfer, as often suggested in the literature. Conversely, on one hand, transfer may occur without L2 acquisition (cf. Kouwenberg, 2006 for cases of early bilingualism); while, on the other hand, there may be L2 acquisition traces in creoles that should not be analyzed as ‘transfer,’ since they appear to be universal interlanguage developments that are not necessarily related to the L1s involved in creole formation (Siegel, 2008).

In line with what is suggested by Sessarego (2013a,b, 2015), we would like to posit that ABS, as well as several other AHLAs, may be analyzed as the result of L1 acquisition (nativization) of advanced L2 grammars. This hypothesis is built on the notion that even though the acquisition of both L1 and L2 is subject to the same linguistic constraints imposed by Universal Grammar (UG), their evolutions significantly differ. In fact, while L1 evolution operates instinctively, L2 acquisition progresses in a less natural way. L2 learners have access to UG but a concomitance of biological and social factors hinder achieving a full command of the target language (TL) (Herschensohn, 2000). Extending these concepts to the current study, our thought regarding ABS (and other Afro-Hispanic varieties) is that African slaves in colonial

![Fig. 7. A continuum of outcomes involving degrees of substrate and L2 input.](Source: Adapted from Winford (2000:216).)

<table>
<thead>
<tr>
<th>Slight substrate retention</th>
<th>Moderate</th>
<th>Extreme L1 retention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced</strong></td>
<td><strong>‘Indigenized’</strong></td>
<td><strong>Intermediate</strong></td>
</tr>
<tr>
<td>Interlanguage</td>
<td>varieties</td>
<td>creoles</td>
</tr>
</tbody>
</table>

Fig. 7. A continuum of outcomes involving degrees of substrate and L2 input.
times managed to acquire relatively close approximations to Spanish (the TL). This implies that each speaker internalized an L2 grammar out of a set of possible grammars (G1, G2, Gn). Their linguistic outputs (x, y, z) resulted in the primary linguistic data (PLD) for the following generation, which acquired such a variety as an L1. This model is depicted in (3), where Grammar 1 (G1) and Grammar 2 (G2) denote two grammars with dissimilar parametric configurations.

(3) a. Individual from Generation 1:
\[ \text{TLY} \rightarrow \text{UG driving L2 acquisition} \rightarrow \text{G1} \rightarrow \text{set of outputs X} \]

b. Individual from Generation 2:
\[ \text{PLDX} \rightarrow \text{UG driving L1 acquisition} \rightarrow \text{G2} \rightarrow \text{set of outputs Z} \]

The scheme in (3) exemplifies a case of nativization consisting of Generation 2’s L1 acquisition. This translates to an L1 grammar (G2) built on L2 inputs. Consequently, G2 shows crystallized aspects of an L2, which are acquired as an L1. The scheme represented in (3) is rooted in the so-called target shift (Baker, 1990), where following generations of slaves no longer target the European lexifier; conversely, they get most of their PLDx by means of interethnic communication that develops on plantations. Demographic figures play a fundamental role in this model. Indeed, Baker (1990) claims that a rapid increase in the enslaved population, combined with a parallel lack of access to the European language, would have triggered the shift in language targets from which radical creoles developed. As indicated elsewhere (Sessarego, 2011a, 2014a), the development of ABS departs from that of radical creoles; however, the scheme in (3) is based on the assumption that access to Spanish in these Bolivian haciendas was constrained by a combination of social and demographic factors (cf. Sessarego, 2013b).

6. Conclusions

This study has provided a preliminary glimpse at the ABS intonation system. In particular, it has contributed to the fields of Spanish intonation and Afro-Hispanic linguistics by: identifying a variety of patterns found in spontaneous ABS declarative sentences that seem to diverge from those documented in previous work on most other native varieties of Spanish; and suggesting that such a divergence could be analyzed as the result of advanced L2 acquisition processes related to an imperfect mastering of linguistic interfaces, in line with recent syntactic studies on the nature of overt pronouns, phi-agreement, inverted questions, and bare nouns (Gutiérrez-Rexach and Sessarego, 2014; Sessarego and Gutiérrez-Rexach, 2011). Since this strand of research is very much in its fledgling stage, the study’s value also comes from the questions it has generated, which mainly arise from its limitations. We hope that pointing out a few such limitations will help provide future researchers with clear ways of expanding upon what we have empirically and theoretically begun here.

First, the analysis provided in this study did not account for the syntactic structure of the selected declarative utterances or their pragmatic classifications. Previous studies such as Selkirk (1984, 1995), Truckenbrodt (1999), and Venditti et al. (1996), among others, have detailed ways in which syntactic structure influences prosodic constructions. While high token counts of specific syntactic structures may be difficult to obtain in spontaneous interviews, attempts to examine the prosody–syntax interface in ABS and other Afro-Hispanic varieties will clearly shed more light on the current findings and implications. Furthermore, even though pragmatic meaning (even beyond just narrow focus) is a challenging factor to address in spontaneous data, we know that it can affect phonological target choice, as seen in Prieto and Roseano’s (2010) seminal volume and in Rao’s (2006) small-scale study. One way of extending the insights of these two works to data similar to ours is by extracting specific spontaneous declaratives that match the pragmatic/speech act categories they use and comparing the pitch accents and boundary tones across the selected utterances. This is simply one possibility, but the main idea we would like to encourage is the pursuit of further research on the relationship between intonation and pragmatic meaning in Afro-Hispanic spontaneous data. With regard to both syntactic and pragmatic issues, future work should also aim to explore other utterance types such as interrogatives and imperatives. Furthermore, in order to be more certain that the ABS features we have documented do not come from the influence of HBS, we urge further work on the intonation of highland varieties. To the best of our knowledge, outside of the descriptions in Lipski (2007), there are no studies resembling ours that have been carried out for such varieties. Finally, while we provided a comparison between our data and previous studies on non-contact Spanish, future research also needs to delve deeper into the intonation of other contact varieties, including both Afro-Hispanic and other Afro-contact varieties, as well as phenomena related to the acquisition of L2 intonation (e.g., Henriksen, 2013; Lleó et al., 2004). Drawing upon a larger number of studies in these two areas, as they become more available, will also help us better understand the intonational strategies involved in contexts of acquiring a non-native language. Hopefully the number of such studies will increase in upcoming years, and as they do, we will learn more about the empirical findings and theoretical suggestions we have put forth here.
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References

Face, T., 2001. Intonation Marking of Contrastive Focus in Madrid Spanish (PhD dissertation). The Ohio State University, Columbus, OH.


O’Rourke, E., 2005. Intonation and Language Contact: A Case Study of Two Varieties of Peruvian Spanish (PhD dissertation). University of Illinois at Urbana-Champaign, Urbana-Champaign, IL.


