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## Intonational variation in Spanish: European and American varieties

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### 10.1 Introduction

#### 10.1.1 Geographical distribution of the Spanish language

The Spanish language has evolved from the Romance variety spoken in the medieval Kingdom of Castile, which had its capital in Burgos, in the north-central part of the Iberian Peninsula, later in Toledo, and still later in Madrid. Reflecting this origin, the language is still most commonly referred to as *castellano* (Castilian) by its speakers in many areas, including Argentina and Peru.

The linguistic history of the Iberian Peninsula is different from that of other Romance-speaking areas, as the Islamic conquest starting in the year 711 brought the Arabic language to most of the Peninsula. This was followed by the so-called reconquest of the territory by the Christian kingdoms established in the north of Iberia. These historical events resulted in the southward spread of the Romance varieties that had originated in these northerly areas. The original central and southern Ibero-Romance linguistic varieties that had arisen from the local evolution of the Latin language before the arrival of Islam (known collectively as Moçarabic) were replaced in part by Arabic and later, to the extent that they had continued to be spoken under Muslim rule, by northern Ibero-Romance after the Christian reconquest. The Kingdom of Castile was especially successful in these expansionistic reconquest endeavors, and its language became ‘Spanish’ (for details see e.g. Penny 2002).

With about 400 million native speakers, Spanish is the second language in the world by number of native speakers, after Mandarin Chinese and slightly ahead of English (although, of course, English has a larger number of speakers if second-language speakers are also counted). Natively monolingual Spanish speakers constitute the majority of the population of Spain (but see below for Catalan, Basque, and Galician-speaking areas); Mexico; the Central American republics of Honduras, El

Salvador, Nicaragua, Costa Rica, and Panama; the insular Caribbean nations of Cuba and the Dominican Republic; the South American republics of Venezuela, Colombia, Ecuador, Peru, Chile, Argentina, and Uruguay; as well as in the US Commonwealth of Puerto Rico. Spanish is also the socially dominant language of three other Latin American countries where, however, monolingual Spanish speakers are in the minority. These countries are Guatemala, where a majority of citizens are bilingual in Spanish and one of over twenty Mayan languages; Bolivia, nowadays officially known as the Plurinational State of Bolivia, where Quechua and Aymara are also official and several other indigenous languages are spoken; and the Republic of Paraguay, where most citizens are bilingual Spanish-Guaraní speakers (monolingualism in Guaraní is common in rural areas). In addition to these three countries, bilingualism between Spanish and another language is a socially and demographically important phenomenon in several other areas.

Except for Uruguay and the island nations of Cuba, the Dominican Republic, and Puerto Rico, all Latin American countries contain larger or smaller populations of speakers of Amerindian languages. Quechua is an important language not only of Bolivia but also of Peru and Ecuador (known as Quichua in the latter country), and Nahuatl and many other languages are still widely spoken in Mexico, although the prevailing trend appears to be towards Spanish monolingualism. In Uruguay, bilingualism in Spanish and local varieties of Portuguese is found along the border with Brazil. English Creole is spoken in Central American enclaves in Nicaragua and Costa Rica. In the US, Spanish has a strong presence in the southwest, in New York, Chicago, and other large cities and, perhaps most importantly, in Miami, US-born bilingual speakers tend to be dominant in English, although relatively balanced bilinguals are also found.

Turning to the Iberian Peninsula, in Catalonia, the Balearic Islands and the eastern regions of Aragon on the Catalonian border, most citizens are bilingual (classifiable as Catalan-dominant, Spanish-dominant, or balanced bilinguals). In Valencia there is also widespread bilingualism in Spanish and Catalan (known as Valencian in this region), but Spanish is by far the dominant language in all three provincial capitals. Spanish is also widely spoken in the independent Principality of Andorra, in the Pyrenees, where the official language is Catalan. In the Basque Country and Navarre, Spanish monolinguals are the bulk of the population, followed by Spanish-dominant Basque-Spanish bilinguals. Monolingual Basque speakers are virtually nonexistent and even clearly Basque-dominant bilinguals are relatively rare, except in some specific areas. In Galicia, Galician-Spanish bilingualism is essentially universal, again with different degrees of competence in the two languages on the part of different speakers. Bilingualism in a closely related Romance variety limited to rural areas is found in Asturias and Cantabria, where local varieties, to the extent that they are still alive, create a continuum between Galician and Spanish, as well as in the Pyrenean valleys of northern Aragon, forming here a continuum with Catalan

and Occitan. In addition, there are a few other small bilingual areas, such as a Galician enclave in the Valley of Xalima in Extremadura. In the Aran Valley, a geographically Gallic territory annexed to Catalonia in the Middle Ages, trilingualism in a local Occitan Gascon variety, Catalan, and Spanish seems to be the norm among natives.

English-Spanish bilingualism is commonplace in the British possession of Gibraltar. In the Spanish enclaves of Ceuta and Melilla, on the North African coast, there is some degree of bilingualism with Moroccan Arabic and/or Berber. The Canary Islands, off the coast of Africa, are monolingual in Spanish.

As for other areas of the world, Spanish is one of the official languages of Equatorial Guinea, and most citizens of this country speak Spanish, but as a second language. In the Philippines, which were also part of the Spanish Empire, the Spanish language never took root and now there is a negligible number of speakers. There is a much larger number of speakers of varieties of Philippine Spanish Creole (locally known as Chavacano). The numerically and socially most important among these creole varieties is Zamboangueño.

Under Ottoman rule, the Sephardic communities of the Balkans and Anatolia preserved Spanish as their home language, and in some cities such as Salonika (Thessaloniki), which had a large Sephardic Jewish population, the Spanish language had an important presence. Because of the obliteration of some of these Sephardic communities, including that of Salonika, during the Holocaust and because of other events, this variety of Spanish, now known as Judeo-Spanish or Ladino, has become endangered and is no longer being transmitted in the home. There are still fluent speakers, but they are all bilingual or, most commonly, multilingual.

#### *10.1.2 Geolectal variation in Spanish*

Geolectal variation in Spanish is relatively small. Considering that the Spanish conquest of the Americas started in the year 1492, one would perhaps expect the language to have diversified more throughout the vast territories of North, Central, and South America. It should be kept in mind, however, that as long as the Spanish Empire existed there was continuous contact with the metropolis, and this contributed to convergent evolutions. Thus, processes that were variable at the time of the conquest, such as the devoicing of the Old Spanish voiced sibilants (/kasa/ > /kasa/ *casa* ‘house’, /oʒo/ > /oʃo/ ‘eye’), and even other processes that took place some time later, like the retraction of the prepalatal fricative to velar or laryngeal (/oʃo/ > /oxo/ ~ /oho/ *ojo* ‘eye’), were uniformly accomplished everywhere in Peninsular and Latin American Spanish. The existence of a Spanish Academy has also contributed to maintaining uniformity in educated speech and writing throughout the Spanish-speaking world even after the independence of the colonies from the metropolis. Comparison with Eastern Judeo-Spanish, which has had an independent evolution,

also starting in 1492, can be illustrative in this regard (see Quintana Rodríguez 2006; Hualde and Saul 2011).

Regarding pronunciation, one can broadly distinguish a general Latin American standard pronunciation and a Peninsular pronunciation (where the term “Peninsular” refers to the Iberian Peninsula), with only very slight differences between the two. The most important difference is the presence of a contrast between /s/ and /θ/ in standard Peninsular Spanish, (as in *masa* /masa/ ‘dough, mass’ vs. *maza* /maθa/ ‘mallet’), which is not found anywhere in Latin America (e.g. *masa*, *maza* are both /masa/ in Latin American Spanish). The historical explanation of this difference is that in the Spanish of the northern and central parts of the Peninsula the Old Spanish dental affricates /ts/, /dz/ became /θ/, without merging with /s/ and /z/, whereas in the south these four phonemes merged. The merger was also completely general in Latin American Spanish. Other differences opposing standard Peninsular to standard Latin American pronunciation have to do with matters of phonetic detail.

Although distinguishing two standard pronunciations, Peninsular and Latin American, seems to be sufficient for practical purposes such as the teaching of Spanish as a second language and international television broadcasting, actual diversity is somewhat greater. Perhaps Argentina is the Latin American country that has developed the most distinct national standard. The difference among the educated varieties of, say, Mexico City, Caracas, Madrid, and Buenos Aires is roughly comparable to that existing between London and Chicago English in speakers of the same educational level. Using Chambers and Trudgill’s (1998: 5) terms, these varieties are more than simply different “accents,” but lexical, morphological, and syntactic differences are relatively small. In written texts, most of the time it is not possible to know the geographical origin of the author, but at other times there are details of lexicon and morphology that allow this identification. A salient morphological feature where we find differences is in the choice of second person familiar pronouns and associated verbal forms (e.g. *vos tenés*, *sos* ‘you have, are’ in Argentine Spanish, etc. vs. *tú tienes*, *eres*, in other areas). In Prieto and Roseano (2010), which we use as an important source of examples here, a different questionnaire was used for each variety studied, because of differences in lexicon and phraseology among regions.

In Latin America, a number of varieties are traditionally distinguished in dialectological work (see Fig. 10.1). The features used for such classifications are mostly phonological, but they also include the choice of second person forms and sometimes lexical features. A common classification recognizes the following main geographical varieties: Mexican, Central American (of very doubtful unity), Caribbean (including the Antilles, Panama, and the Atlantic coast of Colombia and Venezuela), Andean (highlands of Venezuela, Colombia, Ecuador, Peru, and Bolivia), Chilean, Guaranic, or Paraguayan (including neighboring areas of Bolivia and Argentina), and Argentine-Uruguayan (see e.g. Hualde 2005: ch. 2; Lipski 2011; Moreno Fernández 2009, for similar classifications). None of these geographical areas has clear boundaries. At



#### American Spanish Varieties

- [Dark Gray Box] Mexican Spanish
- [Medium-Dark Gray Box] Central American Spanish
- [Medium Gray Box] Caribbean Spanish
- [Light Gray Box] Andean Spanish
- [Very Light Gray Box] Guaranic Spanish
- [Lightest Gray Box] Chilean Spanish
- [White Box] Argentinian Spanish

FIG. 10.1 Map of Latin American Spanish varieties. The towns indicated on the map are those for which data were analyzed in *TISL* and related work, and are available in *AIEE*.

most one may recognize a focal point for each variety, e.g. Central Mexico for Mexican Spanish, Buenos Aires and Montevideo for Argentine-Uruguayan Spanish; but even so, the focal area is less clear for Central American (which has much internal variation) and Andean (Central Colombia vs. the highlands of Peru and Bolivia). Taking the Andean countries as an example, both the speech of the Pacific Coast and that of the interior lowland areas of Colombia, Ecuador, and Peru lack most of the features that can be used to characterize Andean Spanish (for the interior lowlands the label “Amazonian Spanish” is sometimes employed). In view of these difficulties and the arbitrariness of any classification, some authors concerned with describing variation in Latin American Spanish provide instead a country-by-country overview (Canfield 1981; Lipski 1994).

Within Peninsular Spanish, dialectologists traditionally distinguish two main varieties (in monolingual areas), Northern-Central or Castilian and Southern or Andalusian (see Navarro Tomás 1977[1918]: 5–10; Penny 2000: 118–28; Hammond 2001: 356–65). Some more recent work distinguishes three varieties or includes a transitional area between the northern and southern areas (see Fig. 10.2; e.g. Echenique Elizondo and Sánchez Méndez 2005: 323–8). As in the case of Latin American Spanish, in reality what we find is a continuum without any clear boundaries. Most of the phonological features show a north/south differentiation (e.g. aspiration of /s/, stronger in the south, less intense in central areas, and rare in the north), but others have a different distribution (e.g. velarization of word-final /n/, found in both western and southern areas). As for the Spanish of the Canary Islands, it shares most features with Western Andalusian speech, but also presents many similarities with Caribbean varieties, including intonational ones.

One of the linguistic domains where one finds clear differences among Spanish varieties is precisely intonation. In the past, there has been much speculation regarding the origin of this variation, with substrate as a favored explanation. Thus, the Dominican philologist Henríquez Ureña (1938) surmised that the distinctive intonational patterns of central Mexican Spanish have their origin in Nahuatl substrate, and similar claims were made for other areas. Since not much was (or is) known about the intonation system of Nahuatl and other substrate languages, such claims are often difficult to substantiate. More recently, however, Colantoni and Gurlekian (2004) have claimed that some patterns of Buenos Aires intonation are the result of recent extensive contact with Italian, and here the evidence appears to be stronger. The development can also be clearer when there is a strong present-day adstrate situation, with bilingualism in another language, as shown in O’Rourke’s (2005) work on the Peruvian Spanish intonation of monolingual Spanish speakers and bilingual Quechua-Spanish speakers, and in Elordieta and Calleja’s (2005) study comparing speakers from a strongly Basque-speaking small town and from an essentially monolingual Spanish-speaking large town in the Basque Country.

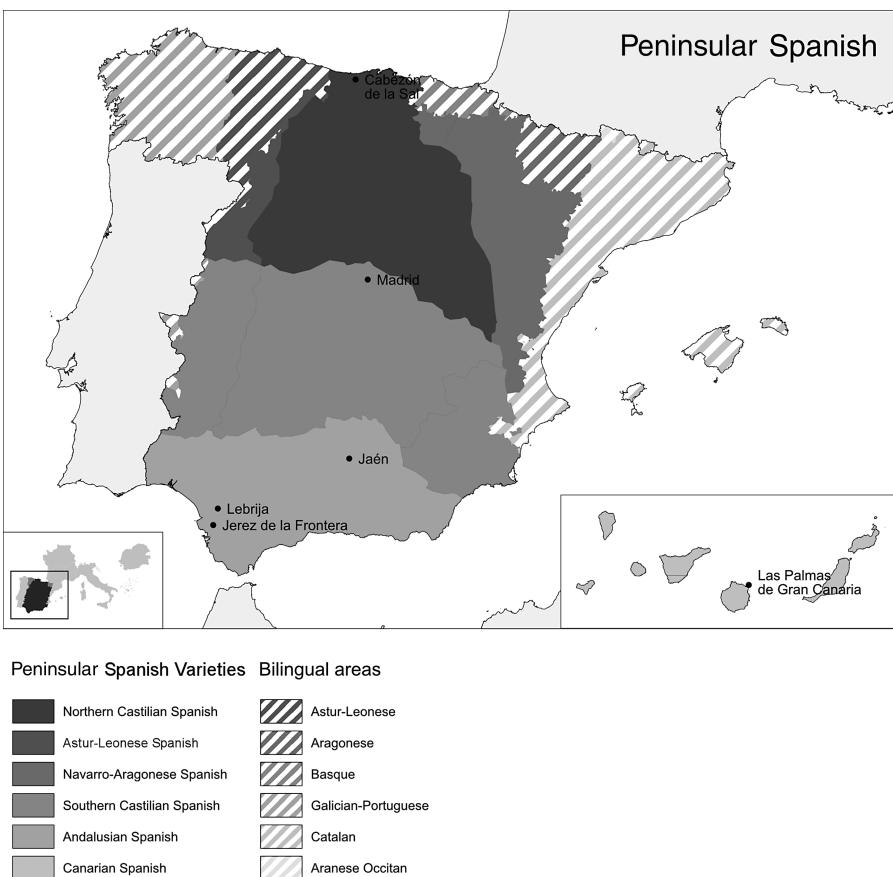


FIG. 10.2 Map of Peninsular Spanish varieties. The towns indicated on the map are those for which data were analyzed in *TISL* and related work, and are available in *AIEE*.

### 10.1.3 Review of previous work on Spanish intonation

The first detailed investigation of Spanish intonation was produced by Navarro Tomás (1944), based on Peninsular Spanish. Quilis (1981; 1987; 1993) carried out a comparison of intonational contours of several varieties, including those of Madrid, Mexico City, and Puerto Rico. Within the Autosegmental Metrical model, Sosa (1999) offered an overview of basic intonational contours in a large number of varieties, both from the Iberian Peninsula (based on the speech of informants from Seville, Barcelona, Pamplona, and Madrid) and from Latin America (Buenos Aires, Bogotá, Mexico City, San Juan de Puerto Rico, Caracas, Havana, and Lima). Sosa (2003) analyzed the tonal configurations of wh-questions in Spanish in both read and spontaneous speech from four Latin American varieties (Mexican, Colombian,

Venezuelan, and Puerto Rican). The first ToBI proposal for Spanish (Beckman et al. 2002) was also pan-dialectal (see also McGory and Díaz-Campos 2002 for a cross-dialectal analysis of declarative intonation patterns). The Sp\_ToBI system of transcription has been the object of several revisions, including Hualde (2003a), Face and Prieto (2007), and Estebas-Vilaplana and Prieto (2008). In the last decade, a large body of work on Spanish intonation within the AM/ToBI framework has been produced, including research on many geographical varieties. For a recent overview, see O'Rourke (2012). Prieto and Roseano's (2010) book coordinated the effort of nine groups of researchers working on a comparable database within the AM framework, and offers extensive bibliographic references for the nine varieties examined therein. Here we mention only some representative recent work on different dialectal varieties, and refer the reader to Prieto and Roseano (2010) and O'Rourke (2012) for further references.

For Peninsular Spanish, probably the most extensively studied variety, see Garrido (1991), de-la-Mota (1995; 1997), Face (2002; 2003), Henriksen (2010), and Martínez Celdrán and Fernández Planas (2003), as well as Elordieta (2003), Elordieta and Calleja (2005), and Robles-Puente (2011a) on the Spanish of the Basque Country, and Henriksen and García Amaya (2012) on Andalusian Spanish, among many others. For the Canary Islands, see Dorta Luis (2007). Regarding Caribbean varieties, see Willis (2003; 2004) for Cibaeño Dominican Spanish; Armstrong (2012) for Puerto Rico; and Alvord (2007) for the Spanish of the Cuban community of Miami. For Mexican Spanish, see Martín Butragueño (2003; 2004). As for South American varieties, recent work includes Colantoni and Gurlekian (2004), Colantoni (2011), and Labastía (2006; 2011) for Argentinian Spanish; Cid-Uribe and Ortiz-Lira (2000) and Ortiz-Lira (2003) for Chile; and O'Rourke (2005) for the Spanish of Peru.

Besides geolocal variation, some recent work has started to consider interspeaker and stylistic variation within the same community, and the possible influence of social factors such as gender and age in this variation (Enbe and Tobin 2008; Henriksen 2012; 2013; Pešková et al. 2012). Some corpora specially designed for multidisciplinary prosodic studies have been recently made available (Garrido Almiñana et al. 2013).

#### 10.1.4 Basic prosodic properties of Spanish

Spanish, like most other Romance languages, has lexical stress. The lexically stressed syllable is always one of the last three syllables of the word, except that the stress can occur further to the left in verbal forms including enclitics (*cantándomelos* ‘singing them to me’, *comiéndosemelas* ‘eating them on me’). In words ending in a vowel (in the singular) the unmarked stress pattern is penultimate (*calabaza* ‘pumpkin’), marked stress is antepenultimate (*bolígrafo* ‘pen’) and final stress is exceptional (*dominó* ‘domino’). If the word ends in a consonant, unmarked stress is final (*universidad*

‘university’), marked stress is penultimate (*difícil* ‘difficult’), and antepenultimate stress is exceptional (*análisis* ‘analysis’). About 80% of all stressed words have penultimate stress (Quilis 1993: 403) and more than 95% of all nouns, adjectives, and adverbs follow the unmarked patterns (Morales-Front 1999: 211).

In verbs, stress is penultimate in the present tense (*canto* ‘I sing’, *cantamos* ‘we sing’) and columnar or morphological in other tenses (*cantaré* ‘I will sing’, *cantaremos* ‘we will sing’; *cantaba* ‘I was singing’, *cantábamos* ‘we were singing’).

Functional words may be stressed (*una calabaza* ‘a pumpkin’, *esta calabaza* ‘this pumpkin’) or unstressed (*nuestra calabaza* ‘our pumpkin’, *para la calabaza* ‘for the pumpkin’) (see e.g. Real Academia Española 1973; Quilis 1993: 390–95). The unstressed/stressed distinction can give rise to phrasal minimal pairs, e.g. *para los caballos* ‘for the horses’ vs. *para los caballos* ‘s/he stops the horses/stop the horses!'; *bajo la mesa* ‘under the table’ vs. *bajo la mesa* ‘I lower the table’ vs. *bajó la mesa* ‘s/he lowered the table’ (Hualde 2005: 233–5). These lexical contrasts may be neutralized either by emphatic/rhetorical stress on an unstressed function word (see immediately below) or by de-accenting of a lexically stressed word.

As in most other stress languages, lexically stressed (or ‘tonic’) syllables generally serve as anchoring points for intonational pitch accents (realized as visible pitch excursions and/or by expanded duration). Nevertheless it is possible to have mismatches in rhetorical, didactic, or emphatic speech, with a pitch accent being anchored on a lexically pretonic syllable (*fundamental*, *fundamental*: see Hualde 2007; 2009; Hualde and Nadeu 2014; see also Nadeu and Hualde 2012 for Catalan).

Perhaps the main intonational difference between Spanish (and other Romance languages) and English (and other West Germanic languages) is the role that accent placement plays in the expression of discourse meaning (Vallduví 1990; 1991). The Romance languages have been characterized as showing very little flexibility in the placement of the nuclear accent (or main phrasal stress), which almost invariably falls on the last content word, except for very marked cases of emphatic or contradictory focus. In Spanish and other Romance languages this is compensated in part by greater flexibility in word order; compare Eng. *His FRIEND arrived* and Sp. *llegó su aMigo* (Bolinger 1954; Ladd 2008a; Zubizarreta and Nava 2011).

In addition, when we compare Spanish and English, some additional differences in pitch accent distribution seem apparent. It could be said that the notion of “accent” (in one of the meanings of this word) plays a considerably less important role in Spanish than in the Western Germanic languages. Whereas in the prosodic annotation of English, determining which words in the utterance are accented and which are not is an important first step, the practice among analysts of Spanish intonation has been to consider that essentially every content word, with few exceptions, is accented.

An example may be useful to highlight the difference between English and Spanish in basic patterns of pitch accent distribution. Katz and Selkirk (2011) state that in English a noun phrase will obligatorily bear an accent if it either has contrastive focus

or is discourse-new, whereas it may or may not bear an accent if it is discourse-given. One of their examples is *Bràttleboro elècted òdd people to the SCHÓOL BOARD, too* (as a reply to *Brattleboro elected odd people to the City Council this year*), where an acute accent mark indicates an obligatory pitch accent, a grave accent mark indicates an optional pitch accent, and capitals are used to mark contrastive focus). Notice that, although discourse-given noun phrases are marked as potentially carrying a pitch accent, only one optional pitch accent is indicated in each of the two noun phrases *odd people* and *school board*, and the adverb *too* is also left unaccented. In contrast, in Spanish, in a similar discourse context, it would not be anomalous to have something like *Valdepeñas eligió gente rarita como miembros del consejo escolar también*, with pitch accents (indicated by boldface) on all content words in the noun phrases *gente rarita* and *miembros del consejo escolar* and on the adverb *también*.

Pitch de-accenting tends to affect mostly verbs and adverbs, not only in parenthetical and reportative clauses (Ortega-Llebaria and Prieto 2009) but also in other more neutral contexts (Face 2003; Rao 2009). This is somewhat curious, since the functional load of lexical stress in Spanish is essentially carried by verbal forms (e.g. *canto* ‘I sing’ vs. *cantó* ‘s/he sang’, *cantara* ‘I/he/she sang, subjunctive’ vs. *cantará* ‘s/he will sing’). Although the prominence of the stressed syllable in such cases tends to be conveyed by duration in the absence of a pitch excursion, it is possible to have complete de-accentuation (Torreira et al. 2012). In the exclamative example in Fig. 10.3 (*¡Y no sé muy bien) hacia dónde tengo que ir!* ‘(And I am not very sure) which way I have to go?’ (from a Map Task, produced by a speaker from Madrid), both *dónde* ‘where’ and *tengo* ‘I have’ appear to be completely de-accented (the words *hacia* ‘towards’ and *que* ‘that’ are lexically unstressed).<sup>1</sup>

As Ladd (2008a) remarks, one of the unresolved issues in the AM analysis of pitch-contours is the status of “phrasal accents,” i.e. tonal targets associated with the domain of the “intermediate phrase.” Spanish has been analyzed both with or and without intermediate phrases. Depending on the view that is adopted in this matter, phonological analyses may be substantially different in some cases (see Ladd 2008a: 142).

As for phrasing, there have been a number of studies based on scripted speech. Nibert (2000) studied phrasing contrasts indicating the scope of adjectives in coordinated structures (i.e. contrasts of the type [*rosas y claveles*] *rojos* ‘red [roses and carnations]’ vs. [*rosas*] *y claveles rojos* ‘roses and red carnations’). Beckman et al. (2002) report on the intonational resolution of ambiguities created by the possibility of omitting and postponing the subject, e.g. *Cuando hubo hablado Juan, se fue* ‘After Juan had spoken, he left’ vs. *Cuando hubo hablado, Juan se fue* ‘After he had spoken,

<sup>1</sup> For clarity, we will use the capitalized abbreviation “Fig.” to refer to figures in this chapter, whereas non-capitalized “fig.” refers to figures in other works.

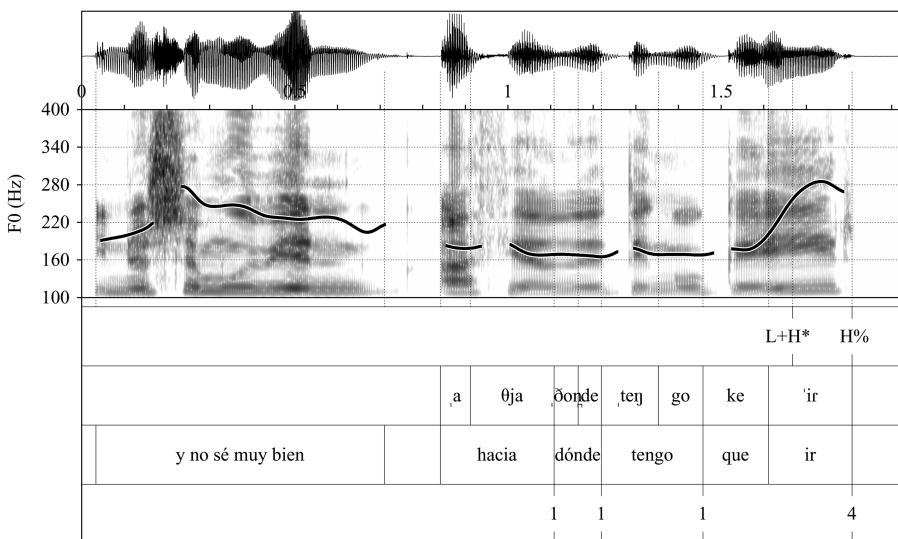


FIG. 10.3 Waveform, spectrogram, and F0 contour of the exclamative (*¡Y no sé muy bien*) *hacia dónde tengo que ir!* ‘(And I am not very sure) which way I have to go!', produced by a speaker from Madrid, Map Task (notice de-accentuation of prenuclear words)

Juan left'. Preferences for phrasing in read speech are studied in Frota et al. (2007) and Prieto (2007). We are still lacking corpus studies of unscripted speech that may inform us of phrasing preferences in spontaneous conversation.

In the remainder of this chapter we will describe and analyze the main intonational patterns of the Spanish language, pointing out differences between geographical varieties. We intend to reflect the current state of our knowledge regarding both specific geolects and differences among them, which is naturally incomplete.

## 10.2 Methodology

This chapter is based on the foundation established by prior work on Spanish intonation, by us and by other researchers, and most closely on the data and analyses presented in the collective book *Transcription of Intonation of the Spanish Language* coordinated by Prieto and Roseano (2010, henceforth TISL), and its associated online tools, the *Atlas interactivo de la entonación del español/Interactive Atlas of Spanish Intonation* (Prieto and Roseano 2009–12, henceforth AIEE), and the *Sp\_ToBI training materials* (Aguilar et al. 2009). TISL and AIEE contain a description and analysis of ten Spanish geographical varieties, from both Spain and Latin America, by different groups of researchers using very similar questionnaires: Madrid (Estebas-Vilaplana and Prieto 2010), the region of Cantabria, in northern Spain (López-Bobo and Cuevas-Alonso 2010), Gran Canaria (Cabrera Abreu and Vizcaíno Ortega 2010),

Mexico City (de-la-Mota et al. 2010), Santiago de los Caballeros in the Dominican Republic (Willis 2010), Puerto Rico (Armstrong 2010), Mérida, in the Andean region of Venezuela (Astruc et al. 2010), Quito (O'Rourke 2010), Santiago de Chile (Ortiz-Lira et al. 2010), and Buenos Aires (Gabriel et al. 2010).<sup>2</sup>

To elicit data, the *TISL* authors used a general questionnaire that was previously used and tested in the Catalan Intonation Atlas project (Prieto and Cabré 2007–12) and which was adapted to each of the Spanish varieties studied, so that the lexicon and phraseology would be natural for each region. This methodology is based on the Discourse Completion Task (Blum-Kulka et al. 1989), which has already been used for some time in research on pragmatics and sociolinguistics (e.g. Billmyer and Varghese 2000; Félix-Brasdefer 2010). The questionnaire included discourse contexts and instructions to participants which were intended to elicit a large number of possible pragmatic meanings. For example, it contained instructions for the participants such as “Look at the picture and tell me what the girl is doing” (expected response: “She is drinking a lemonade”), “You are talking about Maria and you hear that someone is arriving. Ask if Maria is the person who is arriving,” etc. The results of the book showed that this inductive elicitation procedure can be applied successfully to prosody. Typically two or three speakers were interviewed for each variety, although this number was considerably larger for some varieties (up to twenty-five for Buenos Aires).

For this chapter no additional systematic data collection has been undertaken. Since the figures in *TISL* are readily available in paper and online (as part of *AIEE*), we will not repeat them here, but instead refer the reader to these sources. The figures in this chapter will either be of productions by the first author, who speaks a central (Madrid) Peninsular variety, or will be taken from *AIEE* Map Tasks or occasionally other sources.

Spanish speakers are generally aware of intonational differences among varieties; rather, they often can tell that a speaker is from a different region than their own, based on intonational differences alone. Although (leaving a few easily identifiable stereotypical contours aside) we are not yet in a position to tell with certainty what these differences are, some geolocal differences in pitch alignment or preferences for certain accent-types and pitch contours in specific contexts can be tentatively proposed on the basis of the evidence currently available and will be pointed out in this chapter.

A few caveats are in order. The mapping between intonational contours and pragmatic meanings being non-univocal (see e.g. Ohala 1983; 1984), establishing

<sup>2</sup> One of the authors of this chapter (Prieto) was involved in coordinating all these related data-gathering and analysis projects. The other one (Hualde) was not, his participation being limited to the summary and reanalysis presented here.

dialectal differences in intonation is a complex task. The fact that the contributors to different chapters in *TISL* found different contours for a given context using the same questionnaire, for example, cannot always be interpreted directly as a difference between varieties. Establishing this would require further research.

Drawing conclusions regarding contours that are not found in a given gelect on the basis of limited data has proved problematic in the past. Thus, for instance, one of Sosa's (1999) main comparative conclusions is that, whereas in most Spanish geolects unmarked information-seeking yes/no questions end in a rise, in Caribbean Spanish questions always end with a fall. However, later authors have found both falling and rising questions in some Caribbean varieties (Willis 2004; 2010; Alvord 2007), and both kinds of ending are also found elsewhere (cf. also Savino 2012 for dialectal variation in question intonation in Italian). Nevertheless, in some cases at least we have enough evidence for establishing that two varieties differ in their unmarked contours.

As has been the practice in other comparative work across Spanish varieties (e.g. Beckman et al. 2002; *TISL*; *AIEE*), we employ a single system of intonational labels for all varieties of Spanish. For this we use the most recent version of the Sp\_ToBI proposal in *TISL*, with a few relatively minor modifications. For example, given that the goal of the chapter (and of the book) is to provide a phonological notation of intonation, we will not annotate syntagmatic downstep and upstep features, in order to differentiate these phenomena from the paradigmatic upstep contrasts present in the language (i.e. the contrast between L+H\* and L+jH\*). Thus we will not be indicating downstep with a diacritic added to an H\* tone every time a pitch accent is lower than a preceding one, since this may be an automatic effect in neutral declarative sentences, as shown in Prieto et al. 1995 (an effect that might be overridden in emphatic intonation and across phrasal boundaries).

In order to make interlectal comparisons possible (as well as comparison with other Romance languages studied in this volume) we use relatively transparent labels that are common to the analysis of all these languages. Thus, to bring our transcription in line with the analyses provided for the rest of Romance languages included in this book, the M% boundary tone used in *TISL* has been changed to !H%. For the same reasons, the label for a rising pitch accent with a displaced peak in *TISL* L+>H\* has been changed to L+<H\*, and the rising boundary tone HH% in *TISL* has been changed to H%. In relation to the phonetic/phonological status of the transcriptions presented in this chapter, we should be aware that even though the general aim of the chapter is to use phonological annotations, in some cases the transcriptions have the temporary status of a broad phonetic transcription, given the difficulty in firmly establishing what is contrastive in the domain of intonation, which may require extensive experimentation in many cases.

## 10.3 Intonation of main utterance types

### 10.3.1 Statements

10.3.1.1 *Broad-focus statements* The most common types of pitch accent in pre-nuclear position in Spanish statements are of the rising sort, with an initial valley generally around the onset of the stressed syllable and a rise throughout this syllable. As in many other languages, peaks are typically realized later in prenuclear than in nuclear position. In prenuclear position, the peak of rising accents is usually reached well into the posttonic—or even beyond, in the case of words with antepenultimate stress. In words that constitute topics or are in initial position in the phrase, rising accents may show greater peak displacement than elsewhere. The notation L+>H\* was proposed in *TISL* to indicate a rising contour during the tonic with displacement of the peak to the posttonic. In earlier work on Spanish, L\*+H was used for this pitch accent (e.g. Beckman et al. 2002; Face 2002). Here we follow the *TISL* proposal, but modifying the diacritic for delayed peak in accordance with the notational criteria established for all chapters in this book, i.e. L+<H\*.

There are nevertheless Spanish varieties, such as Andean Spanish (O'Rourke 2005), Buenos Aires Spanish (Colantoni and Gulbekian 2004; Gabriel et al. 2010), and bilingual Spanish in contact with Basque (Elordieta and Calleja 2005), where prenuclear peaks aligned within the lexically stressed syllable are said to be much more common, without this necessarily being related to emphasis. The relative frequency or pragmatically unmarked status of peaks aligned within stressed syllables in prenuclear position in statements may turn out to be a significant difference among Spanish varieties.

In Canarian and Caribbean Spanish, the stressed syllable often has a low tone for most of its duration, and the rise in prenuclear accents is often (but not always) totally confined to the following syllable, so that L\*+H is a more transparent notation (Armstrong 2010). In the original version of Sp\_ToBI (Beckman et al. 2002), this very late rise in prenuclear position was already identified as being typical of Caribbean varieties. This is thus likely to be a dialectal feature of the Spanish spoken in the Caribbean region and the Canary Islands, although at this point this must still remain as a hypothesis to be further investigated. From a phonological point of view, this prenuclear L\*+H accent may be the same entity as the L+<H\* accent of other Spanish varieties.

In Peninsular Spanish and other varieties, in words in non-intonational-phrase-final position, lack of displacement of the peak may convey contrastive focus or greater emphasis (de-la-Mota 1995; 1997). So, in a sentence such as *el TELÉFONO suena*, with nuclear accent on *teléfono*, for which Bolinger (1954) proposes the gloss ‘the confounded phone has to go on and ring’, the tonal peak will occur within the stressed syllable of *teléfono* (see Face 2002; Hualde 2005: 264–6). (Notice that English

the PHONE rings would correspond to *suena el teléfono* in Spanish; see §10.3.3.1 on word order.)

As for nuclear accent shapes in words in final position in the intonational phrase in declaratives, we may find one of three pitch shapes around the stressed syllable. A first and common possibility is not to have any pitch excursion, with a smooth falling interpolation between the peak of the pitch accent on the preceding lexical word and the end of the utterance. The stressed syllable of the word in final position is durationaly enhanced. For this shape, the notation L\* has been used. Perhaps a better alternative would be to use \* to indicate an accent without tonal correlates, since it is often not clear that there is any tonal target on the nuclear-accented syllable.

A peak may also occur on the stressed syllable (L+H\*), perhaps indicating more emphasis on this word, since in some studies it has been obtained in contexts where narrow focus on the last word was intended (see §10.3.1.2). This contour is, however, also often found in broad-focus statements (e.g. Robles-Puente 2011b finds it in over 90% of statements in an elicited speech task with speakers of Peninsular Spanish). Both nuclear possibilities, L\* L% and L+H\* L% are illustrated in Figs 10.4 and 10.5 (produced by the first author).

In TISL L\* L% neutral statements are illustrated for Madrid (p. 24, fig. 1), Cantabria (p. 55, fig. 1), the Canary Islands (p. 93, fig. 1), Ecuador (p. 232, fig. 1), Mexico (p. 325, fig. 1), etc., whereas the contour with a peak on the syllable with

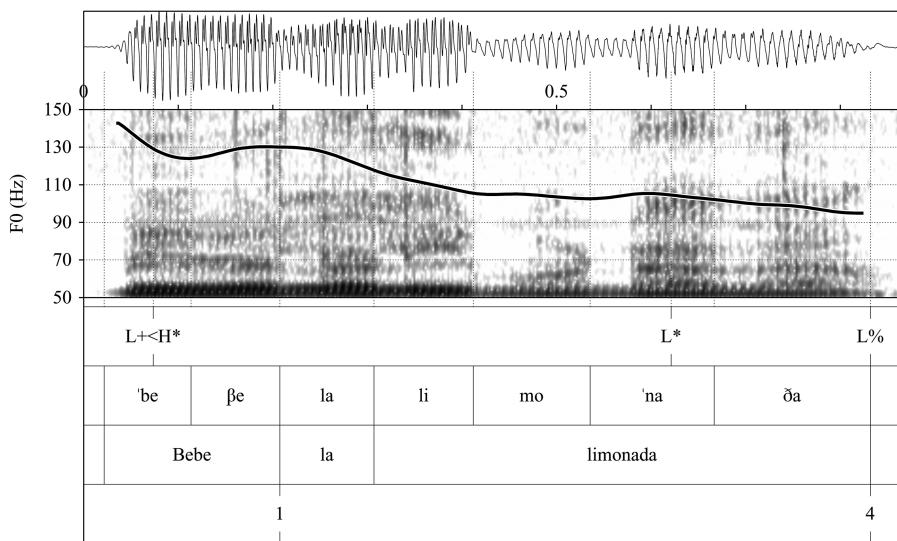


FIG. 10.4 Waveform, spectrogram, and F0 contour of the statement *Bebe la limonada* 'S/he drinks the lemonade', with low nuclear accent, produced by author JIH (Peninsular Spanish)

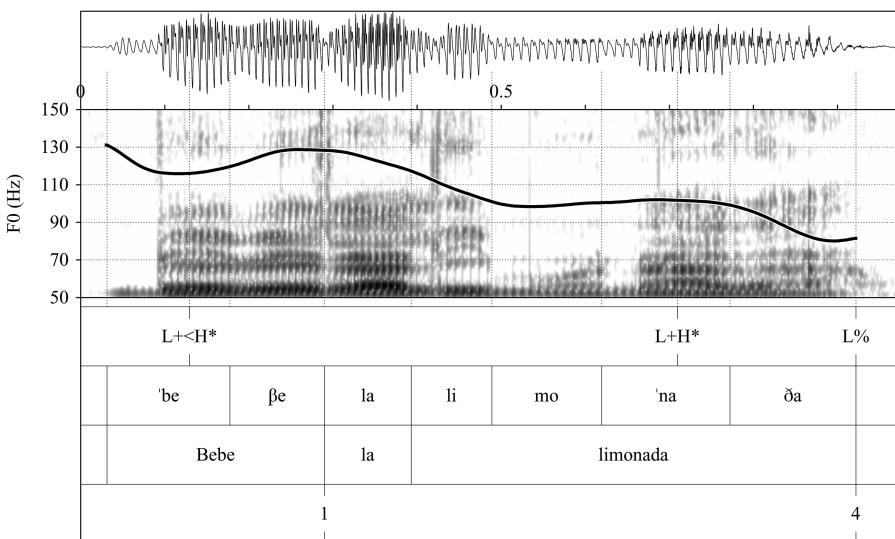


FIG. 10.5 Waveform, spectrogram, and F0 contour of the statement *Bebe la limonada* ‘S/he drinks the lemonade’, with rising nuclear accent, produced by author JIH (Peninsular Spanish)

nuclear accent, L+!H\* L% is shown for Chile (p. 260, fig. 1). Most likely both configurations are available in all Spanish varieties, although their relative frequency may vary.

In Fig. 10.6 *El ayuntamiento está encima de las Modas Nuria* ‘The city hall is above Modas Nuria’ (Madrid Map Task, AIEE), the last two accents are L\*.

Sometimes, finally, there is a clear H target on the pretonic, in both nuclear and prenuclear accents, for which case the notation H+L\* has been proposed (see *TISL*, Puerto Rico, p. 162, fig. 1). This falling contour appears to be particularly frequent in some geolocal varieties, including those of the Caribbean. A Puerto Rico example from a Map Task (AIEE) is given in Fig. 10.7... *a continuar haciendo una línea entrecortada*.

In other varieties, falls from the pretonic to the tonic (H+L\* L%) appear to be less common in declaratives. In Peninsular Spanish they may be found, for instance, in insistent explanations, as illustrated in Fig. 10.8 with (*Te lo repito otra vez,*) *¡bebe la limonada!* ‘(I’m telling you again,) s/he is drinking the lemonade!’ as well as in insistent requests, see §10.3.4.2 (Fig. 10.22).

A typical and recognizable pitch contour of Mexican varieties is the so-called circumflex pitch contour, which can be realized by a clear rise on the nuclear accented syllable, often followed by a low rising boundary tone or even a sustained mid tone until the end of the utterance (Martín Butragueño 2003; 2004; Willis 2005; de-la-Mota et al. 2010: 323–4). An example of L+H\* L!H% is shown in Fig. 10.9. Note that this boundary tone is notated LM% in *TISL*.

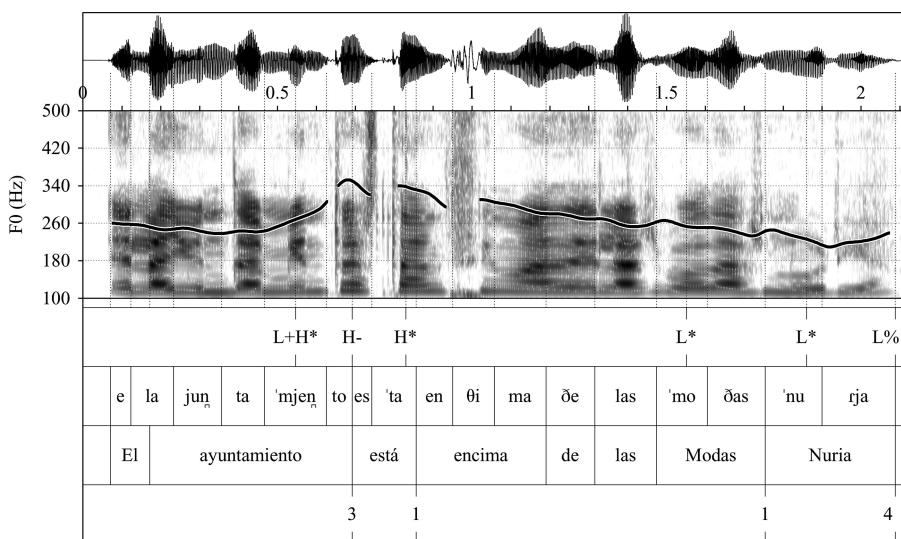


FIG. 10.6 Waveform, spectrogram, and F0 contour of the statement *El ayuntamiento está encima de las Modas Nuria* ‘The city hall is above Modas Nuria’, produced by a speaker from Madrid, Map Task (AIEE)

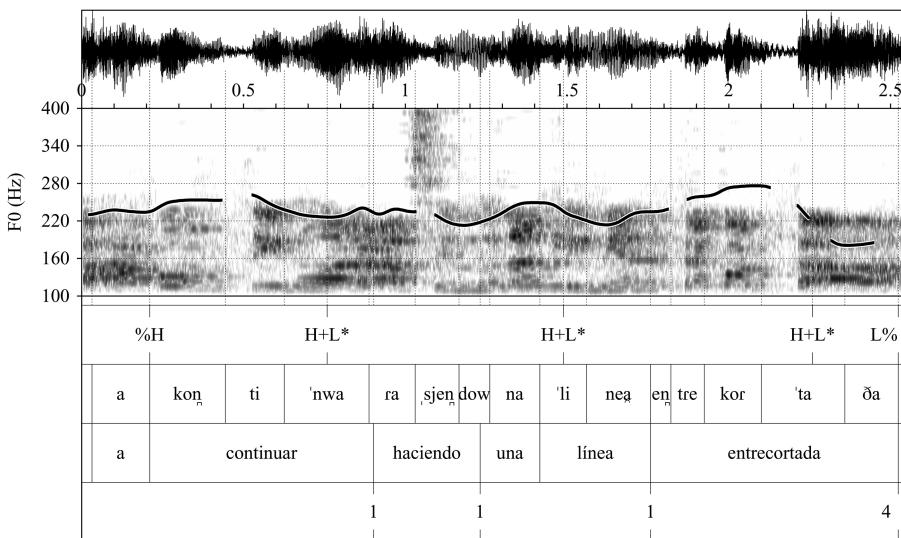


FIG. 10.7 Waveform, spectrogram, and F0 contour of the statement ...a continuar haciendo una línea entrecortada... ‘to keep on drawing a dotted line’, produced by a speaker from San Juan, Puerto Rico (notice the nuclear fall from the upstepped pretonic)

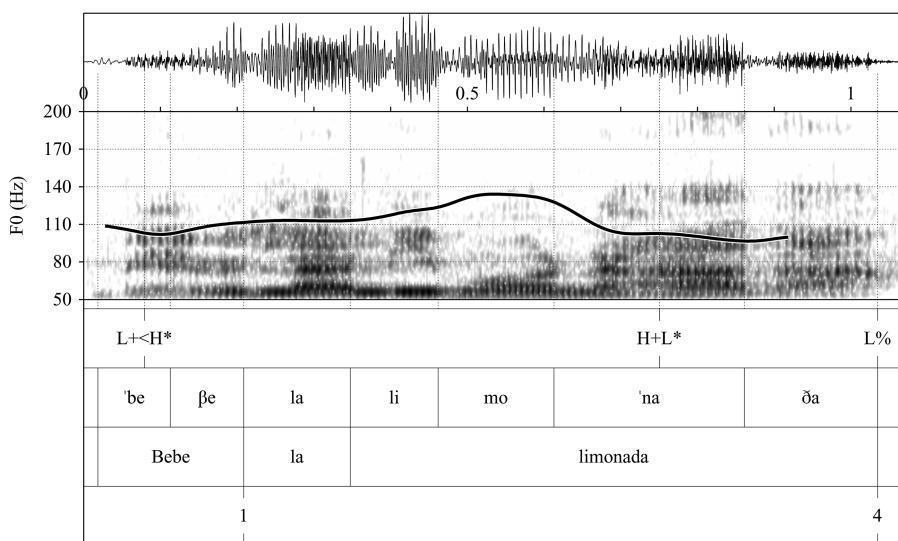


FIG. 10.8 Waveform, spectrogram, and F0 contour of the insistent explanation (*Te lo repito otra vez*) *Bebe la limonada* ('I am telling you again s/he is drinking the lemonade', produced by author JIH (Peninsular Spanish)

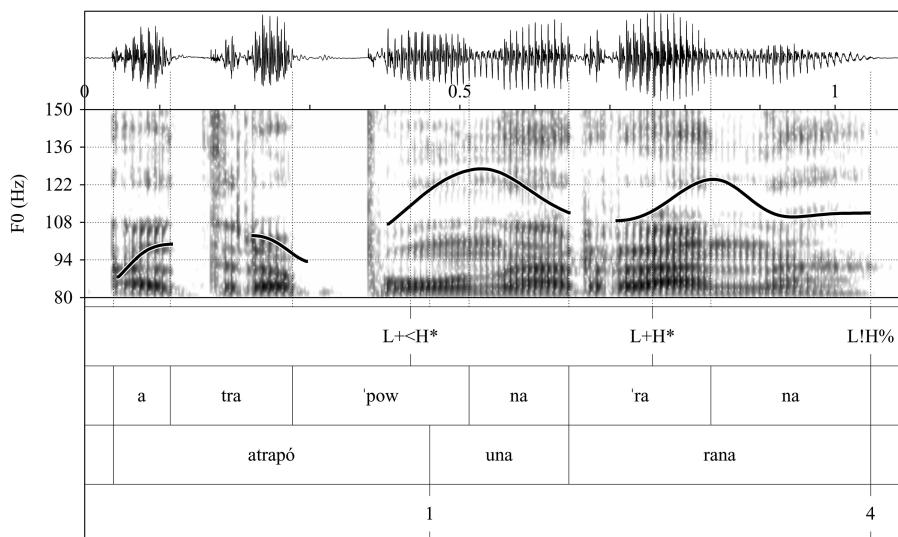


FIG. 10.9 Waveform, spectrogram, and F0 contour of the statement *Atrapó una rana* 'S/he caught a frog', produced by a speaker of Mexican Spanish

Essentially the same contour L+ $\text{H}^*$  M% is shown in *TISL* in a counterexpectational wh-question in Buenos Aires Spanish (Gabriel et al. 2010: 305, fig. 19).

In the case of the rising pitch accents, we have chosen to employ transcriptions with possibly redundant details. For instance, we are using three separate labels for rises, depending on the position of valley and peak with respect to the stressed syllable, L+ $\text{H}^*$ , L+ $<\text{H}^*$ , and  $\text{L}^*\text{+H}$ . We note that Face and Prieto (2007) argue that all three rising accents are phonologically distinct in Madrid Spanish (see also Prieto et al. 2005 for a similar contrast in Central Catalan); but since the intonational contours where the accents are embedded in their examples differ in other respects as well (such as the presence of another following accent or a different boundary tone), it could very well be the case that these contours are phonetically distinct, but in complementary distribution. For example, L+ $<\text{H}^*$ , which appears only in prenuclear accents, may turn out to be a phonetic variant of L+ $\text{H}^*$ . Although there is as yet no strong evidence that the three patterns of alignment are fully contrastive within contours that are otherwise identical, by using three distinct labels we are leaving this possibility open, and we are also allowing for easier comparison across varieties.

*10.3.1.2 Narrow-focus statements and epistemically biased statements* As already mentioned, lack of peak displacement to the posttonic in a rising accent, followed by postfocal pitch compression, may be used to convey focus on a given word (see e.g. Face 2002). This may be analyzed as resulting from a L- phrase accent aligned with the posttonic (Hualde 2002; Ladd 2008a: 142). The alternative is to use a different pitch accent label than for rises with a displaced peak, with an additional statement regarding de-accenting/pitch compression after this accent. Even though there are no studies that allow us to discern between these two possibilities, the presence of reduced postfocal pitch accents appears to be common, at least in read or experimental materials. A production of *Bebe la limonada* (by the first author) with intended contrastive focus on the first word is shown in Fig. 10.10. As already noted, this type of contour may also express focus over the whole utterance (e.g. emphasis, insistence or frustration, not necessarily contrastive focus on the word that bears it).

In words in intonational phrase-final position, exclamatory force (including correction focus) is conveyed by expansion of tonal range (resulting in suspension of downstep or even upstep, if there are preceding accents) and durational increase. In *TISL* a common strategy for expressing contrastive focus is in fact documented for all Spanish varieties covered in the book: expanded pitch range associated with the focalized syllable followed by a fall to the end of the phrase. These features could be regarded as manifestations of the “frequency code” (Ohala 1983; 1984; Gussenhoven 2002; see Vanrell et al. 2013a).

The peak in words in phrase-final position with exclamatory force may fall either on the stressed syllable or on the posttonic. In Sp\_ToBI, these two contours are

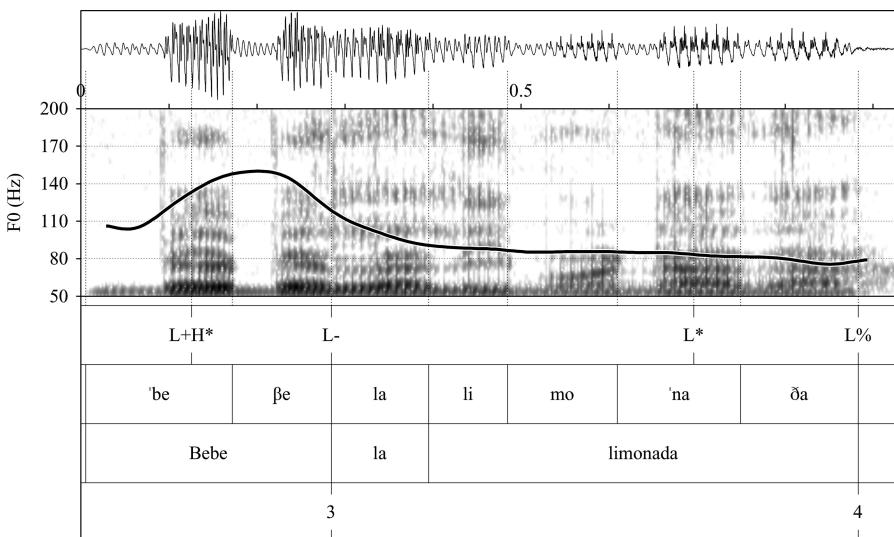


FIG. 10.10 Waveform, spectrogram, and F0 contour of the statement *Bebe la limonada* ‘S/he is drinking the lemonade’, with contrastive emphasis on *bebe* produced by author JIH (Peninsular Spanish)

analyzed as L+H\* L% vs. L\* HL%. Notice that although the overall shape of the contour is essentially the same (rise–fall), there is an important different alignment of the H with respect to the tonic, resulting in perceptually quite different contours. In *TISL* both contours are exemplified for Madrid with the text *No, de limones* ‘No, of lemons’ (Estebas-Vilaplana and Prieto 2010: 24, fig. 2, and 25, fig. 3). The second one, with a L\* accent, is also exemplified in the same chapter with *;Que irán a Lima!* ‘They are going to Lima!’ (25, fig. 4). At this stage in our investigation it appears that, whereas L+H\* L% is common across varieties, L\* HL% may be geographically more restricted. Where both nuclear contours are found, L\* HL% carries a greater emphatic, contradictory force.

In utterances with a topic-focus structure, the topic or given information may be separated prosodically from the rest of the utterance with a final rise (see Hualde 2005: 260–6), as in Fig. 10.11, which was produced with intended narrow, contrastive focus on *limonada*.

To convey the meaning that the content of a statement should be obvious to the listener, the description in *TISL* documents a contour where a nuclear L+H\* accent is followed by a fall and a rise on the final posttonic syllable(s). This boundary configuration is labeled as LM% in *TISL*. For consistency with the analysis of other languages in this volume, here we reanalyze this boundary tone as !H%. ;*Sí, mujer, de Guillermo!* ) L+H\* L!H%. (Estebas-Vilaplana and Prieto 2010: 26, fig. 6). Notice that this is the same contour as the one used for contrastive focus, L+H\* L%, with the

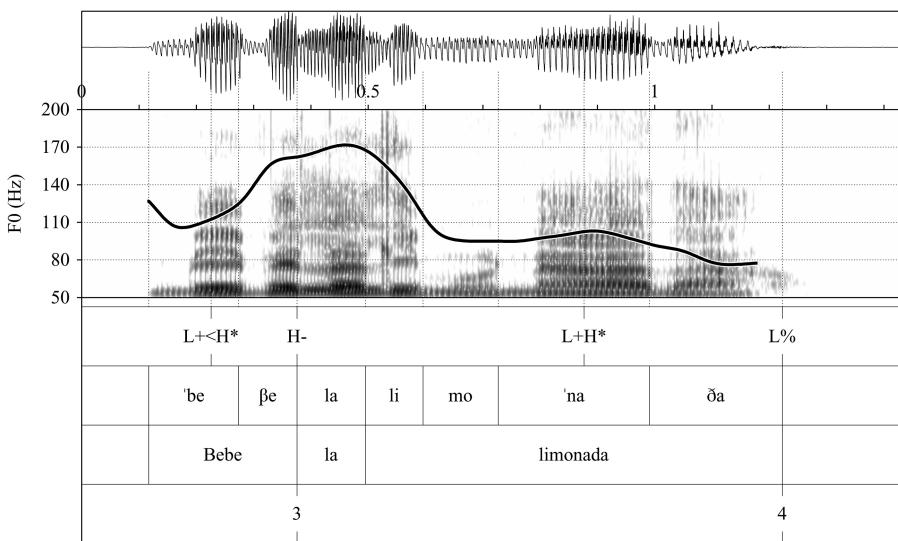


FIG. 10.11 Waveform, spectrogram, and F0 contour of the statement *Bebe la limonada* ‘S/he is drinking the lemonade’, produced as two intermediate phrases with *bebe* as topic and narrow focus on *limonada* by author JIH (Peninsular Spanish)

addition of a final rise after the fall. That is, whereas in one contour we have a final rise-fall, in the other there is a final rise-fall-rise. The geographical distribution of this contour with this meaning of obvious information remains to be established. Besides Madrid, in *TISL* variations of this contour have been documented for Cantabria (López-Bobo and Cuevas-Alonso 2010: 59), Gran Canaria (Cabrera Abreu and Vizcaíno Ortega 2010: 97) and Puerto Rico (Armstrong 2010: 168). We illustrate this obviousness contour in Fig. 10.12.

An equivalent option in Mexican Spanish is to end on a flatter boundary tone, showing less distance between the L and H boundary targets. This is the Mexican contour that we showed above in Fig. 10.9. In *TISL* (p. 328, fig. 6) a more exaggerated version of this contour is illustrated with an example with an implication of obviousness, (*Pues...*) ¡*De Guillermo!* ‘Well, Guillermo’s (of course)!’ transcribed as L+H\* L!H%.

For other varieties covered in *TISL*, speakers used the same contour for obvious statements and in contexts where the last word of the intonational phrase is intended to have narrow focus.

### 10.3.2 Yes/no questions

10.3.2.1 *Information-seeking yes/no questions* In Spanish yes/no questions may have the same syntax as statements. Although unmarked questions require inversion of

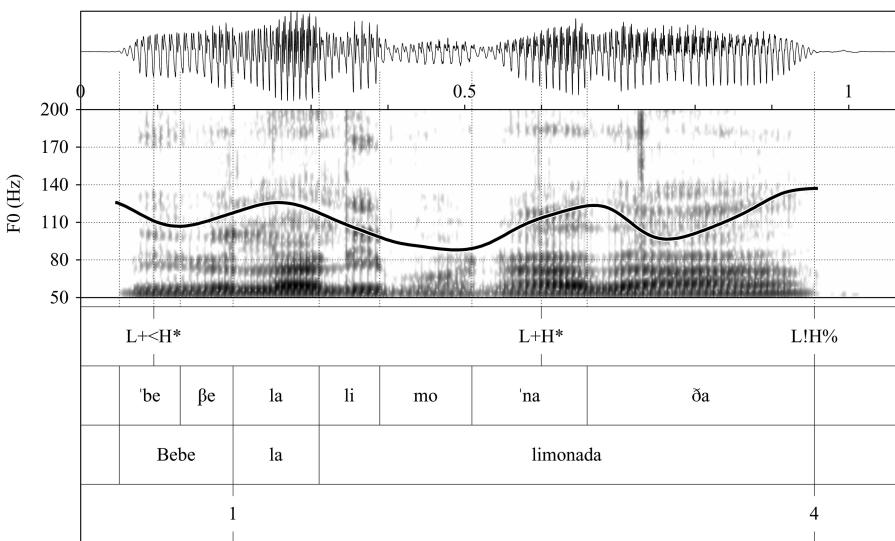


FIG. 10.12 Waveform, spectrogram, and F0 contour of the statement of the obvious *Bebe la limonada* ‘S/he is drinking the lemonade (of course)’, produced by author JIH (Peninsular Spanish)

the subject, the subject is often left unexpressed in Spanish, e.g. *Tienen dinero* ‘They have money’ vs. *¿Tienen dinero?* ‘Do they have money’, and in a number of contexts postposition of the subject is unmarked also in declaratives, e.g. *Te gusta el chocolate* ‘You like chocolate’ vs. *¿Te gusta el chocolate?* ‘Do you like chocolate?; *Llegaron tus amigos* ‘Your friends arrived’ vs. *¿Llegaron tus amigos?* ‘Did your friends arrive?’ (see e.g. Olarrea 2012). For this reason, the contrast that can be made in English between questions with interrogative syntax (e.g. *Have your friends arrived?*) and questions with declarative syntax (e.g. *Your friends have arrived?*) is of limited application to Spanish. Intonation is crucial in order to express interrogativity, in the absence of contextual cues. In most if not all Spanish varieties, interrogatives may display both final rises and final falls, but there are very clear geolocial differences regarding their relative frequency and marked or unmarked pragmatic status. The contour of unmarked, information-seeking, yes/no questions is one of the main respects where we find clear differences in intonation among Spanish varieties.

As Escandell-Vidal (2012) points out, although interrogatives are usually associated with actual questions, “the communicative intentions that can be pursued by means of an interrogative almost exhaust the whole range of illocutions” (p. 636). For Peninsular Spanish, three main configurations in yes/no questions have been described, with different pragmatic interpretations (Fernández Ramírez 1957–9;

Escandell-Vidal 1998; 1999), of which the third one would have a rather restricted distribution:

- (a) Falling-rising (low rise). Fall up to the tonic syllable of the word with nuclear stress followed by a rise to the end of the utterance (i.e. L\* H%).
- (b) Rising-falling (circumflex). Upstepped rise on the tonic syllable of the word with nuclear stress followed by a fall (i.e. L+<sub>i</sub>H\* L%).
- (c) Rising (high rise). Rise from the beginning of the sentence (i.e. (L+)H\* H%).

We illustrate the low rise, circumflex and high rise, contours in Figs 10.13, 10.14, and 10.15 with the text *¿Bebe la limonada?*, produced by the first author of this chapter. Notice that in the circumflex interrogative (Fig. 10.14) the rise on the last tonic is phonologically upstepped with respect to previous accentual peaks. Since this is typically the case we use the phonological upstep diacritic here.

According to Escandell-Vidal (1998; 1999), the falling-rising or low rise contour is the neutral pattern for interrogatives in Peninsular (Madrid) Spanish. The other two contours are pragmatically marked. The circumflex contour is imbued with an “echoic” meaning, with attribution of the proposition to someone other than the speaker, usually the hearer. Finally, the rising contour would indicate that the speaker knows the answer and is ready to provide it (e.g. *Do you know who I saw yesterday?*). Other authors coincide that, in this Spanish variety, contour (a), analyzable as presenting a final sequence L\* H%, is pragmatically unmarked. Thus, for Madrid,

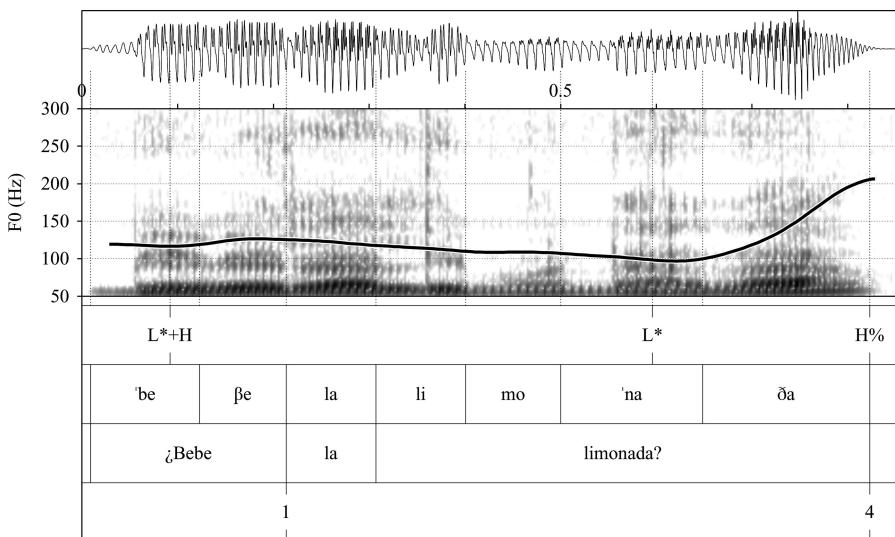


FIG. 10.13 Waveform, spectrogram, and F0 contour of the unmarked yes/no question *¿Bebe la limonada?* ‘Is s/he drinking the lemonade?’, produced by author JIH (Peninsular Spanish)

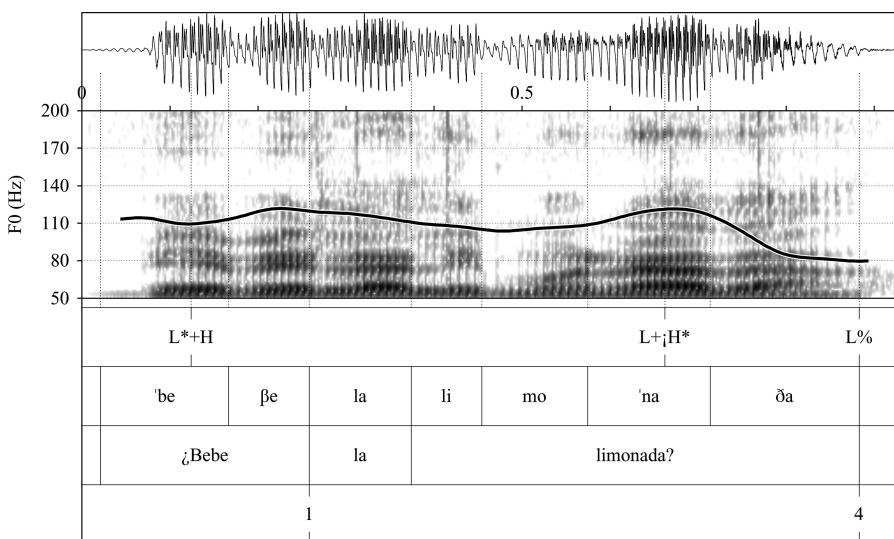


FIG. 10.14 Waveform, spectrogram, and F0 contour of the marked, confirmation yes/no question *¿Bebe la limonada?* 'Is s/he drinking the lemonade?', produced by author JIH (Peninsular Spanish)

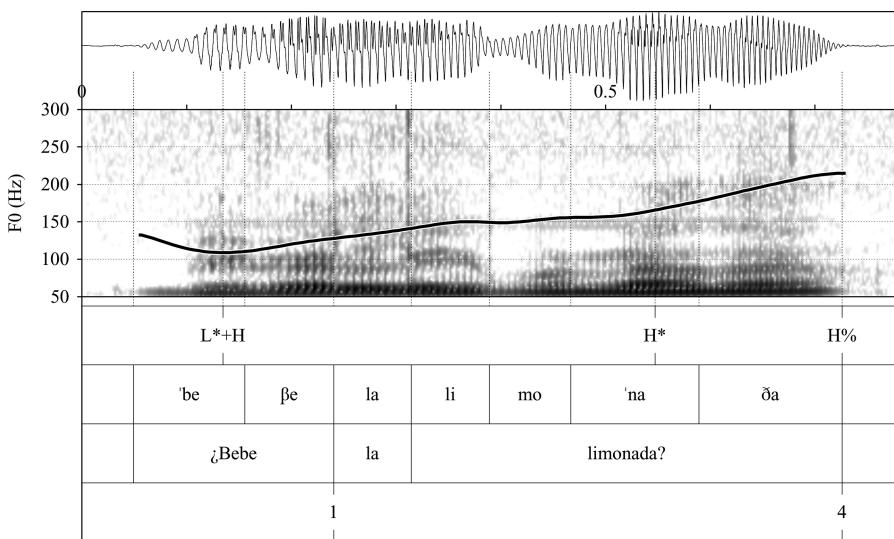


FIG. 10.15 Waveform, spectrogram, and F0 contour of the quiz yes/no question *¿Bebe la limonada?* 'Is s/he drinking the lemonade?', produced by author JIH (Peninsular Spanish)

Estebas-Vilaplana and Prieto (2010) propose that information-seeking yes/no questions typically end in a rise, as in *TISL* p. 30, fig. 30 ;*Tiene mermelada?* ‘Do you have any jam?’ and describe falling contours for pragmatically marked questions such as certain types of echo-questions, counterexpectational questions, confirmation questions and questions with imperative force. This is also in agreement with Quilis (1993: 441).

Pragmatically unmarked, however, is not necessarily synonymous with most frequent. In the analysis of a corpus of casual conversational Madrid Spanish speech, Torreira and Floyd (2012) find that circumflex contours ( $L+;H^* L\%$ ) are much more frequent than low rises ( $L^* H\%$ ). In fact, of a total of 1070 yes/no questions, over 79% were classified as circumflex, and less than 18% as low rises (whereas in this corpus high rises have exceedingly low frequency, less than 2%). On the other hand, Henriksen (2010) in a study of elicited speech carried out in a small town south of Madrid found mostly final rises in yes/no questions ( $L^* H\%$ ), which he classifies as late rises, if the tonic is mostly low, or, early rises, if the valley is at the beginning of the tonic. Only one out of 16 subjects produced circumflex contours in Henriksen’s experiment. Thus, we find that the low rise contour in yes/no question has been described as pragmatically neutral by linguists who are native speakers of Spanish varieties of central Spain, and this is also the contour that has been obtained in experiments involving either read or elicited speech. Nevertheless, this contour appears to be rather infrequent in conversational speech, where, instead, circumflex contours predominate by a large margin. It thus appears that circumflex contours in Madrid Spanish may have a wider range of meanings than it has been assumed, even if this is not the contour that speakers will typically produce in reading, in out-of-the-blue contexts and when performing experimental tasks. It is also likely that rising  $L^* H\%$  contours will be consistently interpreted as questions without a context (but see Fig. 10.3), whereas circumflex contours may be more ambiguous in their interpretation.

There are, however, other geographical varieties where circumflex contours (that is, contours with a rising–falling pattern) are not only frequent but also pragmatically unmarked, used for information-seeking questions in out-of-the-blue contexts.

Regarding the geographical distribution of low rise vs. circumflex patterns in neutral, information-seeking questions, we can establish the following: low rises, besides being found with this function in Peninsular Spanish, have been described as being unmarked contours in Ecuadorian Andean (O’Rourke 2010), Chilean (Ortiz-Lira et al. 2010), and Mexican Spanish (Quilis 1987; de-la-Mota et al. 2010). In Mexican Spanish the phonetic realization of the final rise is often somewhat lagged (transcribed as  $LH\%$  in de-la-Mota et al. 2010).

Circumflex interrogative patterns, on the other hand, are unmarked in several other areas including the Caribbean (e.g. Quilis 1987; Sosa 1999; Armstrong 2010; 2012), the Canary Islands (Quilis 1987; Cabrera Abreu and Vizcaíno Ortega 2010), northwestern Spain (López-Bobo and Cuevas-Alonso 2010; Robles-Puente 2011a),

and Buenos Aires (Gabriel et al. 2010). For both Cantabria and Buenos Aires the label L+;H\* HL% has been proposed (López-Bobo and Cuevas-Alonso 2010: 69 and Gabriel et al. 2010: 296–7, respectively).

Circumflex interrogative contours may be identical to somewhat emphatic statements. A Buenos Aires example is given in Fig. 10.16 from a TIEE Map Task: —*¿Tenés a Santa Bárbara?*—Sí—*Bueno en Santa Bárbara, (te vas a encontrar...)*—‘Do you have Santa Bárbara?—Yes—Well, in Santa Bárbara (you are going to find...’). Notice that in both phrases, which were produced one after the other by the same speaker, there is a final contour L+;H\* HL%, which is typical of Buenos Aires Spanish interrogative sentences (see Gabriel et al. 2010: fig. 8). Interestingly, the pitch rise is phonetically more upstepped in the second sentence (incomplete statement) than in the first (yes/no question).

In the Caribbean and the Canary Islands, pragmatically unmarked yes/no questions show a final fall from a high peak associated either with the last tonic syllable (jH\* L%) or with the pretonic (H+L\* L%). In these dialects, falling (i.e. final low boundary) interrogative contours are distinguished from statements by absence of declination or even upstep of the final accent. Both Quilis (1987) and Sosa (1999) suggest that final-rise questions may be unknown in Caribbean varieties. Nevertheless, more recent work has revealed the existence of questions with final rises in this

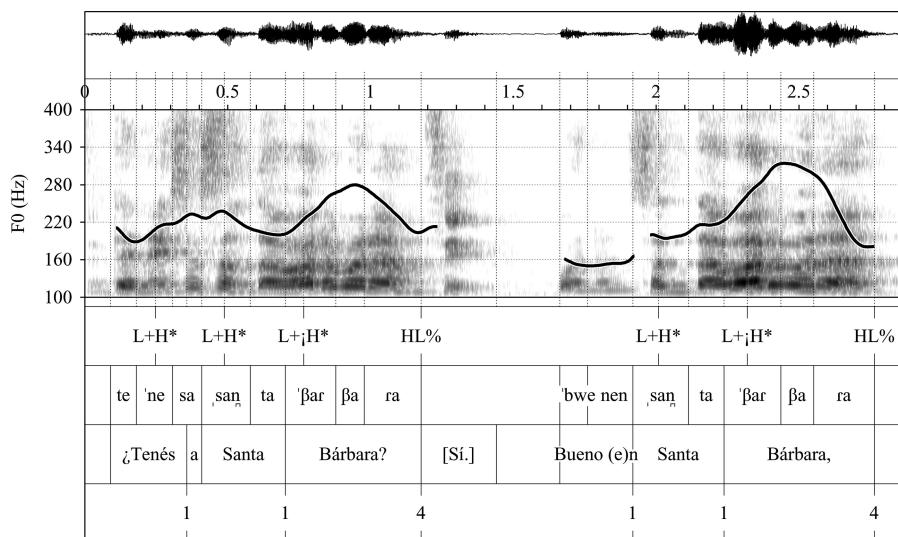


Fig. 10.16 Waveform, spectrogram, and F0 contours of the utterances *¿Tenés a Santa Bárbara?*—Sí—*Bueno en Santa Bárbara, (te vas a encontrar...)* ‘Do you have Santa Bárbara?—Yes—Well, in Santa Bárbara (you are going to find...’), produced by a speaker from Buenos Aires (Argentinian Spanish), Map Task

area as well, always with some added nuance. Thus, for Puerto Rico, Armstrong (2010) describes a different type of circumflex contour  $\text{;H}^* \text{ L}%$  with suspension of declination as unmarked in yes/no questions, confirming other reports on Caribbean intonation, but notices that final rises may also occur, perhaps indicating politeness: *¿Puedo pasar?* ‘May I come in?’ (high rise). Nevertheless, in subsequent work Armstrong (2012) observes that final rises or final plateaux in Puerto Rican Spanish appear to be found only in questions ending in a lexically stressed syllable and analyzes them as cases of truncation. Cabrera-Abreu and Vizcaíno-Ortega (2010: 101) suggest that in Canary Island Spanish low rise questions are always biased and may convey meanings such as counterexpectation or incredulity. On the other hand, Willis (2004) found mostly final rises in questions in Dominican Spanish, in a reading task.

Armstrong (2012) distinguishes three subtypes of final-fall interrogative contours in the Spanish of Puerto Rico. In addition to the unmarked circumflex contours with a fall from an upstepped peak on the last tonic ( $\text{;H}^* \text{ L}%$ ), she postulates two other contours,  $\text{H+L}^* \text{ L}%$  (with a fall from the pretonic to the tonic) and  $\text{L}^* \text{ HL}%$  (with a rise in the posttonic before the final fall). In her pragmatic analysis, the latter two contours are *epistemic*: “ $\text{H+L}^* \text{ L}%$  shows a positive belief value with respect to propositional content ([+belief]) while  $\text{L}^* \text{ HL}%$  shows a *disbelief* value with respect to propositional content ([−belief])” (Armstrong 2012: ii–iii). Because of its meaning, the contour  $\text{H+L}^* \text{ L}%$  is commonly used in questions with external negation (e.g. *no hay por aquí un lugar...?* ‘Isn’t there a place around here...?’). The contour  $\text{L}^* \text{ HL}%$ , on the other hand, can be used to indicate incredulity in this Spanish variety. See also García Riverón et al. (2010) and O’Rourke (2010) for a similar epistemic bias distinction in Havana Cuban Spanish and Ecuadorean Spanish, respectively.

In addition to the dialect-internal variation in the form of circumflex contours just mentioned, possibly related to pragmatic nuances, circumflex interrogative contours show different shapes in different geographical areas. As mentioned above, besides the Caribbean and the Canary Islands, falling contours as pragmatically unmarked in yes/no questions have also been reported for northern Spain (see e.g. Robles-Puente 2011a for Bilbao and López-Bobo and Cuevas-Alonso 2010 for Cantabria) and for Buenos Aires (Gabriel et al. 2010). In these other gelects, however, we do not typically find the high plateaux of Caribbean questions. Instead, there is a circumflex accent with a prominent rise and fall on the last, (nuclear) stressed, word, with the high tone on the posttonic  $\text{L+H}^* \text{ HL}%$ , as in the Buenos Aires example in Fig. 10.16 (for Buenos Aires, see also *TISL*, p. 296, fig. 8, *¿Tiene mandarinas?* ‘Do you have any tangerines?’). As already mentioned, this contour has been analyzed as  $\text{L+H}^* \text{ HL}%$  (a dialectal variant of  $\text{L+H}^* \text{ L}%$  attested in Peninsular Spanish, see Fig. 10.14). This contour often sounds characteristically Argentinean to speakers of other Spanish varieties, but the same label has been proposed for Cantabrian Peninsular Spanish (López-Bobo and Cuevas-Alonso 2010: 65, fig. 10).

Finally, a frequent feature of questions, both pragmatically marked and unmarked, across varieties and phonological contours, is sentence-medial de-accentuation, which is expressed as a reduction or elimination of “ups and downs.” In *TISL* this can be observed most clearly in the Dominican example *¿Tú me dijiste que son las nueve?* ‘Did you tell me it is nine o’clock?’ (Willis 2010: 135, fig. 10), where a high plateau extends from the delayed initial rise associated with the first tonic syllable in the utterance to the falling contour associated with the lengthened nuclear accent, labeled H+L\*.

*10.3.2.2 Confirmation-seeking yes/no questions* In confirmation-seeking questions the speaker has an expectation about the answer based on previous belief, world knowledge, or information that has become available in the discourse. The speaker belief can range from a very strong expectation about the answer (*¿Vendrás, verdad?* ‘You’ll be coming, right?’) to a less confident belief (*¿Vendrás?*). Because of their nature, Map Tasks are prone to produce many such questions. In varieties where neutral questions have a final rise (e.g. Madrid, Mexico City), confirmation-seeking questions have, instead, a circumflex contour. We offer an example in Fig. 10.17, from a Madrid Map Task in *AIEE*, *Vale, ¿rodeo la estatua del rey Jaime?* ‘OK, I go around King James’s statue?’<sup>3</sup>

In a quantitative prosodic analysis of interrogative contours in four Map Tasks from Madrid (accessible in *AIEE*), Pérez-Broncano et al. (2011) found that the circumflex pitch contour is one of the most frequent, and argue that semantically it reflects a moderate degree of confidence on the part of the speaker.

In §10.3.2.1 it was explained that Spanish varieties differ in their unmarked interrogative patterns, the most striking difference being between varieties with unmarked low rises and varieties with unmarked circumflex contours. The *TISL* data suggest that epistemic questions, such as confirmation questions, may also receive different contours in different varieties. For example, in a detailed investigation on Puerto Rican Spanish Armstrong (2010; 2012) suggests that the difference between questions in which the speaker has no belief about the propositional content and questions where the speaker believes the propositional content to be true is expressed by a difference in the alignment of the falling movement in the circumflex contour. While in her Puerto Rico data, information-seeking questions are typically produced with the nuclear *¡H\** L% configuration, confirmation-seeking questions are produced with a H+L\* L% nuclear configuration.

*TISL* does not provide sufficient evidence to characterize dialectal differences in confirmation-seeking questions. In several varieties the authors report that this

<sup>3</sup> In Fig. 10.17 we have inserted a H\* linked to the stressed syllable of the two content words in phrase-medial position based on an auditory perception of the pitch accents. In an alternative analysis there would be a simple interpolation between the initial and the final accents.

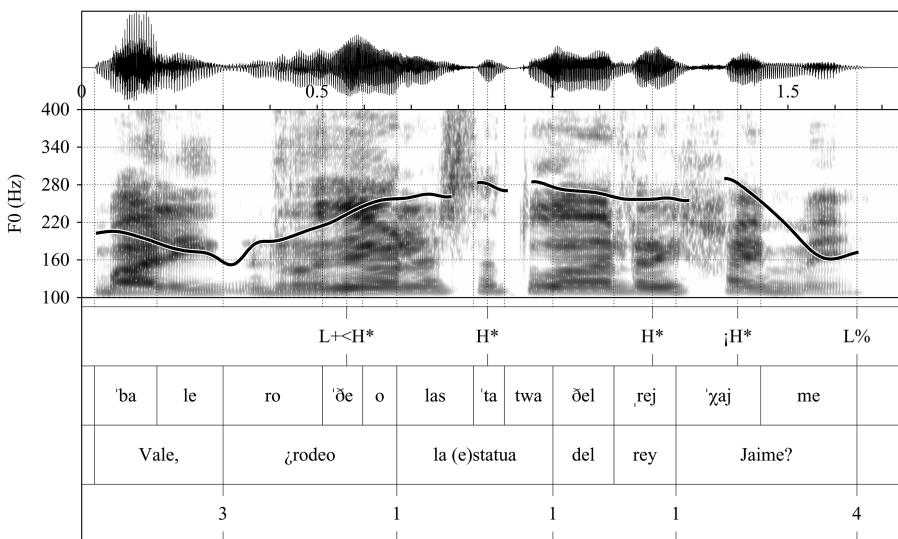


FIG. 10.17 Waveform, spectrogram, and F0 contour of the confirmation-seeking yes/no question *Vale, ¿rodeo la estatua del rey Jaime?* ‘OK, I go around King James’ statue?’, produced by a speaker from Madrid (Central Peninsular Spanish), Map Task

function is realized in a number of different ways, including using the same contour that is employed for information-seeking questions (see Gabriel et al. 2010 and Cabrera-Abreu and Vizcaino-Ortega 2010 for circumflex contours in Argentinian and Canarian Spanish respectively, and O’Rourke 2010 for low rise contours in Ecuadorian Andean Spanish). More research is needed to disentangle the pragmatic scope of the different interrogative intonation contours in each Spanish dialectal area.

**10.3.2.3 Echo yes/no questions** In this section we consider only the context where a speaker replies with a question to another question. The speaker may not have heard correctly and asks for clarification; or asking a question after another question may be a way to express surprise or incredulity. Syntactically, echo yes/no questions may be headed by *si* ‘if’ or *que si* ‘(that) if’: *¿Si tengo dinero?*, *¿Que si tengo dinero?* ‘Do I have money?’ They may also have the same syntax as regular yes/no questions.

Echo yes/no questions may express a number of nuances. Thus, an echo response to *¿Quieres café?* ‘Do you want coffee?’ may be a genuine request for clarification as in (1), but it may also convey the meaning that the answer (yes or no) is obvious (2), or it may express (different degrees of) surprise or even incredulity, as in (3), among other possibilities:<sup>4</sup>

<sup>4</sup> Note that the Spanish DCT that was used for all the languages in the book only contains (1) as a target response.

- (1) *¿Que si quiero café? (¿es eso lo que me preguntas?)*  
'Do I want coffee? (is that what you are asking me?)'
- (2) *¡¿ Que si quiero café?! (¡claro que sí!)*  
'Do I want coffee?! (of course I do!)'
- (3) *¿Que si quiero café? (¿cómo me puedes preguntar eso?, ya sabes que no me gusta)*  
'Do I want coffee? (how can you ask me such a thing, you know I don't drink coffee)'

In Madrid Spanish, for instance, (1) may be realized with a circumflex contour, (2) is a question only in its syntax and would normally have the intonational pattern of an emphatic declarative. As for (3), it may have an expanded rise from a valley in the tonic followed by a slight fall or, perhaps to convey a greater degree of emphasis, may be realized with the same rise–fall–rise ending as in the “obviousness” declarative contour, but with an expanded range (with a higher accentual rise and a deeper valley before the final rise and greater lengthening of the final syllable) (see the two contours in Fig. 10.18, *Málaga*, produced by the first author of this chapter). In conversation, the prosodic differences between the two can also be often accompanied by visual information: raising the chin for the obviousness contour vs. lowering the head and furrowing the brow for the surprise/counterexpectational echo question (see Chapter 2 in this volume for Central Catalan, where this contrast also obtains).

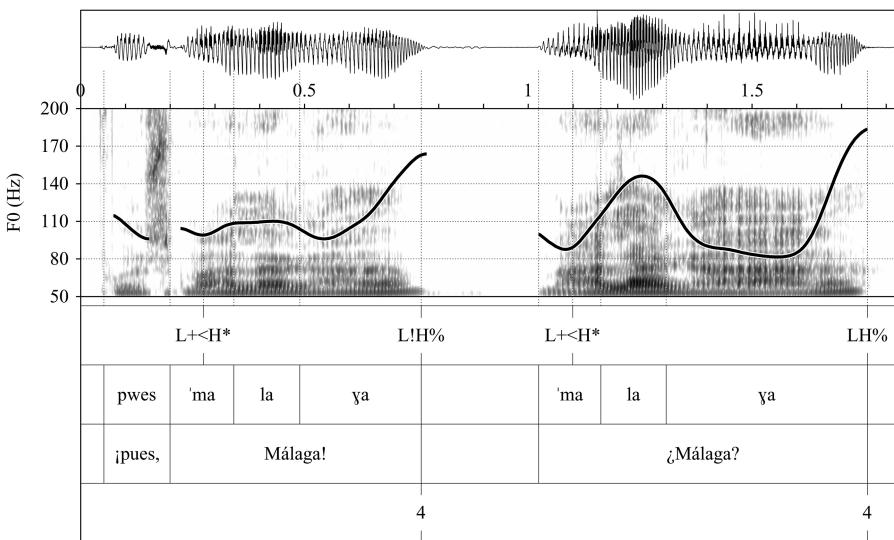


Fig. 10.18 Waveform, spectrogram, and F0 contour of the statement of the obvious *¡Pues, Málaga!* ‘Málaga, obviously!’ and of the counterexpectational echo question *¿Málaga?* ‘Málaga?’ produced by author JIH (Peninsular Spanish)

As noted, for Madrid Spanish, Escandell-Vidal (1998; 1999; 2002) suggests that circumflex contours may function as echo questions (although they appear to also have other conversational functions). This was confirmed in *TISL* not only for Madrid (Estebas-Vilaplana and Prieto 2010), but also for Ecuadorian Spanish (O'Rourke 2010), where unmarked questions are reported to have a low rise contour, as in Madrid. The unmarked question contour, being pragmatically unmarked, can of course also be used in echo questions. In the set of varieties with unmarked low rises, if a low rise is used in an echo question not preceded by (*que*) *si*, its echoic character may be conveyed by a phonetically expanded range including a higher final boundary (see Estebas-Vilaplana and Prieto 2010 for Madrid, de-la-Mota et al. 2010 for Mexico City). This means that varieties with unmarked circumflex patterns in yes/no questions, such as those of the Caribbean and the Canary Islands, may also show circumflex patterns in echo questions, again produced with an expanded range (see Willis 2010 for Dominican Spanish and Cabrera-Abreu and Vizcaíno-Ortega 2010 for the Canary Islands).

Interestingly, in *TISL* specific types of intonation contour to express incredulity and/or counterexpectation are reported for some geographical varieties. Thus, whereas the L+H\* LH% pattern is reported for Madrid and Chilean Spanish, the Puerto Rican and Ecuadorian Andean Spanish speakers who were interviewed used the pitch pattern L\* HL% (see Armstrong 2010; 2012 and O'Rourke 2010 respectively) for these counterexpectational meanings. Again, it is perfectly possible that there is more than one option to express this meaning within any geographical variety.

### 10.3.3 *Wh-questions*

**10.3.3.1 Information-seeking wh-questions** In question-word interrogative sentences, the presence of the question word directly conveys interrogativity, without a need for intonational signaling.

Most authors have pointed out that, as in English, unmarked question-word interrogatives have the same intonation patterns as statements in perhaps all Spanish dialects (Navarro Tomás 1944; Quilis 1993; Sosa 2003), often with a final contour analyzable as a L\* L% nuclear configuration. Sosa (2003) analyzed wh-questions in read and spontaneous speech in four varieties of American Spanish, Mexican, Colombian, Venezuelan, and Puerto Rican, confirming that in all four of them the unmarked configuration is indeed the falling contour. In *TISL* this falling contour was obtained for most geographical varieties (Madrid, Cantabria, Canary Islands, Dominican Republic, Puerto Rico, Venezuela's Andean region, Chile, and Buenos Aires).

Henriksen (2010; 2013), in a study of Manchego (central Spain) wh-question intonation in read speech, finds two types of falling contour that appear to be virtually identical to those found by Armstrong (2010) for yes/no questions in Puerto

Rico and were described above. That is, the pitch rises on the stressed syllable of the initial question-word and stays high either until the last tonic (which is upstepped, L+; $H^*$ )<sup>5</sup> or until the last pretonic, falling on the tonic (H+L\*).

Traditional sources on Peninsular Spanish intonation have also noted that question-word interrogatives may also have a final rise, perhaps with a nuance of politeness (Navarro Tomás 1944; Quilis 1993).

Sosa (2003) proposes that, in addition to being more polite, the rising contour may have a confirmation or reprise function. In *TISL*, both final falls L\* L% and final low rises, L\* HH% (here transcribed as L\* H%), are documented for most dialects, perhaps with different nuances or perhaps in free variation, just like we find in English and in other languages (see Kohler 2004). In Canary Island Spanish, for instance, according to Cabrera Abreu and Vizcaíno Ortega (2010) a final fall from a prominent nuclear peak may be unmarked in pronominal questions, as in English, whereas a final rise may indicate “politeness” or “echo question.” For Madrid Spanish, Estebas-Vilaplana and Prieto (2010) report both contours for the text *¿Qué hora es?* ‘What time is it?’ (see p. 36, fig. 16) and suggest that the rising contour “expresses a nuance of interest and greater speaker involvement in the speech act” (p. 35).

In Henriksen’s (2010) study of elicited speech in south-central Peninsular Spanish, both final rises and falls were found in question-word questions. Henriksen suggests that final rises are more formal, since he found a higher proportion of them in less interactive tasks. In the falling, circumflex contours, the fall could occur either from pretonic to tonic (early fall) or from tonic to posttonic (late falls).

Escandell-Vidal (2011) describes three contours as for yes/no questions for Peninsular Spanish, with rather different basic interpretations, as in her example *¿Quién ha venido?* ‘Who came?’ (we adapt the tonal labels that Escandell-Vidal provides to our notation):

- (a) *¿Quién ha venido?* (falling: L\* L%). Unmarked interrogative.
- (b) *¿Quién ha venido?* (rising-falling: L+; $H^*$  L%). Repetitive interrogative
- (c) *¿Quién ha venido?* (rising: H\* H%). Quiz question

Wh-questions may also be produced with the L\* H% contour of yes/no questions, as in the example in Fig. 10.19 *¿Dónde está tu gasolinera?* ‘Where is your gas station?’ (Madrid Map Task, *AIEE*).

We reproduce these four contours in the two panels in Fig. 10.20.

Emphasis on the question word, for a number of pragmatic purposes, may produce de-accentuation of following words with a drastic drop in pitch after the stressed syllable of the question word. In *TISL*, this can be observed in the Buenos

<sup>5</sup> Henriksen (2013) transcribed the circumflex pitch contour as jL+H\*, which is equivalent to the use of L+; $H^*$  in this chapter. As Henriksen notes, the use of the L upstep feature intends to reflect a broad phonetic transcription of the pitch contour.

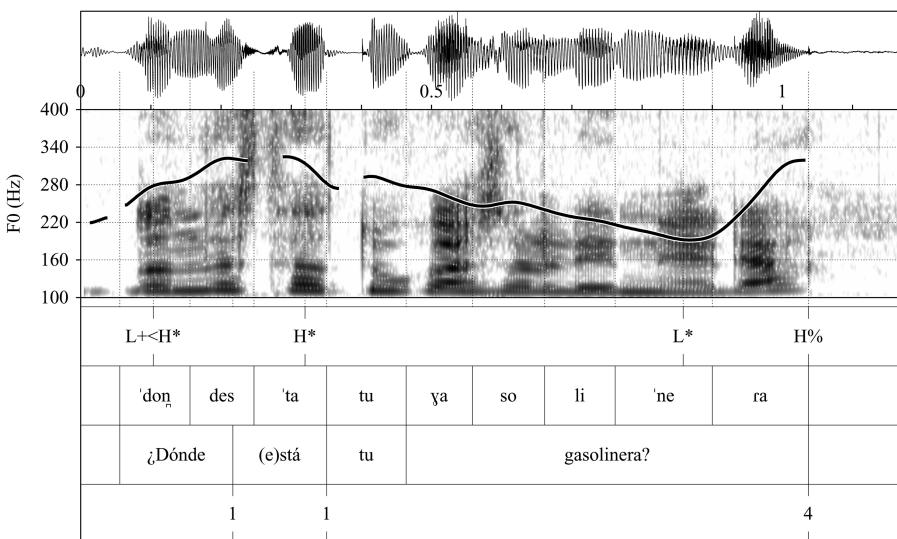


FIG. 10.19 Waveform, spectrogram, and F0 contour of the wh-question *¿Dónde estás tu gasolinera?* ‘Where is your gas station?’, with falling–rising contour produced by a speaker from Madrid (Central Peninsular Spanish), Map Task

Aires example in fig. 11 on p. 306, *¿Cuándo vas a hacerlo?* ‘When are you going to do it?’ where there is a flat low plateau after the accentual peak associated with the interrogative pronoun. Torreira et al. (2012) document frequent de-accentuation in medial position in wh-questions with both finally falling and finally rising contours.

**10.3.3.2 Echo wh-questions** True echo wh-questions echoing a yes/no question may be produced with the question word in situ, and are preceded by (*que*) *si*, like echo yes/no questions: *¿(Que) si voy adónde?* ‘(You are asking me) if I am going where?’ *¿(Que) si lo tiene quién?* ‘(you are asking me) who has it?’, *¿(Que) si sabemos qué?* ‘If we know what?’ In Peninsular Spanish, these may be realized with a circumflex ending or with a low rise. The circumflex configuration L+*H\** L% is more neutral than the low rise L\* H%, which may imply surprise, incredulity, or similar nuances.

Question-word interrogatives echoing another question-word question can be explicitly marked with the conjunction *que* ‘that’: *¿Que cuándo voy?* ‘When am I going’, *¿Que quién lo tiene?* ‘Who has it?’, *¿Que cómo lo sabemos?* ‘How do we know it?’, *¿Que qué es eso?* ‘What is that?’, or they may also have the same syntax as non-echo questions (*¿Cuándo voy? ¿Quién lo tiene? ¿Cómo lo sabemos? ¿Qué es eso?*). Notice that, although these echo questions have the form of a wh-question, they are actually yes/no questions regarding the answer that they require. In TISL, mostly circumflex patterns were obtained for these echo questions, although low

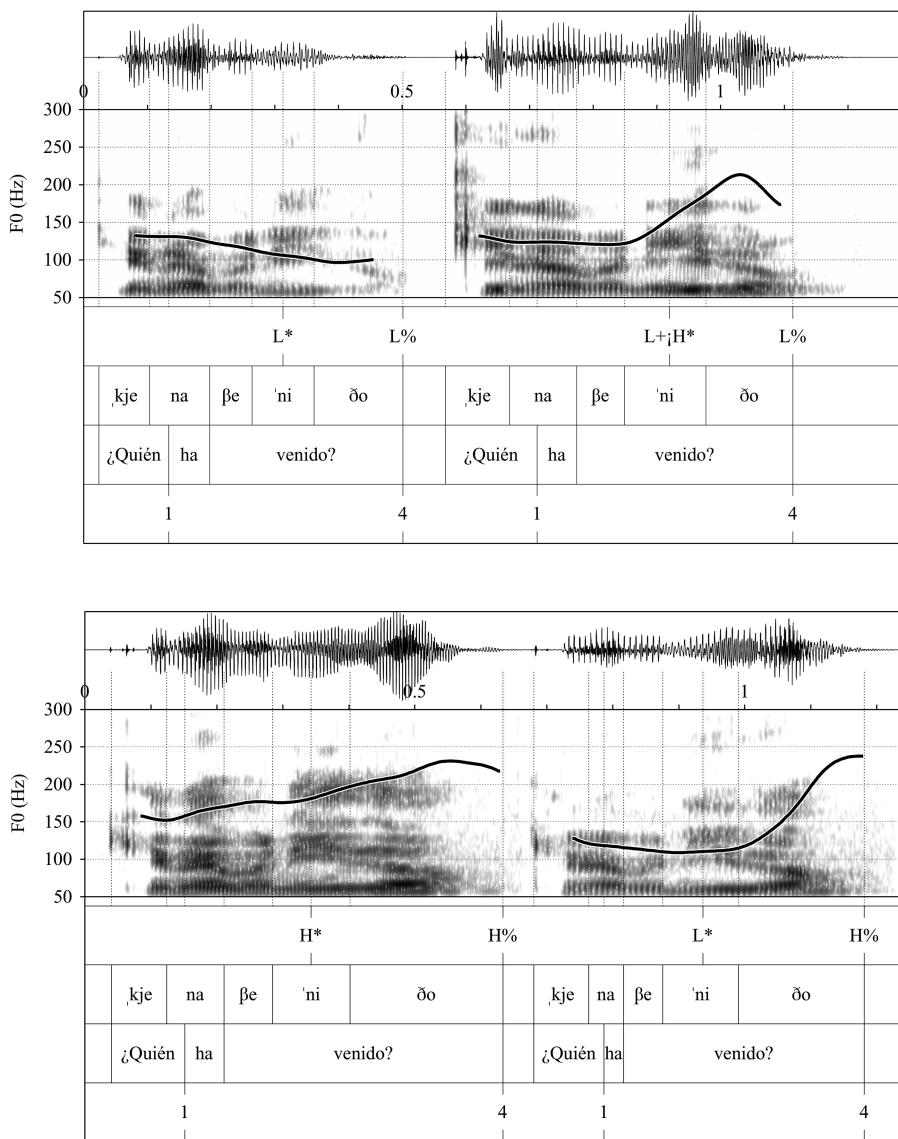


FIG. 10.20 Waveform, spectrogram, and F0 contours of four types of wh-question with the text *¿Quién ha venido?* 'Who came?', produced by author JIH (Peninsular Spanish)

rises, L\* H%, were also found in a couple of geographical varieties. It is likely that both endings are available in most if not all dialects, expressing perhaps different degrees of surprise or involvement.

#### 10.3.4 Imperatives

10.3.4.1 Commands In a classic paper, Kvavik (1988) asked whether in Spanish there is an “imperative intonation,” as postulated by Navarro Tomás (1944). More recently, this question has been addressed again in Willis (2002) and Robles-Puente (2011b), besides the data reported in *TISL*. The existence of a distinct imperative contour would imply that the two meanings of, say, *Bebe la limonada* (a) ‘S/he is drinking the lemonade’ and (b) ‘Drink the lemonade!’ can be systematically distinguished from their intonation. The answer appears to be negative, as both are often characterized by a prenuclear L+<H\* followed by an L\* L% nuclear configuration. What often characterizes commands is a high degree of exclamatory force, which would result in an expanded pitch range, greater intensity, and greater duration. This is, however, orthogonal to the declarative/imperative grammatical distinction. The examples in *TISL* show that imperatives/requests can be produced with a variety of intonational contours, not necessarily linked to specific geographical areas. Robles-Puente (2011b), in a study of Peninsular Spanish, obtained segmentally identical declaratives and imperatives with different degrees of exclamatory force, from soft to angry (e.g. *Abre el armario* ‘S/he opens the closet/Open the closet!’). About 90% of his declarative data were as illustrated in our Fig. 10.5, i.e. they had the contour L+<H\* L+H\* L%. In imperatives this contour was also most commonly found, but very often without downstep (or even with upstep) of the second accentual peak (see also Garrido Almiñana 1991).

In one-word imperatives and exhortatives of the type *¡Venga!* ‘Come on’, *¡Vamos!* ‘Let’s go’, *¡Cállate!* ‘Be quiet’, *¡Deja!* ‘Stop!’, *¡Dámelo!* ‘Give it to me’, it is possible to shift the rise to the final syllable to express greater emphasis. In phrasal commands, the same pragmatic effect appears to be obtained by de-accenting of non-final words, e.g. *¡Dame el libro!* ‘Give me the book!’, *¡Deja el libro aquí!* ‘Leave the book here!', with a single pitch accent).

An even more empathic contour in one-word imperatives (of three or more syllables) contains two peaks, one on the stressed syllable of the verb and a second one on the last syllable. These three contours are illustrated in Fig. 10.21 with the example *¡Vámonos!* ‘Let us go’ /bámonos/, /bamónós/, /bámonós/ (see Moyna 1999). This pattern of optional clitic accentuation in imperative sentences is also found in Central Catalan. This is a different phenomenon from the phonological rule that obligatorily assigns stress to enclitics in Sardinian, Corsican, Majorcan, and Minorcan Catalan, as well as in some languages spoken in the south and north of Italy. For example, a form like *bull-nos* ‘boil this for us’ is produced with stress on the verb in

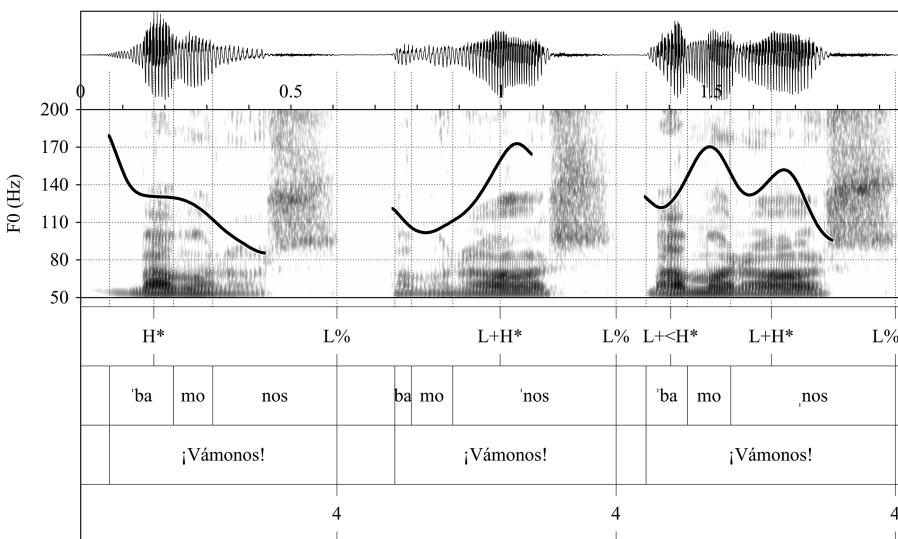


FIG. 10.21 Waveform, spectrogram, and F0 contours of three types of order (accent on verb, on clitic, or on both), produced by author JIH (Peninsular Spanish)

Central Catalan, but with stress on the enclitic *bulli-mos* in Minorcan Catalan (Bonet 2002: 981).

**10.3.4.2 Requests** Requests can be syntactically realized as commands (with some softening element like *por favor* ‘please’ or the colloquial, *porfa*, *venga*, *vamos*, *va*, *anda*) or as yes/no questions. A pattern reported in *TISL* for a few varieties (including Madrid, p. 41, fig. 22, Mexico, p. 340, fig. 21, and Puerto Rico, p. 183, fig. 23) involves a nuclear configuration that consists of a low tone associated with the nuclear accent followed by a complex rise–fall movement on the posttonic syllable(s) of the word. This contour is transcribed in *TISL* as L\* HL%.

In Fig. 10.22 we offer an example of another request configuration with the text *j(Venga,) bebe la limonada!* ‘(Come on,) drink the lemonade!’ involving a falling nuclear contour (H+L\* L%). Notice that even though the tonal pattern is the same as in the declarative contour in Fig. 10.8, the temporal patterns are different, in the sense that requests may be produced in a slower tempo, with significantly longer syllables.

### 10.3.5 Vocatives

**10.3.5.1 Initial call** As in many other (originally) European languages, in Spanish there is a “vocative chant” where the last syllable is durationally prolonged, is often uttered with greater intensity even than the lexically stressed syllable, and receives a sustained mid boundary tone !H%.

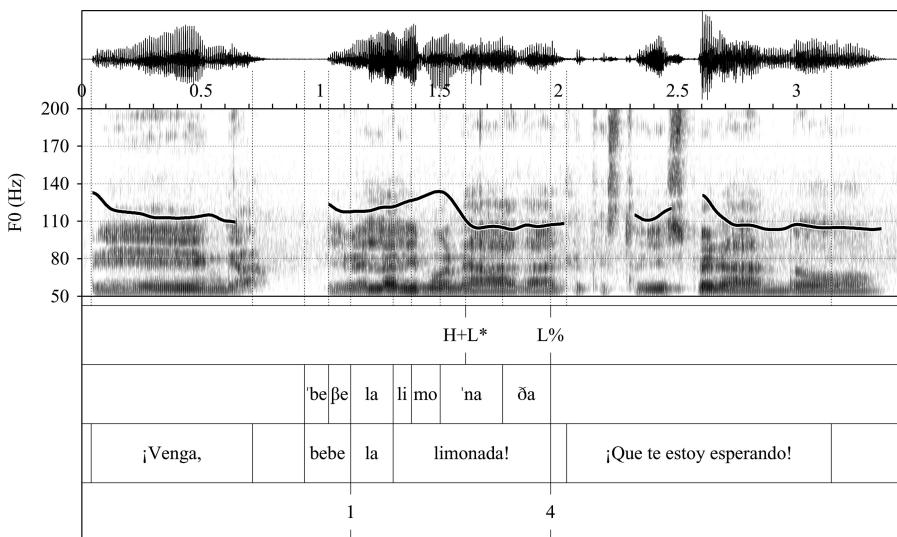


FIG. 10.22 Waveform, spectrogram, and F0 contours of request *¡(Venga,) bebe la limonada!* ('Come on,) drink the lemonade!', produced by author JIH (Peninsular Spanish)

**10.3.5.2 Insisting call** The ‘‘vocative chant’’ is, of course, not the only possibility for vocatives. Vocatives can also be produced with a lengthened stressed vowel bearing a high tone with expanded range and with a fall on the posttonic syllables.

Observation of human interaction reveals that very often when somebody is calling somebody’s name and the addressee does not reply, a variety of tunes will be used with the same text (the addressee’s name). A good illustration of the variability that one is likely to find is provided in *TISL* for Mexican Spanish, where the same vocative text is produced with four different tunes (de-la-Mota et al. 2010). What all calls appear to have in common is the extraordinary lengthening of the (stressed or unstressed) final syllable. The diversity in possible intonational contours that we find in vocatives is no doubt in part a consequence of the many different nuances that a call may convey. In *TISL* the most common vocative contour has the configuration L+H\* M% (transcribed as L+H\* !H% in this chapter) (see Fig. 10.23). A more drastic final fall and rise, L+H\* HL%, which is also reported in *TISL* for most geographical varieties, may convey greater insistence (see Fig. 10.24).

#### 10.3.6 Intonational analysis: summary

In this chapter we have described and analyzed the main intonational patterns of Spanish, noting a number of aspects of geographical variation.

In statements, a pattern of variation may have to do with the relative frequency of displaced peaks in prenuclear accents (L+<H\*). Also the beginning of the rise in

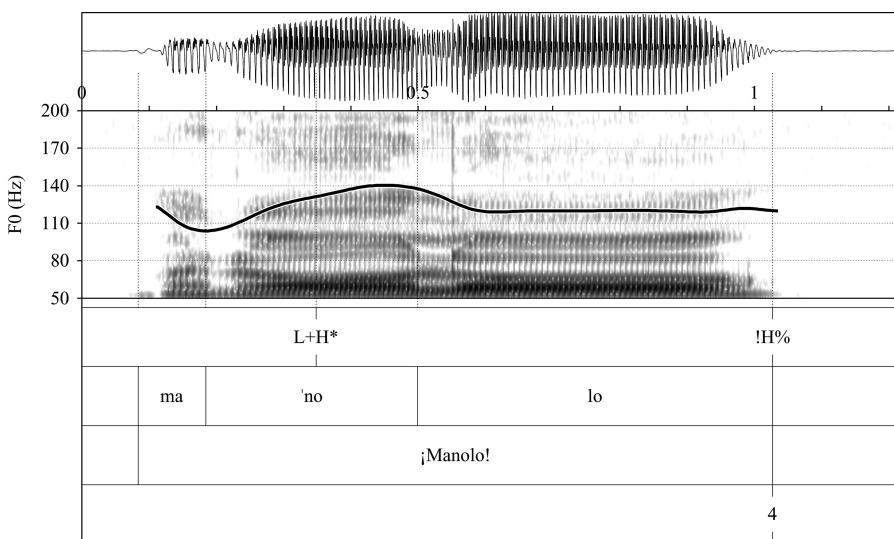


FIG. 10.23 Waveform, spectrogram, and F0 contours of the vocative chant *¡Manolo!*, produced by author JIH (Peninsular Spanish)

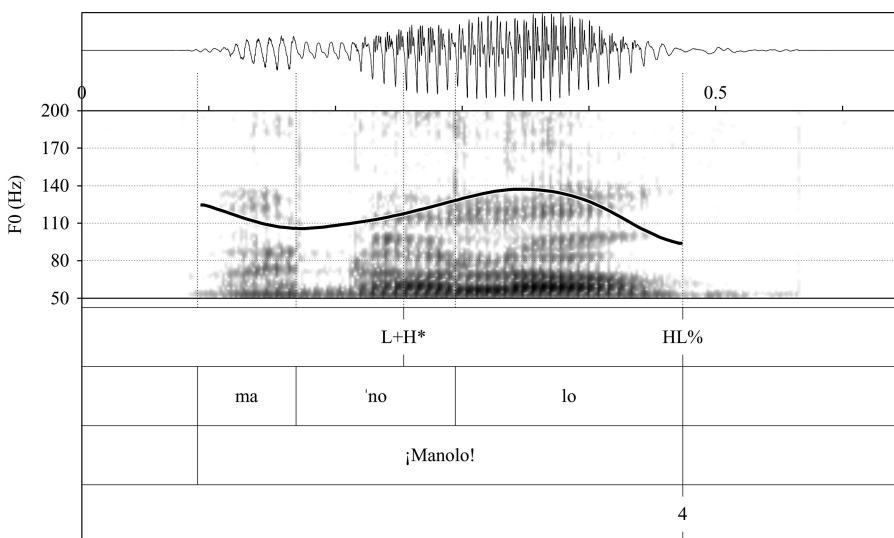


FIG. 10.24 Waveform, spectrogram, and F0 contours of the insisting call *¡Manolo!*, produced by author JIH (Peninsular Spanish)

prenuclear accents may be subject to variation, Caribbean varieties preferring very late rises ( $L^*+H$ ). As noted above,  $L+<H^*$  and  $L^*+H$  may be two realizations of the same phonological entity. Two main nuclear contours have been reported in statements: a falling interpolation from the prenuclear peak to the end of the sentence, the syllable with nuclear stress being signaled by its duration ( $L^* L%$ , see Fig. 10.4); and a peak on the nuclear syllable ( $L+H^* L%$ , see Fig. 10.5). The choice between these options has to do with relative emphasis on the last word, but in part it may also be dialectal, stylistic, or personal. Falling nuclear accents in declaratives ( $H+L^* L%$ ) appear to be less common and have been described only for Caribbean Spanish. In the relative low frequency of the nuclear  $H+L^* L%$  configuration in statements, Spanish would seem to clearly differ from Italian or Portuguese (Grice et al. 2005: 364; Chapters 5 and 7, this volume; Frota 2014). It is interesting to note that this declarative contour has been also found in Catalan in contact with either Italian or French (Prieto and Cabré 2013).

As we saw, an option in Mexican Spanish declaratives that has the status of a stereotype is a circumflex contour ending in a sustained tone.

A number of gelects, but perhaps not all, employ a nuclear contour  $L^* HL%$  to express emphasis or contradiction.

As for yes/no questions, we find a separation between dialectal varieties where unmarked information-seeking questions have a falling–rising configuration (e.g. Madrid, Mexico) and dialectal varieties where such neutral questions have a rising–falling contour instead (e.g. Caribbean, Buenos Aires). The unmarked status of final rises in questions in a given dialectal area, however, does not imply that such contours are particularly frequent in spontaneous speech.

Our description has been biased towards Peninsular Spanish because this is the variety that has so far received the greatest attention in intonational research, and is also the one that the authors of this chapter know best. An unfortunate consequence of this decision is that this may give the impression that this variety is somehow more central or less marked and that other dialectal varieties are best described in comparison with the Peninsular “norm.” Most emphatically, this is not the case. Our greater emphasis on Peninsular intonation is simply a reflection of our ignorance.

For Peninsular Spanish, then, we have seen that a text such as *Bebe la limonada* produced as a complete utterance may be pronounced with a number of intonational patterns, including those in Table 10.1, which have been illustrated in the figures of this chapter.

The inclusion of other dialectal varieties would necessitate expanding Table 10.1. For instance, uttered as a question in Caribbean Spanish, this text may be produced with a prenuclear late rise,  $L^*+H$  and a nuclear circumflex nuclear pitch configuration  $\downarrow H^* L%$  (or  $L+\downarrow H^* L%$ ) or with the pretonic ( $H+L^* L%$ ) falling configuration,  $H+L^*$  (see §10.3.2.1).

TABLE 10.1 Some possible intonations of *Bebe la limonada* ‘S/he is drinking the lemonade’ in Peninsular Spanish

<i>bebe</i>	<i>la limonada</i>	Function
L+<H*	L+H* L%	Statement or command
L+<H*	L* L%	Statement or command
L+H* L-	L* L%	Statement or command with emphasis on first word
L+<H* H-	L+H* L%	Statement or command with emphasis on second word. First word is topic.
L+<H*	L+H* L!H%	Statement of the obvious (see also echo-question expressing surprise)
L*+H	L* H%	Information-seeking question
L+ <H*	L+H* HL%	Confirmation question
L+<H*	L+;H* L%	Echo question (surprise etc.)
L+ H*	H* H%	Quiz question
L+<H*	H+L* L%	Insistent explanation
		Insistent request

Our intonational analysis of Spanish has included the following inventory:

pitch accents: H\*, L\*, H+L\*, L+H\*, L+<H\*, L+;H\*, and L\*+H;  
intermediate-phrase boundary tones: L-, H-, and !H-;  
intonational-phrase boundary tones: H%, L%, !H%, LH%, L!H%, and HL%.

Pitch accent distribution appears to be relatively high when compared to a language like English. However, as in English, it is style-dependent. In careful speech, such as reading, speaking to an audience, or giving instructions, every content word will tend to carry a pitch accent, and we may even have cases of secondary prominence where accents are assigned to lexically unstressed syllables. As was noted, the few studies of more casual speech that have been undertaken have noticed that about 30% of content words fail to show evidence of tonal prominence. In even more casual styles, such as conversations between friends, the rate of de-accentuation is likely to be much higher.

#### 10.4 Conclusion

In Spanish it is relatively easy to identify a number of geographical varieties by ear from their rhythmic and intonational properties, even after listening to only short excerpts. For a long time scholars have been interested in these interdialectal differences in intonation, and a number of specific contours have been identified, such as the Mexican declarative circumflex contour L+H\* (L)!H%, the “long fall” of Argentinian Spanish L+;H\* HL% (Kaisse 2001), and the “hat pattern” with nuclear

$\text{;H}^* \text{L}%$  of Caribbean yes/no questions. In this chapter we have reported on the state of our knowledge regarding intonational variation across Spanish geographical varieties, noting several additional respects where speakers of different geolects appear to differ in their preferences. We must admit that much prosodic variation among geographical varieties of Spanish still remains to be investigated. Some interdialectal differences clearly have to do with durational patterns (see Estebas-Vilaplana 2010), specifically the relative duration of pretonic, tonic, and posttonic syllables, so that the same pitch accent may produce very different auditory impressions.

Some aspects of intonation make its comparative study, whether across varieties of the same language or cross-linguistically, especially challenging.

First of all, regarding methodological issues, using DCT tasks we cannot be absolutely certain that two speakers intended to produce exactly the same “intonational meaning.” We don’t have readily available minimal pairs like *peso* ‘weight’/ *beso* ‘kiss’, *canto* ‘I sing’/ *cantó* ‘s/he sang’. Thus, if we find that two speakers produced two different contours in a given context, we cannot be completely certain that they actually intended to express the same meaning, so that the difference that we find represents a difference between their languages or dialects. An alternative explanation may be that they were expressing different nuances. This is so because the information that we convey through intonation is amazingly complex, including linguistic and paralinguistic meaning. We need to accumulate more corpus and experimental work before we can establish that we have found an interlectal difference.

Furthermore, the linguistic code may allow for what appear to be one-to-many mappings between meaning and intonational form, so that slightly or radically different contours may express the same meaning; conversely, the same contour may also serve to express a number of different meanings. Importantly some authors have claimed that pitch contours can encode more general or more specific meanings. For example, Escandell-Vidal (1998) claims that in Peninsular Spanish there is a “default” pitch contour that encodes a general meaning of interrogativity (the low-rise pitch contour  $\text{L}^* \text{H}%$ ) and two other contours that impose more restrictions and specialized meanings on the inferential process ( $\text{H}+\text{L}^* \text{L}%, \text{L}+\text{;H}^* \text{L}%$ ). Armstrong (2010) corroborated this idea for question intonation patterns in Puerto Rican Spanish: in this dialect, a rising-falling pitch contour ( $\text{;H}^* \text{L}%$ ) has a default meaning, i.e. it encodes interrogativity, while  $\text{H}+\text{L}^* \text{L}%$  and  $\text{L}^* \text{HL}%$  encode two types of epistemic bias ( $\text{H}+\text{L}^* \text{L}%$  encodes a positive bias and  $\text{L}^* \text{HL}%$  is a strong cue to disbelief in the variety). One of the important challenges that intonationalists face today is to try to pin down the pragmatic meanings associated to different pitch contour types, and to establish how they interact with the meaning extracted from contextual cues.<sup>6</sup> A different, theory-internal problem that makes cross-linguistic

<sup>6</sup> Notice that DCT questionnaires may shed light on the functions and contexts of use of intonational contours, but do not provide direct information on the meaning of intonational primitives (see e.g.

comparison difficult within the AM model is the use of language- and dialect-specific labels to identify contours (so that phonetically identical contours may receive different labels in different languages or dialects). In this chapter we have generally tried to provide consensus phonological transcriptions that at the same time follow the F0 contour sufficiently closely as to make cross-linguistic comparison possible. In some specific cases, establishing the phonological status of such labels in different Spanish varieties will require further research.

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Pierrehumbert and Hirschberg 1990; Gussenhoven 2004: ch. 5; Steedman 2007 on intonational meaning in English).