

# Transcription of Intonation of the Spanish Language

## Introduction\*

Pilar Prieto<sup>a</sup> and Paolo Roseano<sup>b</sup>

Institució Catalana de Recerca i Estudis Avançats - Universitat Pompeu Fabra<sup>a</sup>  
Universitat de Barcelona and Universitat Pompeu Fabra<sup>b</sup>

### *The main features of Sp\_ToBI*

The *1st Sp\_ToBI Workshop* held at The Ohio State University in October 1999 had the important outcome of proposing a set of transcription conventions that would be useful for the transcription of Spanish intonation within the Tones and Break Indices (ToBI) framework. A preliminary proposal for these transcription conventions for Spanish—or Sp\_ToBI—was published in 2002 by Beckman, Díaz-Campos, McGory and Morgan on behalf of the participants of the Workshop. While this was a very important first step in establishing a consensus-based transcription system, more recent work on the prosodic phonology of Spanish varieties suggested the need for modifications to this preliminary proposal. Revised versions of the Sp\_ToBI system have thus been proposed successively by Hualde (2003), Face and Prieto (2007), and Estebas-Vilaplana and Prieto (2008).

At the *2nd* and *3rd Spanish ToBI Workshops*, held in Barcelona, Spain, in 2005 and Braga, Portugal, in 2007, a number of individual presentations focused on the difficulties encountered in actually using the Sp\_ToBI system to label transcriptions of different dialects of Spanish. As a consequence, the main goal of the *4th Sp\_ToBI Workshop*, which took place in Las Palmas de Gran Canaria, Spain, in conjunction with the *Phonetics and Phonology in Iberia 2009* conference, was to reach consensus on a transcription system for Spanish intonation that would ultimately be applicable to all varieties of Spanish. The novelty at this fourth workshop was that researchers studying different dialects of Spanish within the

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framework of Autosegmental-Metrical (AM) phonology had used the same methodology to elicit parallel databases of spontaneous speech, an approach that allowed for precise and systematic cross-dialectal comparisons. One of the important conclusions reached at the workshop was that there was considerable agreement regarding the transcription of the parallel data sets under analysis. It was also clear that there existed a group of core intonational contours that were shared across Spanish dialects. Moreover, the revised version of the Sp\_ToBI transcription system as set forth in Beckman et al. (2002), Face and Prieto (2007) and Estebas-Vilaplana and Prieto (2008) was proved to be fully capable of accounting for both the set of meaningful intonational contrasts found within each dialect and the homogeneity of contours found across dialects. Thus, as a whole the 4<sup>th</sup> Workshop provided convincing evidence that the revised Sp\_ToBI does indeed perform well as a common pan-Hispanic transcription system and obviates the need to develop specific transcription tags for each major dialectal area. These were very important motivations for starting the project of which this book is one product (the other being the *Interactive Atlas of Spanish Intonation*) and which has the goal of making available the consensus-based Sp\_ToBI analysis as applied to each dialectal variety under investigation. Used in this way, Sp\_ToBI constitutes a valuable research tool to help us separate the core intonational phenomena that are shared across Spanish dialects from the unique prosodic traits that are characteristic of each dialectal area.

The Sp\_ToBI analysis followed in this book is consistent with the initial Sp\_ToBI transcription system plus all its later revisions. A good summary of the system is presented in the *Sp\_ToBI Training Materials*, an online course with examples of labelled utterances and exercises intended to be a practical tool for learning how to label prosodically diverse speech data in Spanish (Aguilar, de-la-Mota and Prieto 2009). Nevertheless, because Sp\_ToBI is the basic notation system used throughout this book, we will offer here a brief introduction. As is well known, the ToBI system rests heavily on the AM model of intonation, a model that draws a clear distinction between the two sorts of tonal units, namely, tonal entities associated with prominent or metrically strong syllables (or *pitch accents*) and tonal entities associated with edges of prosodic domains (or *boundary tones*). Tonal units can be monotonal or bitonal. In the case of pitch accents, Pierrehumbert (1989) proposed a phonological inventory of six pitch-accent shapes for English (H\*, L\*, H\*+L, H+L\*, L\*+H, L+H\*), some of them encoding alignment differences. As used in the AM model, the star notation '\*' in bitonal pitch accents indicates tonal association with metrically strong syllables and relative alignment. For instance, the combination of a low tone followed by a starred high tone L+H\* is phonetically realized as a rising pitch movement where the peak is aligned with the accented syllable. Dependent tones preceding starred tones are leading tones, since they act as pointers (like L in the case above), and dependent tones following starred tones are trailing tones.

Regarding the notation of rising pitch accents, early research on Spanish intonation within the AM framework (Sosa 1999 and Face 2001) proposed different categories to model both the prenuclear and nuclear accents of Spanish declaratives. According to these authors, prenuclear pitch accents were better described by means of a bitonal accent, L\*+H, which stands for a low or rising F<sub>0</sub> during the accented syllable with the F<sub>0</sub> peak on the posttonic syllable. This notation was adopted by the first Sp\_ToBI proposal (Beckman et al. 2002). However, more recent work conducted by Prieto and Face (2007) showed that rising accents with a late peak, that is, with the F<sub>0</sub> maximum on the posttonic syllable, actually correspond to three distinct tonal categories in Castilian Spanish. The L\*+H tonal category is used by

these authors to describe a low F0 during the accented syllable with the rise starting at the beginning of the postaccentual syllable. A new entity L+>H\* is proposed to account for those accents which show a rising movement during the accented syllable with the F0 peak on the posttonic. It differs from a third L+H\* pitch accent in that the F0 peak is aligned with the end of the accented syllable. This three-way distinction is based both on the realizational differences observed in acoustic analyses of the patterns and on perceptual evidence which shows that the accented syllable of L\*+H is identified as low and the accented syllable of L+>H\* and L+H\* accents is perceived as high. This distinction is mainly attested in the prenuclear position of yes-no questions (L\*+H) as compared to broad focus statements (L+>H\*).

The Spanish nuclear pitch accent has also been given a variety of phonological descriptions within the AM tradition. Basically, the debate lies between H\* (a F0 peak) and L\* (a F0 valley). Prieto, van Santen and Hirschberg (1995), Prieto, Shih and Niebert (1996), and Niebert (2000) propose H\* to account for the last accent of a neutral declarative in Spanish since a strongly lowered F0 peak is observed in some of their data. This tonal category is also used in declaratives with only one accent where a clear high target is produced within the limits of the accented syllable. However, since the majority of declaratives with prenuclear accents show no peak on the final accent but instead a progressively falling movement (what Sosa calls the '*tobogán* or slide pattern'), several authors such as Sosa (1999), Beckman et al. (2002) and Estebas-Vilaplana and Prieto (2008) propose to transcribe the nuclear accent in multi-stressed declaratives as a low tone (L\*). In this book, we have adopted this proposal, and L\* is the nuclear pitch accent of long broad focus utterances in the chapters describing Castilian, Cantabrian, Canarian, Mexican, Ecuadorian Andean, Argentinian and Mexican dialects, to which we may add the falling H+L\* nuclear accent of Puerto Rican broad focus statements. Downstepped versions of a high or rising nuclear accents are found in Venezuelan Andean and Chilean varieties, and Dominican Spanish shows a rising nuclear configuration in such statements, that is L+H\* H%.

Although in the standard AM model only low and high boundary tones were contemplated, the original Sp\_ToBI proposal by Beckman et al. (2002) proposed the existence of a mid (M) boundary tone. The existence of such scaling contrasts at the boundary tone level in Spanish has long been noted in the Spanish literature on intonation (e.g. it is one of Navarro Tomás' 1944 five *tonemas*, the *semianticadencia*, or 'half anti-fall' – i.e. 'half rise'). In this book, the M% boundary tone notation has been used throughout in the transcription of uncertainty statements in many varieties (i.e. Castilian, Canarian, Venezuelan Andean, Chilean and Argentinian Spanish), and the stylized vocative contour in all dialects, with the sole exception of Dominican Spanish.

Two levels of prosodic structure will be relevant in the Sp\_ToBI notation used in this book: the intonation phrase and the intermediate phrase. The intonation phrase is the domain of the minimal tune. It consists of at least one pitch accent followed by a boundary tone. It is also the domain for pre-boundary lengthening (see Vizcaíno Ortega, Cabrera Abreu, Estebas Vilaplana and Astruc Aguilera 2008) and it defines the position for pauses. The intermediate phrase is a minor domain located below the intonation phrase in the prosodic tree. Phrase accenting has been the subject of debate in recent years within the AM model. Researchers such as Sosa (1999), Beckman et al. (2002) and Cabrera Abreu and Vizcaíno Ortega (2007) have regarded the incorporation of the phrase accent in the description of Spanish intonation as unnecessary since, unlike English, Spanish is a language

which tends to locate the main accent in sentence-final position and thus there is no ‘space’ between the last pitch accent and the boundary tone that needs to be accounted for by means of a phrase accent. The revised version of the Sp\_ToBI system incorporates this idea and no phrase accents are present at the end of intonational phrases. Yet in Spanish the tonal movements at the end of an intonation unit show a certain degree of complexity, which arises from the presence of more than one tonal target after the nuclear tone. In order to account for complex pitch trajectories at the end of utterances, Estebas-Vilaplana and Prieto (2008) proposed the incorporation of bitonal boundary tones, that is, tones with two tonal targets, similar to those found in bitonal pitch accents (and not a phrase accent followed by a boundary tone). This proposal allows for bitonal pitch accents with a leading tone in the nuclear position followed by complex pitch movements at the end of the utterance. Thus, a fall-rise pitch movement at the end of a contour can now be described by means of a L+H\* nuclear accent followed by a bitonal boundary tone LH%.

Yet phrase accents will continue to be used in the Sp\_ToBI system to mark the presence of an intermediate phrase. The main argument for the presence of an intermediate phrase is a perceptual one, since two clear degrees of disjuncture are perceived in Spanish intonational patterns. For example, neutral declaratives with a long subject clearly show a weaker break between the subject and verb which is generally signalled by an H- boundary tone associated with the right of the minor or intermediate phrase domain. The end of the weaker disjuncture corresponds to a level 3 break index in the Sp\_ToBI system while the strong disjuncture corresponds to a level 4 break index. Frota, D’Imperio, Elordieta, Prieto and Vigarío (2007) examined the phonetic and phonological properties of prosodic boundaries in five Romance languages, among them Spanish, and found that the end of an intermediate phrase, such as the first constituent of a neutral declarative, was always realized with a high tone (H-) or continuation rise or with a mid tone (M-) or sustained pitch. The end of intonation phrases, on the other hand, was always marked by either a low tone (L%) or a wider inventory of tone combinations. According to the *Sp\_ToBI Training Materials*, other break indices indicate the cohesion between orthographic words constituting a prosodic word (level 0 break index) or boundaries between prosodic words (level 1 break index). Finally, a level 2 break index is supposed to mark the edge of a phonological phrase, a level of phrasing below the intermediate phrase. At this point the existence of phonological phrases in Spanish is an unresolved issue.

### *Contents of this book*

The chapters included in this book are text versions of the presentations given at the *4th Sp\_ToBI Workshop*, to which we have added chapters on Dominican Spanish (by Erik W. Willis) and Venezuelan Andean Spanish (by Elsa Mora, Lluïsa Astruc and Simon Rew). The chapters appear in the following order, reflecting dialect groupings: Castilian Spanish and Cantabrian Spanish (representing Peninsular dialects); Canarian Spanish; Dominican Spanish and Puerto Rican Spanish (Caribbean dialects); Venezuelan Andean Spanish and Ecuadorian Andean Spanish (Andean dialects); Chilean Spanish and Argentinean Spanish (southern South America); and Mexican Spanish (North America). The book thus provides an intonational description of the main Spanish dialect areas while at the same time in most cases offering the possibility of comparing two subdialects from within that area. In general, the variety of Spanish chosen for analysis is the dialect spoken in the administrative capital of the country or region and thus corresponds to the local standard. The only exceptions are

the chapter on Dominican Spanish, which focuses on the dialect of the Cibao region, and the chapter on Cantabrian Spanish, whose informants came from an area located in the north-western area of Cantabria.

As mentioned above, one of the advantages of the cross-dialectal work presented here is the common methodology used to collect the recorded speech data. This methodology involved recording informants not simply reading a text but reacting to a guided questionnaire, which is based on the one used in Prieto (2001). This questionnaire comprises a set of 69 controlled situations designed to elicit a wide array of intonational contours with a specific pragmatic meaning. It is an inductive method in which the researcher presents the subject with a series of hypothetical situations to which the subject is asked to react. For example, in order to obtain an utterance with the typical intonation pattern of a statement of the obvious, speakers were provided with the following context: 'You are with a friend and you tell her that María, a mutual friend of yours, is pregnant. Your friend asks you who the father is. You are surprised that she doesn't know because everyone knows that the father is her boyfriend, Jaime. What do you say to her?' The subject then produces naturally a target utterance that fits in the given context 'It's Jaime's, of course!' (in Spanish, '*Pues, hombre, ¡de Jaime!*'). It is important to stress that this questionnaire is centred around common everyday contexts designed to elicit realistic communicative answers, which can then be analysed for their pragmatic meaning. This would not be possible with read speech, which tends to be unreliable because it fails to take context into consideration. The respective authors of each chapter recorded between 2 and 25 informants to represent that specific dialectal variety.

The questionnaire was slightly adapted to make it appropriate culturally or linguistically for the particular local context. The various versions of the questionnaire as well as audio files of the recorded target utterances can be found in the *Interactive Atlas of Spanish Intonation* (*Atlas interactivo de la entonación del español*, coordinated by Pilar Prieto and Paolo Roseano, 2009-2010, accessible at <http://prosodia.upf.edu/atlasentonacion>). At present the authors of the different chapters in this book head the research groups covering the respective dialect areas for which material is available in the *Atlas*.

In order to facilitate the comparison of similar intonation contours across dialects, all chapters follow the same general structure. The first section of each chapter reviews both the traditional and autosegmental work on intonation carried out to date for that particular dialect and then presents an overview of the chapter. The second section presents the inventory of the basic units (pitch accents and boundary tones) found in the dialect. The third section consists of a description and Sp\_ToBI analysis of the various target utterance types, in the following order: broad focus statements, narrow focus statements, exclamatives, statements of the obvious, uncertainty statements, information-seeking yes-no questions, echo yes-no questions, imperative yes-no questions, confirmation yes-no questions, neutral wh- questions, echo wh- questions, imperative wh- questions, rhetorical wh- questions, commands, requests and, finally, vocatives. For each utterance that is discussed, this third section also includes a figure showing the spectrogram, oscillogram and orthographic transcription of the sentence, as well as the tone labels and break indices. Finally, the fourth section presents a summary of the main properties of the intonation contours found in that variety. Though the general descriptions presented in section 3 cover both the nuclear and prenuclear parts of the intonation contours, the summary at the end of each chapter concentrates on the nuclear configuration patterns. This is because, as is well-

known, the main traits of an intonation contour are usually realized in the final nuclear and boundary tones. Importantly, if the utterance is made up of just one word (with one accent), then the contour will typically be that of the corresponding nuclear configuration.

Each chapter presents all meaningful intonational distinctions found for each dialect under investigation. A concerted effort has been made to make the transcription system, terminology and visualization of the intonation contours consistent across chapters. It is important to emphasize that, taken as a whole, the chapters included in this book clearly demonstrate that the revised version of the Sp\_ToBI proposal (with minor additions required for the description of a few of the dialects—see below) is amply able to handle the transcription of intonational contours and contrasts in the range of Spanish dialects described here.

The Castilian Spanish intonation chapter, written by Eva Estebas-Vilaplana and Pilar Prieto, describes the intonation patterns found in Madrid Spanish. After reviewing the standard works on Castilian intonation by Navarro Tomás (1944, 1948) and Quilis (1993), they examine the main intonation contours found in this variety. Some of the patterns are recurrent across other dialects, such as the nuclear trajectories of broad ( $L^* L\%$ ) and narrow focus statements ( $L+H^* L\%$ ). Prenuclear pitch accents in broad focus utterances are typically rising pitch accents with delayed peaks, that is,  $L+\>H^*$  pitch accents. The use of  $M\%$  tones at the edge is frequent in Castilian Spanish, as it is found in uncertainty statements, stylized calling contours ( $L+H^* M\%$ ) and statements of the obvious ( $L+H^* LM\%$ ). Complex boundary tones are also commonly found, as in correction narrow focus statements ( $L^* HL\%$ ), insistent vocatives ( $L+H^* HL\%$ ), statements of the obvious ( $L+H^* LM\%$ ) and counterexpectational yes-no questions ( $L+H^* LH\%$ ). Finally, information-seeking yes-no questions are characterized by a high rising nuclear configuration ( $L^* HH\%$ ), confirmation-seeking questions by a rising configuration ( $L+H^* H\%$ ), echo questions by a rise-fall circumflex pattern ( $L+iH^* L\%$ ) or a high rise pattern ( $L+H^* HH\%$ ), and imperative questions by a falling pattern ( $H+L^* L\%$ ).

The Cantabrian Spanish intonation chapter, written by María Jesús López-Bobo and Miguel Cuevas-Alonso, describes the intonation patterns found in the traditional dialect spoken in north-western Cantabria and also provides some interesting comparisons with the standard subvariety of Spanish which is typically present in urban areas of the same region. After reviewing the literature on this subject, the authors offer a description of the main intonational features of Cantabrian Spanish. Most of the patterns found in statements are shared with the other Peninsular variety described in this book, Castilian Spanish. Probably the most noteworthy commonality with the Castilian dialect is found in the difference between broad and narrow focus statements, the former being characterised by a  $L^* L\%$  nuclear configuration and the latter by  $L+H^* L\%$ . Similarly to Castilian Spanish, the prenuclear pitch accent of broad focus utterances is  $L+\>H^*$ . The use of final  $M\%$  tones in Cantabrian Spanish is well documented, as it is found in imperative yes-no questions ( $H+L^* M\%$ ,  $L+iH^* M\%$ ), echo wh- questions ( $L+iH^* M\%$ ) and stylized calling contours ( $L+H^* M\%$ ). Complex boundary tones are also found in statements of the obvious ( $L+H^* LM\%$ ), echo yes-no questions ( $H^* HL\%$ ), invitation yes-no questions ( $L+iH^* HL\%$ ), counterexpectational yes-no questions ( $L+H^* HL\%$ ), confirmation yes-no questions ( $L+H^* HL\%$ ) and insistent calls ( $L+H^* HL\%$ ). As far as information-seeking yes-no questions are concerned, it is worth pointing out that the standard subvariety of Cantabrian Spanish shows a  $L^* HH\%$  nuclear configuration, as in Castilian Spanish, whereas the more traditional subvariety presents the falling contour  $H^* HL\%$ , which is comparable with the pattern found in several western Romance varieties of

the Peninsula (López Bobo, Cuevas Alonso, Díaz Gómez and Viejo Lucio-Vellegas 2008, López Bobo and Cuevas Alonso 2009).

The chapter about Canary Spanish is the result of research carried out by Mercedes Cabrera Abreu and Francisco Vizcaíno Ortega, who collected intonational data on the island of Gran Canaria. The authors first provide a review of the literature on the intonation of this dialect produced since the late 1980s (Quilis 1989) and then proceed with an analysis of its basic intonational patterns as seen in the data they collected for this project. Regarding statements, Canary Spanish is shown to share some important features with the other European Spanish varieties described in this book (i.e. Castilian and Cantabrian): broad focus statements are characterised by L\* L%, whereas narrow focus statements are uttered with a L+H\* L% nuclear configuration (for both kinds of statements, the prenuclear accent is L+>H\*). The use of final M% tones in Canary Spanish seems to be slightly less common than in other European varieties, since they appear only in uncertainty statements (iH\* M%), polite wh- questions (L\* M%) and the contours used to gently call and demand attention (L\* (H\*) M%). Complex boundary tones are found in a limited set of utterance-types, namely statements of the obvious, where the cross-dialectally common L+H\* LM% configuration is found, and the most common kind of vocative (L+H\* HL%). As for yes-no questions, the authors confirm that Canary Spanish, differently from Castilian dialect but similarly to some Caribbean and south-American varieties, makes use of a descending pattern (iH\* L%), which is found in not only information-seeking questions but also echo, confirmation and imperative questions.

The description of Dominican Spanish intonation is contained in the chapter written by Erik W. Willis. Besides reviewing the main intonational studies of the dialect spoken in the Cibao region of the Dominican Republic, he describes the main intonational features of this variety. The intonational contours of this dialect differ from the ones described for other Spanish in several respects. One of the differences is the fact that statements generally end in a slight rise (H% or LH%), with the sole exception of statements of uncertainty (H+L\* L%). Regarding prenuclear accents, Dominican Spanish shows a clear tendency to use L+>H\* in broad focus statements. Final M% tones in Dominican Spanish occur only in invitation yes-no questions and requests, both having a L+H\* M% nuclear configuration. The only complex boundary tone found is LH%, which always follows a L+H\* nuclear pitch accent and is characteristic in narrow focus statements, exclamatives and vocatives. Regarding information-seeking yes-no questions, Dominican Spanish shows a falling H+L\* L% pattern which resembles the intonation contour found in Canary and Puerto Rican Spanish. On the other hand, echo, counterexpectational and confirmation-seeking yes-no questions are characterised by the rising pattern H+L\* H%.

The description of the main features of Puerto Rican intonation, as well as a review of the studies concerning this subject, is contained in the chapter written by Meghan E. Armstrong. Her analysis is based on the dialect spoken in San Juan, and it shows that broad focus and narrow focus statements differ in terms of both prenuclear accents and the nuclear pitch accent (typically L\*+H ... H+L\* L% in the former and L+>H\* ... H\* L% in the latter). Final M% tones in Puerto Rican Spanish are attested in calling contours (L+H\* M%). Two complex boundary tones were found in the data presented in this chapter: LM% was found in statements of the obvious (L+H\* LM%) and rhetorical wh- questions (L+H\* LM%), while HL% appeared in counterexpectational yes-no questions (L\* HL%), requests (L\* HL%) and insistent calls (L+H\* HL%). This chapter again confirms that, especially as far as yes-no

questions are concerned, there are several intonational similarities between Canarian, Dominican and Puerto Rican Spanish, in so far as all three dialects use final falls in yes-no information-seeking questions, although with some minor differences. In fact, Puerto Rican Spanish makes use of both  $\uparrow H^* L\%$  and  $\uparrow H+L^* L\%$  nuclear configurations, the latter being found also in Dominican Spanish and the former in Canarian Spanish for the same question type.

Lluïsa Astruc, Elsa Mora and Simon Rew are the authors of the chapter on the Spanish variety spoken in the Venezuelan Andean town of Mérida. The first part of this chapter offers an overview of past intonational research in Venezuelan Spanish intonation. The central sections focus on an analysis and description of the basic intonational patterns of this dialect as seen in the data recorded for this project. Broad focus statements in Venezuelan Andean Spanish are characterised by a  $(!)\uparrow H^* L\%$  nuclear configuration, which differs from the usual  $L^* L\%$  found in the majority of Spanish dialects and which is comparable to the  $L+\uparrow H^* L\%$  configuration found in Argentinian Spanish. In contrast to other Spanish dialects, the typical prenuclear accent in broad focus statements is  $L+H^*$ . Final  $M\%$  tones in Venezuelan Andean Spanish are found in uncertainty statements ( $\uparrow H^* M\%$ ) and calling contours ( $L+H^* M\%$ ). Complex final boundary tones are very rare in this particular corpus: the only example is  $HL\%$ , which appears in insistent calls ( $L+H^* HL\%$ ). In terms of information-seeking yes-no questions, Venezuelan Andean Spanish is one of the several dialects that exhibit a low final boundary tone  $L\%$ . Nevertheless, its nuclear pitch accent  $L+(\uparrow)H^*$  differs from that found in Dominican Spanish ( $H+L^* L\%$ ), and is similar to that seen in the same utterance type in Argentinian Spanish ( $L+\uparrow H^* L\%$ ) and, to some extent, those found in Canarian and Puerto Rican Spanish (in both cases  $\uparrow H^* L\%$ ).

The Ecuadorian Andean Spanish intonation chapter, written by Erin O'Rourke, describes the intonation patterns found in the Spanish spoken in Quito. After reviewing traditional works by authors such as Toscano Mateus (1953) and Argüello (1978), the chapter offers a description of the main intonation contours found in this variety. The nuclear configurations of broad focus and narrow focus statements are, like in most dialects,  $L^* L\%$  and  $L+H^* L\%$  respectively. Also similarly to most dialects of Spanish, the prenuclear pitch accent found in such statements in Ecuadorian Andean Spanish is  $L+\>H^*$ . The use of  $M\%$  tones can be seen in Ecuadorian Andean Spanish in stylized calling contours ( $L+H^* M\%$ ), as in several other dialects, and neutral *wh*- questions (either  $L+H^* M\%$  or  $L^* M\%$ ). The only complex final boundary tone,  $HL\%$ , is found in echo and counterexpectational yes-no questions only, where it always follows a  $L^*$  nuclear pitch accent. As far as information-seeking yes-no questions are concerned, Ecuadorian Andean Spanish has the same nuclear configuration as Peninsular varieties, i.e.  $L^* HH\%$ . Non-information-seeking yes-no questions differ from such varieties, however, in so far as Quito Spanish uses circumflex configurations in echo yes-no questions ( $L^* HL\%$ ), counterexpectational yes-no questions ( $L^* HL\%$ ) and invitation yes-no questions ( $L+H^* L\%$ ).

The Chilean Spanish dialect spoken in the area of Santiago is described by Héctor Ortiz, Marcela Fuentes and Lluïsa Astruc. The authors open their chapter with a review of the literature on the intonation of this variety, beginning with the studies by Silva Fuenzalida (1956-1957). In the following sections a description of the main intonational features of the dialect is offered. For broad focus and narrow focus statements, the authors found the same nuclear configurations as in most dialects, that is to say  $L^* L\%$  and  $L+H^* L\%$  respectively. The prenuclear accent of Chilean broad focus statements is  $L+\>H^*$ , a characteristic which is

shared with most Spanish dialects. Final M% tones in Chilean Spanish are found in uncertainty statements (H\* M%) and calling contours (L+H\* M%). The use of complex final boundary tones is limited to counterexpectational yes-no questions (L+H\* LH%). Finally, yes-no questions are generally characterized by a rising nuclear configuration (which is L+H\* HH% for information-seeking questions, L\* HH% for echo questions and L+H\* LH% for counterexpectational questions), except for confirmation-seeking questions, where the final boundary tone is falling (H+L\* L%).

The chapter about Argentinian Spanish intonation is the result of the joint research carried out by Christoph Gabriel, Ingo Feldhausen, Andrea Pešková, Laura Colantoni, Su-Ar Lee, Valeria Arana and Leopoldo Labastía. The authors first offer a summary of previous descriptions of the dialect under study, which is the variety of Spanish spoken in Buenos Aires, starting with the early analyses by Vidal de Battini (1964) and Fontanella de Weinberg (1966). One of the most noteworthy features of this particular dialect is the presence of the tritonal L+H\*+L pitch accent, which typically occurs in nuclear position and in utterances with a contrastive or emphatic value. For example, the broad focus statement can present a L\* L% nuclear configuration, as in most other dialects, whereas narrow focus statements are characterised by the tritonal nuclear pitch accent (L+H\*+L L%). It is important to note that broad focus statements are produced with L+H\* prenuclear accents, in contrast to other Spanish varieties. The use of M% tones is common in Argentinian Spanish, as it is found in uncertainty statements (L\* M%), counterexpectational wh- questions (L+iH\* M%) and stylized calling contours (L+H\* M%). The rising pitch accent L+H\* followed by the complex boundary tone HL% constitutes the typical nuclear configuration in all information-seeking yes-no questions and counterexpectational echo questions, as well as in vocatives (L+H\* HL%).

The Mexican Spanish intonation chapter, written by Carme de-la-Mota, Pedro Martín Butragueño and Pilar Prieto, describes the intonation patterns found in the Spanish spoken in the federal capital. The first section of the chapter offers an overview of past intonational research in Mexican Spanish and the central sections describe the main intonational features of this variety. Mexican Spanish is shown to share some important features with the Peninsular Spanish varieties described in this book in that broad focus statements are characterised by L\* L%, whereas narrow focus statements are uttered with a L+H\* L% nuclear configuration. Interestingly, the Mexican dialect also uses a variety of circumflex contours to express broad focus statements. The use of final M% tones is found in invitation wh- questions (L+H\* M%) and, once again, in calling contours (L+H\* M%). Complex boundary tones are very commonly found, in statements of the obvious (L+H\* LM%), information-seeking yes-no questions (L\* LH%), counterexpectational yes-no questions (L\* LH%), imperative yes-no questions (L\* LH%), neutral wh- questions (L+H\* HL%), echo wh- questions (L\* LH%), requests (L+H\* HL%), calling vocatives (L+H\* HL%) and request vocatives (L\* HL%). Finally, yes-no questions are characterized by a low rising nuclear configuration (L\* LH%), which can also be found in information-seeking and confirmation-seeking questions, and counterexpectational and imperative yes-no questions, whereas invitation yes-no questions and confirmation yes-no questions show L\* HH% and L\* H% respectively.

*A cross-sectional analysis*

A comparison of the results found in each chapter reveals that there is a very broad common ground in terms of the specific intonational contours that are shared cross-dialectally in Spanish.

Broad focus statements have a nuclear configuration characterised by a low or falling nuclear accent and a low final boundary tone in the majority of dialects. The most noteworthy exception is Dominican Spanish, where this type of utterance is characterised by a falling nuclear accent followed by a high final boundary tone. It is also worth mentioning that Venezuelan Andean Spanish, despite sharing the low final boundary tone with other varieties, has a downstepped nuclear accent (!H\*).

Several authors have noted that in many varieties of Spanish there is a contrast between focal and non-focal accent types. The data presented in this book corroborate this assertion: in all dialects examined the non-focal nuclear accent is either low, falling or downstepped, whereas the focal accent is either high or rising, the contrast being thus always prosodically realized. In the majority of dialects, exclamatives share the same nuclear configuration found in narrow focus statements, which is typically L+H\* L%. The exceptions are Canarian Spanish, where a characteristic chant is found, and Venezuelan Andean Spanish, where a rising nuclear accent is followed by a mid final tone. Argentinian Spanish presents a tritonal L+H\*+L nuclear accent, followed by a low final boundary tone, in both narrow focus and exclamative statements.

As far as statements of the obvious are concerned, the dialects can be divided into two groups. Half of them, including all European dialects, express obviousness by means of the nuclear configuration L+H\* LM%, which is employed exclusively for this pragmatic purpose (Castilian, Cantabrian and Canarian Spanish, but also Puerto Rican and Mexican Spanish). The remaining varieties (i.e. Dominican, Venezuelan Andean, Ecuadorian Andean, Chilean and Argentinian Spanish) make use of the same nuclear configuration used in narrow focus statements, namely, L+H\* L% (though L+H\*+L L% in the case of Argentinian Spanish).

According to the classical description by Navarro Tomás (1944), uncertainty statements in Spanish are characterised by a final mid tone. In fact this final M% boundary tone is present in the data for only five of the dialects reported here (Castilian, Canarian, Venezuelan Andean, Chilean and Argentinian Spanish), and follows different kinds of nuclear pitch accents. The other dialects do not employ a specific configuration used exclusively for this type of pragmatic meaning. In Cantabrian Spanish, for example, uncertainty statements are produced with a L+H\* L% configuration (which differs from the L\* L% configuration of broad focus statements).

Yes-no questions in Spanish have classically been characterised as exhibiting cross-dialectal intonational variability (Navarro Tomás 1944, Quilis 1993, Sosa 1999). The patterns found in the information-seeking yes-no questions described in this book clearly suggest the existence of two main dialect clusters. In the first dialect cluster, which includes Peninsular varieties as well as Ecuadorian Andean and Chilean Spanish, information-seeking yes-no questions are characterized by final high rise HH%, usually preceded by a L\* nuclear accent. Mexican Spanish may also be included in this group, although the final boundary tone is LH% (HH% being used in invitation questions). In the second dialect cluster, which includes

Canarian, Argentinian, Venezuelan Andean and Caribbean (i.e. Dominican and Puerto Rican) Spanish, such questions typically show a final falling pattern with a L% final boundary tone. In these dialects, the contrast between information-seeking questions and broad focus statements is realized by means of either the whole nuclear configuration or the nuclear accent only. Dominican Spanish, for example, uses the L+H\* H% nuclear configuration for broad focus statements, while information seeking-yes-no questions are produced with a final H+L\* L%. Canarian, Argentinian, Puerto Rican and Venezuelan Andean Spanish varieties realize such a contrast by means of the nuclear accent, that is, while broad focus statements have low or downstepped nuclear pitch accents followed by a low boundary tone L%, information-seeking yes-no questions are characterized by high or even upstepped nuclear accents.

Echo yes-no questions and counterexpectational questions show an even higher degree of interdialectal variety. The contrast between information-seeking questions and echo yes-no questions can be realized in some dialects by using the same intonational contour with a difference in pitch range (i.e. Cantabrian, Canarian, Dominican and Mexican Spanish). It can also be realized by means of the whole nuclear configuration. One of the most common nuclear configurations used for echo questions is the rise-falling nuclear configuration L+ $\uparrow$ H\* L% or  $\uparrow$ H\* L%, found in Peninsular, Puerto Rican and Canarian Spanish. On the other hand, several dialects use a variety of intonation contours with complex boundary tones to express incredulity and echo question meanings: Venezuelan Andean Spanish uses H+L\* L% for echo yes-no questions, Ecuadorian Andean Spanish makes use of L\* HL% in both echo and counterexpectational yes-no questions, and Chilean Spanish exhibits L\* HH% in echo questions and L+H\* LH% in counterexpectational questions.

As is common in several languages, confirmation-seeking utterances may be expressed by means of different strategies. In the Spanish dialects described in this book, two main patterns can be found: a tag question (e.g. *¿verdad?*, *¿eh?*, *¿no?*) and a yes-no confirmation question (the latter being sometimes introduced by a phrase explicitly seeking confirmation, such as *¿Verdad que...* 'Is it true that...') (see Hernanz and Rigau 2006). The data discussed in this book does not provide sufficient evidence to conclude that there is a dialectal preference for any of the above-mentioned strategies, since in several varieties they tend to coexist. With respect to the potential intonational contrast between confirmation questions and other types of yes-no questions, it must be noted that this contrast is realized by a variety of means in all dialects. This is to say, there is no nuclear configuration that is cross-dialectally common for this utterance type. This notwithstanding, there seems to be a common pattern, which consists in using a final boundary tone that is radically different from that used in information-seeking yes-no questions. In dialects where the latter utterance type shows a rising final boundary tone, confirmation questions have a falling or low boundary tone, and in dialects where information-seeking yes-no questions exhibit a falling or low boundary tone, the boundary tone for confirmation questions rises.

Traditional studies concerned with Peninsular Spanish intonation, like Navarro Tomás (1944) and Quilis (1993), pointed out that the unmarked configuration of wh- questions generally corresponds to the declarative intonation, with the highest peak associated with the first accented word (in many cases the wh- word) and then followed by a gradual descent which ends in a final fall. On the other hand, Sosa (2003) found that Mexican, Colombian, Venezuelan and Puerto Rican Spanish had a preference for the use of falling contours in wh- questions in spontaneous speech. If we attempt to find commonalities

among the dialects analysed here, we may point out in first place that most of these varieties display low or falling final boundary tones in this utterance type. More specifically, it is noteworthy that in most varieties (Castilian, Cantabrian, Canarian, Dominican, Puerto Rican, Venezuelan Andean, Chilean and Argentinian Spanish) the final boundary tone in neutral *wh*- questions is the same as in broad focus statements. In addition, in five of these dialects these two utterance types share not only the final boundary tone but also the nuclear pitch accent. In Mexican and Ecuadorian Andean Spanish, by contrast, neutral *wh*- questions and broad focus statements have no element in common in the nuclear configuration.

Predictably, echo *wh*- questions show different nuclear configurations across dialects. It is of note that in most dialects echo *yes-no* questions and *wh*- echo questions have different nuclear configurations. The only exceptions are Castilian and Puerto Rican Spanish, where both question-types show  $L+jH^* L\%$ . Moreover, it is of interest that in all dialects echo *wh*- questions differ from neutral *wh*- questions in both the nuclear accent and the final boundary tone, the whole nuclear configuration thus being different. As for counterexpectational *wh*- questions, they are realized with a high or ascending final boundary tone in most varieties (Castilian, Cantabrian, Dominican, Venezuelan Andean and Chilean Spanish), while in a minority of cases this tone is low or falling (Canarian and Mexican Spanish). Counterexpectational *wh*- questions differ from neutral *wh*- questions in all dialects, with the sole exception of Canarian Spanish. This particular contrast is realized by means of a different final boundary tone only in Castilian and Mexican Spanish, by means of a single nuclear accent in Dominican and Chilean Spanish, and by mean of both (i.e. the whole nuclear configuration) in Cantabrian, Venezuelan Andean and Argentinian Spanish.

Commands show a low final boundary tone in all dialects. In addition, it is important to note that the nuclear configuration of this utterance type tends to be the same as either that of broad focus statements (Venezuelan Andean, Ecuadorian Andean and Argentinian Spanish) or that of narrow focus statements and exclamatives (Castilian, Canarian, Chilean and Mexican Spanish). Requests always have a low or falling final boundary tone and tend to have the same nuclear configuration as commands, as is the case in Cantabrian, Canarian, Dominican, Ecuadorian and Chilean Spanish. In some cases, we find special nuclear configurations to express requests (e.g.  $L^* HL\%$  in Castilian and Puerto Rican Spanish,  $L+H^* HL\%$  in Mexican Spanish).

Vocatives constitute quite a diversified class of utterances, due to both the variability in their pragmatic purpose and the potential nuances they may express (e.g. calling, calling repeatedly, reproaching, ordering). The examples of vocatives discussed in the chapters of this book reveal a widespread presence of the configuration  $L+H^* M\%$ , which appears in eight of these ten dialects (and, in a slightly different form, also in Canarian Spanish). This configuration, which generally is used to call someone, may be conceived as the most neutral form of vocative. If the vocative is more marked, i.e. when it conveys a nuance of insistence or imperativeness, the most frequent configuration is  $L+H^* HL\%$ , which is also found in eight of the dialects analysed.

*Final remarks*

In sum, this book represents a valuable contribution towards a comprehensive description of the intonation of the many varieties of Spanish. The various chapters describe in systematic fashion the more salient intonational phenomena found in the specific dialects for which data was collected. In the process, this book makes it plainly evident that the ToBI system is not simply a transcription system (see also Beckman et al. 2005: 14) but also a tool that can be used to analyse the phonological contrasts present in the intonational system of a given variety. Nonetheless, while the evidence for a broad common ground in the use of intonation contours across Spanish dialects is clear, it is also apparent that much work remains to be done before Sp\_ToBI can become a standard communal resource. That is why many of the chapters conclude by proposing perception experiments to test specific phonological contrasts. Collectively, the authors of this book have raised many questions that we hope will motivate further research on the intonational system of Spanish and other Romance languages.

Pilar Prieto  
Paolo Roseano

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