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11. Intonation in Romance: systemic similarities and differences

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Abstract

This chapter examines the main similarities and differences in the prosodic and intonation systems of the nine Romance languages and their varieties described in the previous chapters. The first section is devoted to patterns of prominence and phrasing, providing a survey of word and phrase-level prominence features and prosodic domains that are intonationally relevant for each language. The second section discusses the nuclear contours of main utterance types, as well as the use of lexical and syntactic markers to convey pragmatic meanings, and their interaction with intonation. The third section offers a systematic comparison of the nine intonation systems, focusing on the types, complexity and distribution of pitch events, and the types of nuclear configurations obtained. The final section offers an overview of the common prosodic features and of the main dimensions of variation found across Romance languages, together with a reflection on their contribution to prosodic typology.

Keywords: intonation, prosodic phrasing, prominence, Romance languages, intonational variation, typology, nuclear contour, pitch accent, boundary tone, postfocal accent.

11.1. Introduction

This chapter examines the main similarities and differences in the prosodic and intonation systems of the nine Romance languages and their varieties described in the previous chapters. Finding and discussing similarities and differences across these languages is possible because they were described using the same framework of analysis – the Autosegmental Metrical model of intonational phonology – as well as a common methodology of data collection that enhances the cross-language comparability of the empirical basis used (see chapter 1 for a detailed description). In this way, we tried to tackle the disagreements in theoretical approach, transcription and comparability that constitute strong limitations in cross-linguistic prosodic studies (Jun 2005b; Ladd 2008a, 2008b; Hyman 2012).

We have focused on aspects of prosodic and intonational cross-linguistic variation that have been traditionally considered of typological interest (Ladd 2001; Jun 2005b, 2014b; Vogel 2009; Gussenhoven 2011; Hyman 2012), as well as on properties that appear to be particularly relevant in the context of Romance languages. The first section is devoted to prominence and phrasing, providing a survey of word and phrase-level prominence features of the nine languages, together with the set of intonationally relevant prosodic constituents in each language/variety and the prosodic constituent selected as the domain for the distribution of pitch events (section 11.2). In section 11.3, similarities and differences found across Romance languages and their varieties in the nuclear contours of main utterance types are discussed. The use of intonation patterns, discourse particles and other kinds of lexical and syntactic markers used to convey pragmatic meanings, and the division of labor between intonation and these markers is considered. Section 11.4 offers a systematic comparison of the intonation systems introduced in the previous chapters,

focusing on the types, complexity and distribution of pitch events, and the types of nuclear configurations produced. The presence or absence of other intonational properties, such as deaccenting, tonal compression, and different strategies of tune-text accommodation is also described. Importantly, the potential impact of non-intonational features, such as prominence patterns or lexical-syntactic markers, on the design of intonation systems is considered. In the final section, an overview of the common prosodic features across Romance languages and of the main dimensions of variation is provided as a contribution to prosodic typology.

11.2. Prominence and phrasing

Prominence and phrasing are key prosodic properties that are relevant to our understanding of intonation patterns (e.g, Gussenhoven 2007b, Ladd 2008a, Wagner and Watson 2010). These properties have also been considered of typological interest and are thus usually included in prosodic and intonational typology work (Ladd 2001; Jun 2005b, 2014b; Vogel 2009; Hyman 2012). In this section, a summary of word and phrase-level prominence features of the nine languages described in the previous chapters is provided, together with the set of prosodic constituents considered intonationally relevant in each language/variety.

11.2.1. Prominence and intonation

All the Romance languages studied in this book have lexical stress, with the exception of French. Typically, stress falls on one of the last three syllables of the word (enclitics excluded) and penultimate stress is the dominant pattern. However, languages may differ in the relative distributions (or markedness) of final and antepenultimate stress. In Catalan and Portuguese, for example, final stress is more

frequent than antepenultimate stress, whereas Sardinian shows the opposite pattern with a clear dispreference for final stress. Unlike the other seven languages, Occitan only shows the penultimate or final stress patterns, and words with final stress are frequent. In French, which lacks lexical stress, there is an obligatory phrase final prominence that is realized on the last metrical syllable of the word.

Pitch accents are known to associate with prominent syllables (e.g., Ladd 2008a), whether they are lexically stressed or bear edge prominence as in French. In most Romance languages nuclear prominence is rightmost, that is the last prosodic word in the phrase gets the nuclear stress. Therefore, the nuclear pitch accent typically occurs close to the right edge of the intonational phrase. The notable exceptions are the realization of question intonation in Romanian and Sardinian. In Romanian, statements and questions behave differently in this respect, with the latter having the nuclear stress on the verb, in yes-no questions, and on the wh-word, in wh-questions (Jitcă et al., this volume). The nucleus of short wh-questions in Sardinian is also the wh-word, and sentences with right dislocations or fronting constructions also display non-final nuclei (Vanrell et al. this volume). These patterns of sentence stress found in Romanian and Sardinian are characteristic of Hungarian, Greek and the Slavic languages (Ladd 2008a).

Although Romance languages have generally been considered to show little flexibility in shifting the nuclear accent to a non-final position when compared with West Germanic languages (as is the case of Spanish or Catalan – Hualde and Prieto, this volume; Prieto et al. this volume), changes in the placement of the nuclear accent can also be used as a common strategy to express focus in some Romance languages (like in Portuguese and Romanian – Fernandes 2007b, Frota et al. this volume, Jitcă et al. this volume).

The distributions of lexical stress or metrical prominence, described above, and the fact that nuclear prominence is typically rightmost in Romance languages constrain the amount of postaccentual segmental material available, or in other words the distance between the nuclear accented syllable and the edge of the IP. Tune-text accommodation strategies apart (see section 4.4), the availability of little postaccentual material or its absence is suggested to be a relevant factor in the design of intonation systems. In French there is a more limited number of pitch accents and boundary tones compared with most other Romance languages, which Delais-Roussarie et al. (this volume) explain to be due to the absence of postaccentual material in this language. Along similar lines, Sichel-Bazin et al. (this volume) link the reduced number and monotonal shape of boundary tones in most dialects of Occitan spoken in France to the little postaccentual material available in the language (see section 11.4).

Secondary stress in Romance languages tends to display a binary pattern to the left of the word stress, like in Catalan or Brazilian Portuguese. However, in some languages the binary pattern is not found, and secondary stress aligns with the left edge of the prosodic word, as in European Portuguese or Romanian. In French and in Occitan, there is an optional stress at the left edge of the accentual phrase. In some languages, like Spanish and Catalan, emphatic stresses have been reported on pretonic syllables in rhetorical and didactic speech. Interestingly, secondary prominences on pretonic syllables in some languages may be conveyed by pitch accents (as in Brazilian Portuguese, Catalan, Spanish or Sardinian).

Another prominence phenomenon that most Romance languages exhibit is stress/accent shift or destressing/deaccenting under stress clash, as in Brazilian Portuguese, Catalan, Italian (especially in Northern varieties), Occitan, or Sardinian

(see the respective chapters in the this volume). In Italian, stress valleys or lapses tend to be avoided by means of secondary stress insertion. European Portuguese contrasts with most other Romance languages by not showing stress/accent shift or destressing/deaccenting of the first clashing syllable, but instead a phenomenon of stress strengthening of this syllable with no impact on pitch accent distribution (Frota 2000, Frota et al. this volume).

The rhythm of most Romance languages has been reported to be syllable-timed, like Catalan, French, most varieties of Italian, Romanian and Spanish (see Nespor, Shukla, and Mehler 2011, and the relevant chapters in this volume). In Italian, rhythm varies across varieties between more syllable-time and more stress-timed rhythm (Gili Fivela et al. this volume). Friulian is probably a stress-timed language (Roseano et al. this volume), and Portuguese has mixed rhythm (more stress-timed in European varieties and more syllable-timed in Brazilian varieties). Interestingly, both European and Brazilian Portuguese are perceived as syllable-timed on the basis of temporal properties, and intonation is a crucial factor in the perceived rhythmic distinction between EP and BP (Frota et al. this volume). The contribution of intonational properties to rhythmic distinctions across languages and varieties (as suggested in Dauer 1983) remains largely to be explored.

11.2.2. Prosodic phrasing and intonation

The set of prosodic constituents relevant for intonational structure varies across Romance languages. In Catalan, Spanish, Italian, Friulian, Sardinian and Romanian, two intonationally defined prosodic constituents are described, namely the intonational phrase (IP) and the intermediate phrase (ip). The two levels of constituency are usually characterized by preboundary lengthening (stronger at the IP

level) and the presence of boundary tones. The ip boundary is also reported to play a role in sentence disambiguation and in signaling dislocated phrases, such as constituent fronting or right dislocation (Prieto et al. this volume, Hualde and Prieto this volume, Gili Fivela et al. this volume, Roseano et al. this volume, Vanrell et al. this volume). However, instances of the same type of construction may be described as showing either an ip or an IP boundary, arguably depending on the strength of the prosodic break (see, for example, Fig. 9.9 from Vanrell et al. showing an example of constituent fronting with two intonational phrases). Although the presence of two intonationally defined constituents seems to be the dominant pattern across Romance, for some of the languages specific studies about prosodic phrasing are still lacking or are very limited (as in the case of Friulian, Romanian and Sardinian), and other languages have been analyzed both with and without the intermediate phrase (as Spanish – Hualde and Prieto this volume).

For Portuguese, there is a general consensus in the prosodic literature that only one prosodic constituent is intonationally relevant – the IP (Frota et al. this volume). There is no evidence for phrase accents or for a prosodic phrase smaller than the intonational phrase whose boundaries are tonally marked (with the exception of an optional low boundary signaling the right edge of the phonological phrase that contains a narrow focus in some Brazilian varieties). Many of the constructions reported in other languages to be signaled by ip boundaries, such as parentheticals, tags and dislocated phrases, are described as forming IPs. Ambiguous structures are also disambiguated by IP boundaries (Vigário 2003b).

While in all the languages mentioned above there is no evidence for constituents larger than the prosodic word and smaller than the ip/IP that are tonally marked (with the possible exception of Northern Catalan due to contact with French), that is not the

case for French and most dialects of Occitan (Delais-Roussarie et al. this volume, Sichel-Bazin et al. this volume). In French and Occitan, the prosodic unit relevant for accentuation is the accentual phrase (AP). The AP is characterized by a final pitch accent, marking its right edge, and an optional low boundary tone together with an optional phrase initial accent at its left edge. Besides the AP, French shows two other constituents relevant for intonation: the ip and the IP. Like in the other Romance languages in which these two levels of constituency have been described, they are characterized by different degrees of phrase-final lengthening and the presence of a boundary tone at the right edge. The ip boundary is also described as blocking the downtrend of peaks in the intonational contour. In Occitan, APs group together into IPs, whose right edge is marked by final lengthening and a boundary tone that blocks downstep. In this language there is not enough evidence for the presence of the ip.

It seems clear that the issue of whether the prosodic domain of the intermediate phrase is necessary, as least for some Romance languages, is still unresolved in Romance intonational phonology. On the one hand, most if not all the features that characterize the ip also characterize the IP, both within and across languages/varieties. On the other hand, gradient differences in juncture strength have been reported (see Frota 2012 for a general discussion on the definition of prosodic constituents and levels of phrasing). Independently of the status of the intermediate phrase in Romance languages, the descriptions of ip edge tones in Romance seem not to match their counterparts in English ToBI, where phrase accents are the ip edge tones defined as controlling the pitch contour after the nuclear accent until the end of the ip (Beckman, Hirschberg, and Shattuck-Hufnagel 2005).

Table 11.1 Intonationally defined prosodic constituents across Romance languages.

Prosodic constituents	Languages and varieties
IP	Portuguese
IP and ip	Catalan, Spanish, Italian, Friulian, Sardinian, Romanian (possibly Aranese and Cisalpine Occitan)
IP, ip and AP	French (possibly Northern Catalan)
IP and AP	Occitan

Table 11.1 shows a summary of the variation found in the set of prosodic constituents relevant for intonational structure across Romance languages and varieties. Further work is needed, within and across languages, to determine the status of the intermediate phrase, and thus whether the four patterns in Table 11.1 may be reduced to two.

11.2.3. Domains for the distribution of pitch events

Languages are known to differ in the density or sparseness of pitch events in the intonational contour. In Hellmuth (2007) it was proposed that this variation may be accounted for by the selection of different prosodic constituents as the domain for the distribution of pitch accents (namely, prosodic word, accentual phrase, phonological phrase/intermediate phrase, intonational phrase). In Jun (2005b, 2014b), the frequency or domain of pitch events is one of the criteria that determine the prosodic tonal pattern of the utterance (called ‘macro-rhythm’).

Most Romance languages show a dense pitch accent distribution in non-question intonation, where essentially every prosodic word, with a few exceptions, receives a pitch accent (Brazilian Portuguese, some varieties of European Portuguese, Catalan, Aranese and Cisalpine Occitan, Spanish, Sardinian, Friulian), or every accentual phrase is tonally marked (French, most Occitan dialects – see the respective

chapters in this volume).[1] The notable exception is Standard European Portuguese, with a sparse pitch accent distribution. In this Portuguese variety, only 17-27% of phrase internal prosodic words get a pitch accent (independently of speech style), in contrast with about 60% to 80% in Brazilian Portuguese (respectively, in semi-spontaneous and laboratory speech – Frota and Vigário 2000, Vigário and Frota 2003, Frota et al. this volume). In Spanish careful speech a pitch accent is usually found on every prosodic word and about 70% of prosodic words are accented in careful speech (Hualde and Prieto this volume). Although further research on the distribution of pitch events is still required in several Romance languages/varieties, Table 11.2 summarizes our current knowledge of the domains for the distribution of pitch events in Romance.

Table 11.2 Domains for the distribution of pitch events across Romance languages.

Domains	**Languages and varieties**
IP	Standard European Portuguese
AP	French, Occitan
Prosodic word	Brazilian Portuguese, some varieties of European Portuguese, Catalan, Aranese and Cisalpine Occitan, Spanish, Sardinian, Friulian

Pitch accent distribution has also been noted to differentiate between sentence types in several Romance languages. Typically, questions show a sparser distribution relative to statements with few or no pitch accents in the sentence-medial stretch, as reported for Catalan, Spanish and a few varieties of European Portuguese. In Brazilian Portuguese, however, there is a dense tonal density irrespective of sentence type.

[1] There is no information on pitch accent distribution for Italian and Romanian.

In most, if not all, the Romance languages with a low domain for the distribution of pitch events, the prenuclear contour of statements consists of a dense and regular sequence of rising pitch movements. For example, in Brazilian Portuguese, Catalan, Friulian and Spanish the most common types of prenuclear accents are rising accents (L+H*, L*+H). In French and Occitan, the contour that characterizes the accentual phrase consists of one or two rising pitch movements. In Standard European Portuguese, by contrast, high accents predominate and they are not regularly distributed within the prenuclear stretch (Frota 2002a). This interdependency between low prosodic domains for the distribution of pitch events and an alternating tonal pattern seems to hold beyond Romance languages, as the intonation languages with regular alternating patterns described in Jun (2014), called the 'strong macro-rhythm' languages, do not have a high domain for pitch event distribution (namely, the IP), and less or non-alternating languages ('weak macro-rhythm' in Jun 2014b's terms) do not have a low domain for pitch event distribution (that is, the PW or the AP).[2]

11.3. Intonational meaning

In this section, similarities and differences found across Romance languages and varieties in the nuclear contours of main utterance types are discussed. The use of intonation patterns, discourse particles and other kinds of lexical and syntactic markers used to convey pragmatic meanings, and the division of labor between intonation and these markers is also considered. By and large, variation in nuclear contours for a given sentence type can be found both within and across languages.

[2] Although it is too soon to establish the reasons for this interdependency, some kind of OCP effect could be suggested to hold locally in low prosodic domains.

However, some languages were shown to be quite cohesive in their intonation patterns (e.g., Friulian, Sardinian), while others revealed a rich internal variation (e.g. Italian, Catalan). Across and within languages, some sentence types show little variation in their nuclear contours, as broad focus statements and vocatives, while others display strong differentiation, like yes-no questions which are especially rich in their intonational variation. Unless otherwise stated, the data sources for this section are the nine previous chapters from this volume.

11.3.1. Nuclear contours of main sentence types

Broad focus statements

Broad focus statements across Romance languages and varieties show three types of nuclear configurations: H+L* L%, L* L%, and L+H* L%. The first two are the dominant patterns, as depicted in Fig. 11.1. H+L* L% is the characteristic nuclear contour of Portuguese, Italian, Sardinian, Friulian and Romanian, and it also occurs in varieties of Latin American Spanish (Puerto Rico and Buenos Aires), Catalan (North Catalan and Algherese, the latter in contact with Sardinian) and in the Cisalpine variety of Occitan (also in contact with Italian). L* L% is the typical pattern of Catalan, Spanish, Occitan and French, which may also occur in some European Portuguese varieties. The third pattern, with a rising nuclear accent, is typical of some Spanish varieties where it co-occurs with L* L%. In Dominican Spanish the rising nuclear accent is followed by a high boundary tone (Willis 2010).

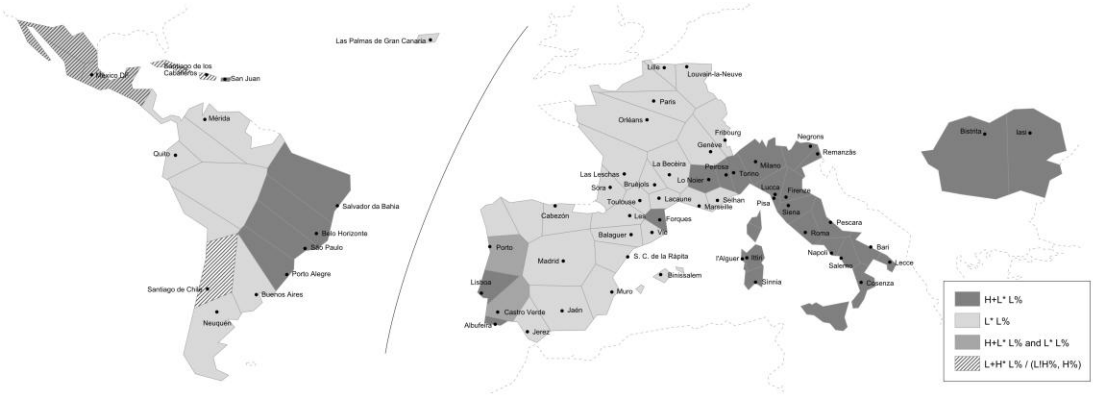

Figure 11.1 Geographical distribution of nuclear contours of broad focus statements across Romance languages and varieties in Europe and Latin America. The locations indicated on the map are those for which data were analyzed, and were taken to represent a set of Voronoi polygons, each of them marked with the representation of the different contour types documented.

Broad focus statements in Romance are thus generally characterized by a low or falling nuclear accent and a low boundary tone. Although in a few varieties both patterns may be found in broad focus statements, in most languages and varieties only one of the patterns occurs in this sentence type and the two patterns are contrastive within the language/variety intonation system. For example, in European Portuguese H+L* L% contrasts with L* L%, the nuclear contour found in requests, and in Italian H+L* is the nuclear accent for broad focus while L* identifies postfocal material.

In the European Romance language space (Fig.1, panel A), the distribution of the two dominant nuclear configurations shows a central geoprosodic L* L% area with two discontinuous H+L* L% areas on the Western (Portugal) and Eastern (Italian peninsula and the Balkans) sides.

Narrow contrastive focus statements

In most Romance languages, broad focus statements and narrow contrastive focus statements are differentiated by the use of distinct nuclear configurations, and in particular by the use of different pitch accents (with the exception of French and the Occitan varieties spoken in France). Although more variation is found in narrow focus statements than in broad focus statements, this variation can be reduced to two basic patterns, each divided in two sub-patterns (see Fig. 11.2): nuclear falls (high fall and low fall, typically H*+L L% and L* L%), and circumflex contours (with H* or L* as the accentual tone. Most languages/varieties with circumflex contours display either the L+H* L% or the L*+H L% patterns (the former being more common than the latter, which was only reported for Brazilian Portuguese so far).

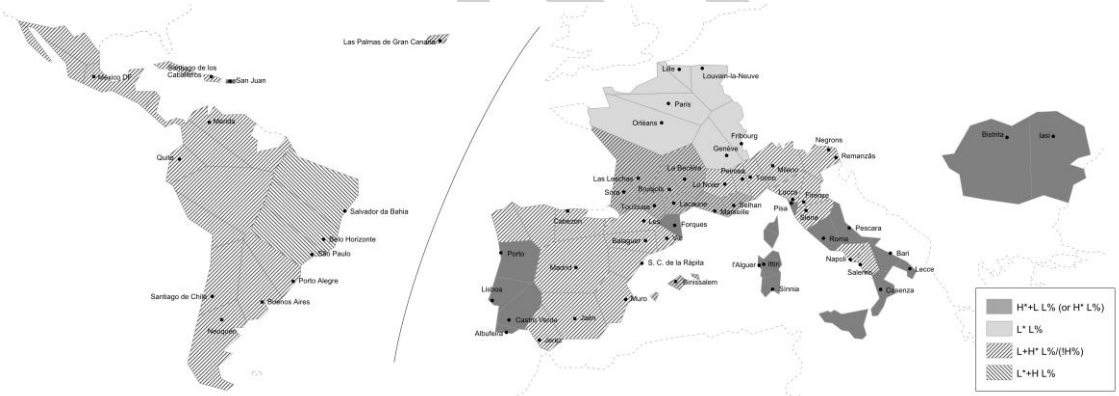

Figure 11.2 Geographical distribution of nuclear contours of narrow contrastive focus statements across Romance languages and varieties in Europe and Latin America. The locations indicated on the map are those for which data were analyzed, and were taken to represent a set of Voronoi polygons, each of them marked with the representation of the different contour types documented.

The high fall pattern is typically found in a subset of languages and varieties which show H+L* as the nuclear accent in broad focus statements (European Portuguese, the Catalan varieties of Algherese and Northern Catalan, Sardinian, several varieties of Italian, and Romanian). The complementary subset (Brazilian Portuguese, several varieties of Italian, Friulian), as well as most languages that have L* as the broad focus accent (Spanish, Catalan, Occitan), display the circumflex pattern. Only French and the Lengadocian varieties of Occitan use L* L% as the nuclear contour for both broad and narrow focus statements, distinguishing the two by an initial accent that signals the left edge of the focused element (Hi). Given this distribution of narrow focus patterns, no clear geoprosodic areas arise apart from the French/Occitan area.

Narrow focus statements in Romance can thus be generally described as showing a high peak in the nuclear word. In most languages the high peak is the accentual tone, although the phonologically relevant part of the pitch contour is an accentual rise (L+H*) in some languages and an accentual fall (H*+L) in others. In French and Occitan the peak is a form of left-edge marking, which relates to the specific role of the accentual phrase in the intonation of these languages (see section 11.2).

In several languages, the two most common contrastive patterns – L+H* L% and H*+L L% - are also used in contradiction statements and other epistemically-biased statements (Portuguese, Spanish, Italian, Friulian, Sardinian, Romanian).

Yes-no questions

Yes-no questions display strong inter-variety intonational variation in all the languages covered in this volume, with the exception of Friulian and Sardinian. In

Italian, Occitan, Portuguese, and Romanian, yes-no questions have the same surface syntax as statements. Yes-no questions may also have the same syntax as statements in Spanish, in contexts where the subject is left unexpressed, or where postposition of the subject is the unmarked pattern also in declaratives. In Catalan, the use of sentence-initial interrogative particles like *que* 'that' is frequent depending on the variety. In French and Sardinian, the use of declarative syntax also co-exists with other strategies (namely, presence of interrogative particles and/or different morphosyntax, such as constituent fronting in Sardinian). In Friulian information-seeking yes-no questions are morphosyntactically different from statements, being signaled by the enclitic position of subject clitics. Independently of the presence or absence of morphosyntactic differences between statements and yes-no questions, the two sentence types usually show distinct nuclear configurations in all the languages studied.

The intonational variation that characterizes information-seeking yes-no questions, within and across languages, can be reduced to two big clusters of patterns: rising patterns (i.e., nuclear contours that end in a high boundary tone), and falling patterns (nuclear contours that end in a low boundary). Both types of patterns are found in all languages, except Occitan and Sardinian (the former with rising patterns and the latter with falling patterns only). Although rising patterns are more common overall, the distribution between the two the groups of patterns is fairly balanced, as shown in Fig. 11.3.

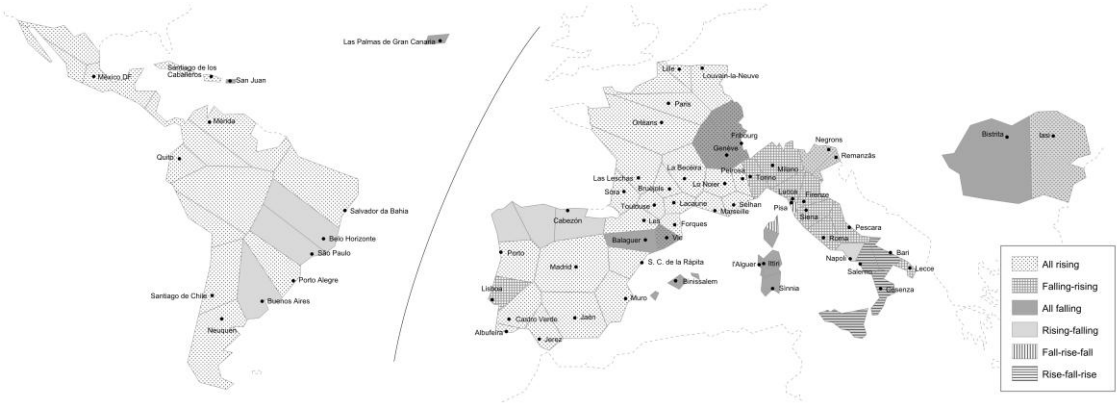

Figure 11.3 Geographical distribution of nuclear contours of information-seeking yes-no questions across Romance languages and varieties in Europe and Latin America. The locations indicated on the map are those for which data were analyzed, and were taken to represent a set of Voronoi polygons, each of them marked with the representation of the different contour types documented.

Within rising nuclear patterns, two main subgroups are found: all rising contours (L* H%, L*+H H%, L+H* H%, H* H% - represented in light dotted pattern in Fig. 11.3) and falling-rising contours (H+L* LH%, H* LH%, H*+L LH% - represented in dark dotted pattern). L* H% is the more widespread all rising contour, being characteristic of Spanish varieties (including Peninsular Spanish), of several varieties of Catalan, of the Aranese variety of Occitan, and of the Moldavian variety of Romanian. L*+H H% is found in Portuguese, L+H* H% in Occitan, and H* H% in French. Falling-rising contours appear in less geographically diverse areas: H+L* LH% is found in Standard European Portuguese and in several Italian varieties; and H* LH% and H*+L LH% are also found in varieties of Italian. A third, more complex, rising pattern (L+H* LH%) occurs in Southern varieties of Italian.

Falling nuclear patterns can also be divided in two main subgroups: all falling contours (H* L%, ¡H+L* L%, H+L* L%) and rising-falling contours (L*+H L%,

L*+H HL%, L+H* L%, L+H* HL%), respectively represented in dark and light grey in Fig. 11.3. The different types of all falling nuclear contours appear confined to specific areas or varieties: H* L% is reported in Latin American Spanish varieties and in Franco-Provençal French; ¡H+L* L% is characteristic of Sardinian and of the Majorcan and Algherese varieties of Catalan, in contact with Sardinian, while H+L* L% is found in Central and Northwestern Catalan; L* H+L* L% (with a nuclear L* and a postfocal falling contour) is specific to Transylvanian Romanian. A similar picture arises for rising-falling contours: L*+H L% is found in varieties of Brazilian Portuguese, and L*+H HL% in varieties of Italian; L+H* L% occurs in Friulian, and L+H* HL% in the Spanish varieties of Cantabria and Buenos Aires; finally, L* L+H* L% is specific to Moldavian Romanian. Besides the two main sub-groups of falling and rising-falling contours, a more complex falling-rising-falling contour (H+L* HL%) is found in Central varieties of Italian.

In several varieties more than one pattern can be used (see, for example, the description in chapter 5 for varieties of Italian), and rising and falling patterns may co-exist within a single variety (as in Central Catalan or Franco-Provençal French).

The rich intonational variation that characterizes information-seeking yes-no questions in Romance languages impacts on the ways other types of yes-no questions, such as echo questions, counterexpectational questions, and confirmation-seeking questions are expressed by intonation. In some languages there is no systematic use of intonational marking to signal pragmatic differences within yes-no questions (Sardinian, Italian, Portuguese), whereas other languages tend to systematically distinguish between different types of yes-no questions (Spanish, Catalan, Occitan, Friulian). A pattern frequently used for echo yes-no questions is a nuclear configuration with an upstepped high tone, which is found in varieties of Spanish,

Catalan and Friulian (L+¡H* L%), and in Sardinian (¡H*+L L%). Confirmation-seeking questions are frequently expressed with the same nuclear patterns as information-seeking questions, even in languages that tend to differentiate between types of yes-no questions (Portuguese, Catalan, Occitan, French, Italian, Friulian, Sardinian). However, confirmation-seeking yes-no questions may exhibit lexical markers that differentiate them from information-seeking questions in several languages (as in Catalan, French and Friulian). Unlike confirmation-seeking questions, counterexpectational questions are frequently distinguished from information-seeking questions by intonational marking (most Portuguese varieties, Spanish varieties, Catalan, French, Friulian).

Wh-questions

In Romance languages, wh-questions are characterized by containing a wh-word, usually at the left of the utterance, which signals interrogativity without the need for some kind of intonational marking. The most common pattern observed is thus statement-like intonation, which is found in Portuguese, Spanish, Italian, Sardinian (in long wh-questions), French and Occitan. In Catalan, all varieties except Algherese show a nuclear contour different from the broad focus statement pattern, characterized by a H* or H+L* nuclear accent. In Friulian, H*+L L% is found in information-seeking wh-questions, contrasting with the broad focus statement contour (H+L* L%). In Sardinian and Romanian, nuclear prominence is placed on the wh-word, especially in short questions (see section 11.2.1), and is expressed by a F0 peak in the form of an upstepped high tone in Sardinian (¡H+L* L%) and of a H* accent in Romanian (instead of the H+L* accent typical of statements in both languages).

Unlike yes-no questions, information-seeking wh-questions across languages and varieties generally display terminal falls. However, in many languages final rising contours may be found (Portuguese, Spanish, Italian, Catalan, French), frequently expressing politeness. Contrasting with information-seeking wh-questions, echo wh-questions basically show the same nuclear patterns as echo yes-no questions (Portuguese, Catalan, Occitan, Italian, Friulian), or as information-seeking yes-no questions (Sardinian), or either (Spanish, French). Therefore, echo wh-questions systematically differ from information-seeking wh-questions in their nuclear patterns.

Imperatives

In most (if not all) Romance languages imperative sentences are characterized by morphosyntactic markers (e.g., verb initial position, imperative mood). The intonation patterns of imperatives are not different from those found in statements (see Table 11.3) in many languages. However, prosody has a role in distinguishing commands from requests in most of the languages covered in this volume, either by means of nuclear pattern choice (Portuguese, some varieties of Spanish and Italian, Catalan, Sardinian, Friulian, and Romanian), by other prosodic features such as lengthening or pitch range (as in Occitan), or by both (as in Portuguese, Catalan, Spanish, Italian and Romanian).

A comparative view of the main intonation patterns that characterize commands and requests across Romance languages and their varieties is given in Table 11.3. The nuclear configuration mostly used for commands is either the same as the broad focus or the narrow contrastive focus statement patterns found within each language/variety. The exceptions are Occitan, French and Romanian, which use a different pattern in commands (H* L%), not described in statements. In some of the languages that share

the same nuclear patterns between commands and statements, the former tend to display a wider pitch range than the latter.

Table 11.3 Main intonation patterns of imperative utterances (commands and requests) across Romance languages: broad focus (BF), narrow contrastive focus (NF), other patterns/features.

Languages	**Commands**				**Requests**			
	BF pattern	**NF pattern**	**Other pattern**	**Other features**	**BF pattern**	**NF pattern**	**Other pattern**	**Other features**
Portuguese	BP	EP					L* L% (EP), L* L%, L+H* L% (BP)	Lengthening of nuclear syllable
Spanish	Peninsular Other[(a)]	Most varieties		Wider pitch range	Canarian Chilean	Most varieties	L* HL% (Peninsular, Puerto Rico)	Lengthening
Catalan	YES			Wider pitch range			L* HL% (most varieties)	
Occitan		YES	H* L%				H* L% L* HL% (Aranese)	Lengthening of nuclear syllable
French			H* L%				H* L%	
Sardinian		YES		Wider pitch range	YES			
Italian	Many varieties[(b)]	Most varieties			Most varieties	Lucca, Rome, Naples		Global lengthening
Friulian	One-word	YES				YES		
Romanian			H* L%				L+H* L%, L* L%	Lengthening of nuclear syllable

(a) Canarian, Chilean and Mexican Spanish (Prieto and Roseano 2010).
(b) This pattern is used as an alternative contour in several varieties of Italian.

As for requests, the situation is reversed, given that in most languages a nuclear configuration different from statement intonation is found, with two main patterns: a low nuclear accent (L*) followed by a L % or a HL% boundary configuration, or a nuclear accent with a high peak (H*, L+H*) followed by L%. The L* patterns seem typical of (originally) Iberian Romance varieties, whereas the high peak pattern (H* L%) is found in France. Both possibilities are found in Romanian and Brazilian Portuguese (although further research is needed on intonational variation in requests in this variety of Portuguese – see Frota et al., this volume). In Sardinian, Italian, and Friulian, by contrast, requests show one of the statement patterns. The most frequent nuclear configuration used in these languages is the contrastive pattern, in what seems to be a feature of Romance varieties in the Italian Peninsula. Lengthening effects seem to be a general prosodic feature of requests across languages.

The intonation of imperative sentences shows a low or falling boundary in all Romance languages. The falling boundary, which depicts a rise-fall at the edge of the utterance (HL%), is characteristic of requests in varieties of Catalan and Spanish, in Aranese Occitan (in contact with Catalan), and in varieties of Brazilian Portuguese.

Vocatives

The findings on calling contours in the nine languages and their varieties covered in this volume support previous observations that calling contours have many similarities in European languages, together with systematic language-specific differences in tune-text association of the typical vocative chant, L+H* !H (Gussenhoven 1993, Ladd 2008a). Furthermore, they also confirm that different languages (or language varieties) may use different types of calling contours to express the same pragmatic meanings.

A summary of the dominant nuclear patterns obtained for the two kinds of vocatives analyzed in this volume – the initial call and the insistent call – is provided in Table 11.4, together with the most frequent alternative patterns or the patterns specific to given local varieties. Prominent phonetic features of calling contours, namely pitch range and lengthening properties, are also included in Table 11.4.

Table 11.4 Intonation patterns of vocatives (initial calls and insistent calls) across Romance languages: dominant contour, other patterns and features.

Languages	**Initial Calls**			**Insistent Calls**		
	Main pattern	**Other pattern**	**Other features**	**Main pattern**	**Other pattern**	**Other features**
Portuguese	L+H* !H%	L* HL% (BP-RGS)	Lengthening of boundary syllable	L+H* L%	L+H* !H% (EP-ALE) L* HL% (BP-RGS)	Lengthening of nuclear syllable
Spanish	L+H* !H%		Lengthening of boundary syllable	L+H* HL%	L+H* !H%	Lengthening of boundary syllable
Catalan	L+H* HL%	L+H* !H%[(i)]	[(i)]Lengthening of boundary syllable	L+H* !H%	more local patterns	
Occitan	H* L%	L+H* !H% (Aranese, Cisalpine)		H* L%	L+H* !H%	Wider pitch range Global lengthening
French	H+!H* !H%			H* L%		
Sardinian	L+H*L* L%		Lengthening	L+H*L*L%[(i)]	L+H* !H%	[(i)]Wider pitch range
Italian	L+H* H!H%			L+H* H!H%[(i)]	L+H* L%	[(i)]Wider pitch range, lengthening of nuclear syllable
Friulian	L+H* H!H%		Lengthening of boundary syllable	L+H* HL%		Lengthening of boundary syllable
Romanian	L+H* !H%		Lengthening of boundary syllable	L+H* L%		

All Romance languages use a form of the vocative chant, that is a contour characterized by high pitch followed by a downward step after which the pitch level is sustained. Three language-specific types of this contour were found, which are differentiated by the tune-text association of the downward step in pitch (!H). In the most frequently used contour, the step down characterizes the postaccentual stretch and is thus represented by a !H% boundary which spreads in the postnuclear stretch. In the contour specific to Italian and Friulian, the step down occurs only on the last posttonic syllable and thus only the boundary syllable shows the sustained mid pitch, a fact that is captured by a bitonal H!H% boundary tone. [3] The third type of contour is specific to French, where the step down occurs on the accentual syllable, and thus the sustained pitch is found in the accentual syllable until the end of the contour (H+!H* !H%).

A low calling contour is also used in most languages (Sardinian being the exception). In this contour, the high pitch on the nuclear syllable (H* or L+H*) is followed by a low (L%) or a falling (HL%) boundary tone.

Both the sustained pitch and the low calling contour may be used in different languages to express either the initial call or the insistent call pragmatic meanings, although the former more frequently expresses initial calls, and the latter is more frequently associated with the expression of insistent calls. An illustration of the language specific use of the two contours to express the different pragmatic meanings is provided by Catalan and Spanish. In Catalan, the dominant contour for the initial call is L+H* HL%, although L+H* !H% is also used. L+H* !H% is the dominant contour for insistent calls in Catalan. By contrast, in Spanish the dominant contour for

[3] Friulian also has a L+H* !H% contour, but with a different pragmatic function (see section 11.3.2).

insistent calls is L+H* HL%, although L+H* !H% may also be used. In Spanish, L+H* !H is the dominant contour for initial calls.

Within each language or variety, initial calls and insistent calls are distinguished by their nuclear configurations in French, Friulian, Romanian and in most varieties of Portuguese. As described above, Catalan and Spanish may use the same contour for the two pragmatic meanings, but differ with respect to the dominant pattern for each meaning. In Occitan, the same nuclear configuration is used in each variety, but insistent calls show wider pitch range and longer durations. In Sardinian, and also in Italian, the same nuclear pattern is frequently used. However, insistent calls tend to show wider pitch range in both languages, as well as longer nuclear syllables in Italian.

As with imperative sentences, pitch range and duration effects are actively used in vocatives. The latter seem more common in sustained pitch contours, in particular the lengthening of the boundary syllable which typically goes together with !H%. The former characterize insistent calls, as already described. In insistent calls, a longer duration of the nuclear syllable has also been reported.

11.3.2. Lexical and syntactic markers and intonation

Romance languages differ in the use of discourse particles and other kinds of lexical and syntactic markers to convey pragmatic meanings. The presence of such markers has an impact on the division of labor between intonation and other strategies that may be used to signal the same meanings.

Sardinian and Friulian are the languages that display a heavier load of lexical and syntactic marking of modality (see, respectively, Vanrell et al. and Roseano et al., this volume). In these languages a variety of lexical markers (e.g., modal particles,

adverbs) can be found to convey meanings related to epistemically-biased statements or questions, and to imperatives. In addition, Sardinian uses syntactic strategies such as constituent fronting (namely, in questions), and Friulian has morphosyntactic markers, such as the presence and position of subject clitics that differ according to sentence type. An illustration of the impact of such rich systems of lexical and syntactic marking on the relation between intonation and meaning is provided by the following two examples. In Sardinian and Friulian, epistemically-biased statements are distinguished through the use of a variety of lexical markers and tend to show the same nuclear configuration (e.g., usually H*+L L% is used for all types of epistemic biases, including contradiction, certainty, uncertainty, obviousness). A more extreme example is the presence of one single nuclear configuration in Friulian, the non-vocative chant L+H* !H%, that can be used in most sentence types (with the exception of the broad focus statement) with the phatic function of keeping the communication channel open. According to Roseano et al. (this volume), such a multifunctional pattern is possible in Friulian due to the heavy use of morphosyntactic and lexical markers in this language.

In other Romance languages, the presence of lexical or syntactic markers is much less prevalent. For example, in French and in the varieties of Occitan spoken in France, information-seeking yes-no questions may start with an interrogative marker (respectively, *est-ce que* and *es que*) or show the same surface syntax as statements (Delais-Roussarie et al. this volume, Sichel-Bazin et al. this volume). Typically, the presence or absence of the interrogative marker correlates with the types of nuclear patterns used. In French, when the marker is present the nuclear patterns are less consistent, and differ from the H* H% configuration that signals yes-no questions without the interrogative particle. Similarly, in Occitan the presence of the marker

triggers the falling nuclear pattern characteristic of declaratives (L* L%), whereas questions with no marker show a distinct rising configuration (L+H* H%).

A clear example of the use of intonation patterns to express a similar set of meanings that can be conveyed by lexical markers in languages like Sardinian or Friulian is provided by Catalan. While in Sardinian and Friulian the same nuclear configuration is used in the different kinds of epistemically-biased statements (i.e., H*+L L%), in Catalan the different kinds of biases can be expressed by intonation (Prieto et al. this volume). Catalan uses distinct combinations of nuclear accents and boundary tones to convey, for example, obviousness and contradiction (L+H* L!H% and H+L* HL%, respectively). Importantly, some tonal elements are specifically linked to a given meaning, as the L!H% boundary tone that has only been attested in statements of the obvious.

In most Romance languages, vocatives have no morphosyntactic markers and tend to be signaled by particular nuclear configurations (as described in section 11.3.1). However, in some varieties of Catalan (Algherese and Balearic Catalan), insistent vocatives are typically produced with the sentence-initial particle *o* (i.e., *O Margalida!;* see Prieto et al. this volume). Similarly, in Sardinian (and also in Algherese Catalan, in contact with Sardinian), there is a particular truncation process of the poststressed segmental material that mainly affects initial calls. As both initial calls and insistent calls may be produced with the same intonation contour (L+H* L* L%), in the varieties that truncate truncation serves as a marker to distinguish between the two pragmatic meanings.

The variation found in the use of discourse particles and other kinds of lexical and syntactic markers, and its interaction with intonation, illustrate the need to take lexical and syntactic properties into account when describing intonation. These

properties may join phonetic and phonological properties like stress and prominence patterns in the set of non-intonational features relevant for intonation in a given language. Specifically, these properties may be seen as a relevant factor in the design of intonation systems. The fact that Sardinian makes a restricted use of boundary tones and has a fairly reduced inventory of nuclear patterns compared with other Romance languages (see section 11.4) could be explained, as suggested in Vanrell et al. (this volume) by the interaction between lexical-syntactic markers and intonation in this language.

11.4. Intonation systems across Romance languages and varieties

In the Autosegmental Metrical model of intonational phonology, the intonation contour consists of a string of tones that comprise pitch accents (T*), phrase accents (T-) and boundary tones (T%) (see, among others, Beckman and Pierrehumbert 1986; Ladd 2000, 2008a; Jun 2005b, 2014b; see also chapter 1). Language-particular inventories of tonal events of the different types are used to produce the tunes of utterances. In section 11.3, we described similarities and differences across Romance languages and varieties in the nuclear contours of main utterance types. In the current section, we focus on the types of pitch events, their complexity and distribution, as found in the nine languages studied, as well as on the distinct types of nuclear configurations obtained by the combination of pitch accents and boundary tones. This comparative approach allows us to establish the most common types of pitch events found across Romance languages, together with the main differences that characterize the nine language-specific intonation systems. Other intonational properties of interest to cross-linguistic variation are also considered, such as the presence/absence of

deaccenting or tonal compression, and kinds of strategies of tune-text accommodation mostly used.

11.4.1. Tonal events and nuclear contours

All Romance languages have pitch accents and (IP) boundary tones, but not all show phrase accents or ip edge tones. In addition, only French and Occitan (and possibly Northern Catalan) have tonal events that signal the left edge of the accentual phrase. This is as expected given the variation in the set of intonationally relevant prosodic constituents described in section 11.2.2 above.

In most (if not all) Romance languages, nuclear pitch accents display a wider set of possible types than prenuclear accents. It is common for a given pitch accent to be used only prenuclearly: L+<H* in Catalan, Spanish, Aranese Occitan and Romanian; L*+H in Catalan and Friulian; H* in Portuguese and Sardinian (see the respective chapters for each language in this volume, and also Frota 2002a for Portuguese). Moreover, in many Romance languages the prenuclear contour is characterized by the regular presence of the same type of pitch accent (see section 11.2.3 above). Consequently, most other pitch accents present in the language inventory are used only in nuclear position.

Table 11.5 shows the inventory of nuclear accents and boundary tones of the nine languages and their varieties described in the previous chapters. Pitch accents or boundary tones that are restricted to particular varieties within each language are represented in light grey. The nuclear pitch accent inventories have between four (French) and seven (Italian) pitch accent types. Most languages display five types of nuclear pitch accents (Portuguese, Spanish, Occitan, Friulian and Romanian, and also Catalan if variety-specific accents are excluded). In a subset of languages that

includes Spanish, Catalan, Italian, Sardinian and Friulian, three phonological tonal levels are contrastively used in nuclear pitch accents: L, H and ¡H, the latter only in the bitonal accents ¡H+L*, ¡H*+L, and L+¡H*. However, while L+¡H* is common across languages, the upstepped high in falling accents seems specific to Sardinian and varieties of Catalan in contact with Sardinian. Similarly, a downsteped H tone in nuclear accents is specific to French. Another particular feature of French is the presence of same tone bitonal accents. If a contrastive use of tonal scaling is reported in several languages, only Italian seems to show a contrastive use of alignment in nuclear accents (L*+H and L*+>H). The most common nuclear accents across Romance languages are H+L*, L+H* and L*, which occur in all languages but one (French for the two bitonal accents, and Italian for the low accent).

Table 11.5 Inventory of nuclear accents and boundary tones of the nine languages and their varieties.

Nuclear accents / Languages	**H***	**L***	**H+L***	**H*+L**	**L+H***	**L*+H**	**¡H+L***	**¡H*+L**	**L+¡H***	**L+>H***	**H+H***	**H+!H***
Portuguese		■	■	■	■	■						
Spanish	■	■	■		■				■			
Catalan	■	■	■		■				■			
Occitan	■	■	■		■						■	
French	■	■									■	■
Sardinian		■	■	■	■		■	■				
Italian	■		■	■	■	■			■	■		
Friulian		■	■	■	■				■			
Romanian	■	■	■	■	■							

Table 11.5 (Continued)

Boundary tones / Languages	**L%**	**H%**	**!H%**	**LH%**	**HL%**	**L!H%**	**H!H%**	**LHL%**
Portuguese	■	■	■	■	■			
Spanish	■	■	■	■	■	■		
Catalan	■	■	■	■	■	■		■
Occitan	■	■						
French	■	■	■					
Sardinian	■		■					
Italian	■	■		■	■	■	■	
Friulian	■	■	■		■		■	
Romanian	■	■	■					

As for boundary tones, languages vary between an inventory of two (Sardinian) and seven (Catalan) boundary tones. At the low end we also find French and Occitan (in particular the varieties spoken in France), whereas Spanish and Italian are at the higher end with a larger boundary tone inventory. Crucially, complex tonal configurations at the IP boundary are absent from languages with small boundary tone inventories, while they prevail in languages with larger inventories. Catalan seems to be the only language with a tritonal boundary tone (LHL%). In all languages but Sardinian, three phonological tonal levels are used in boundary tones (L, !H, and H).

The nuclear contours obtained by the combinations of nuclear accents and boundary tones in the nine languages and their varieties are summarized in Table 11.6. Although both monotonal and bitonal nuclear accents are present in all languages, most Romance languages show a more restricted use of monotonal accents, and thus bitonal accents are more productive in nuclear configurations (Portuguese, Catalan, Occitan, Italian, Sardinian, Friulian). A language where monotonal accents dominate is French. Among the languages that have both simple and complex boundary tones, simple boundary tones were found to be clearly more productive in Portuguese, whereas both types are equally productive in languages like Catalan and Italian, which have larger boundary tone inventories. Sardinian and French are the two languages with the most reduced number of nuclear configuration attested, respectively seven and six. At the other end of the spectrum, we find Catalan and Italian with more than twice as many different nuclear configurations (15 and 19).

Table 11.6 Nuclear contours across the nine Romance languages and their varieties. Italics signal nuclear contours restricted to local varieties.

	H*	**L***	**H+L***	**H*+L**	**L+H***	**L*+H**	**¡H+L***	**¡H*+L**	**L+¡H***	**L+>H***	**H+H***	**H+!H***
L%	SP, Ca, Oc, Fr, *It*, Ro	PT, SP, Ca, Oc, Fr, Sa, Ro	PT, SP, Ca, Oc, Sa, It, Fri, Ro	PT, *Ca*, Sa, It, Fri, Ro	PT, SP, Ca, Oc, Sa, It, Fri, Ro	*PT*, *It*	*Ca*, Sa	Sa	SP, Ca, It, Fri	It	Oc, Fr	Fr
H%	SP, Fr, Ro	SP, Ca, Oc, Fr, Fri, Ro	*PT*, *Oc*		Ca, Oc, It, Fri, Ro	PT, *It*			It			
!H%					PT, SP, Ca, Oc, Sa, Fri, Ro							
LH%	*It*	*PT*, SP,	PT, It,	It	SP, Ca, It	*PT*			*It*			
HL%		*PT*, SP, Cat, *Oc*, Ro	PT, Ca, *It*		SP, Ca, Fri	PT, It			*SP*			
L!H%					SP, Ca, *It*							
H!H%					It, Fri							
LHL%					Ca							

The intonation system of French stands out in many respects. Besides the presence of pitch events signaling the AP left edge, which French shares with Occitan, French shows a more limited number of pitch accents and boundary tones compared with most other Romance languages, displays same tone bitonal pitch accents (H+H) and simple boundary tones, and monotonal accents dominate in nuclear configurations. In Delais-Roussarie et al. (this volume) the first of these features is suggested to be due to the absence of postaccentual material in this language, given that French lacks lexical stress and has an obligatory phrase final prominence that is realized on the last metrical syllable of the word (see also section 11.2.1). We suggest that the other features may be explained along similar lines, that is complex nuclear configurations (different tone bitonal accents, complex boundary tones, or combinations of bitonal accents and boundary tones) are highly disfavored (or even absent) because their realization would be strongly affected by the lack of postaccentual material. The boundary tone inventory of the Occitan varieties spoken in France has similar properties to the French one: a reduced number and monotonal shape of boundary tones. Although Occitan has lexical stress, it only shows penultimate or final stress patterns, and the latter are frequent. In Sichel-Bazin et al. (this volume), the properties of the Occitan boundary tone inventory are suggested to be related to the little postaccentual material available in the language.

Sardinian also stands out because of its reduced inventory of boundary tones, together with a fairly reduced inventory of nuclear patterns compared with other Romance languages. Vanrell et al. (this volume) suggest that these features of Sardinian can be explained by the interaction between lexical-syntactic markers and intonation in this language (see also section 11.3.2). Indeed, Sardinian and Friulian are the two languages that display a pervasive use of lexical and syntactic markers to

convey pragmatic meanings. However, the ways in which lexical and syntactic marking interact with intonation in the two languages seem to be different. In Sardinian, this non-intonational feature impacts on the design of the intonation system. In Friulian, by contrast, it seems to interact with the tune choices for particular sentence types and pragmatic meanings without strongly affecting the inventory of tonal categories available in the language.

The intonation systems of all nine Romance languages differ in three important respects from the intonational grammar proposed in Pierrehumbert (1980) for English (see also Ladd 2008a). One of the differences relates to the status of the intermediate phrase and the intermediate phrase edge tone (or phrase accent), already discussed in section 11.2.2 above. In most Romance languages, the ends of IPs have been described using either simple or complex boundary tones, and no phrase accent. A second difference relates to the internal structure of intonation contours. Unlike in English, in Romance languages prenuclear accents and nuclear accents constitute two different sets of pitch accents, the former being more restricted than the latter. This argues for an internal structure of tunes with a prenuclear and a nuclear stretch. Finally, in Romance languages and their varieties it is not the case that all possible sequences of pitch accents and boundary tones are assumed to be legal in the respective language/variety. In fact, many of them have not been attested in the data. In other words, the intonation systems overgenerate. There are a number of reasons that could explain this. Limitations in data coverage is certainly one of them. However, some pitch accents and boundary tones display very restricted combination possibilities, probably due to pragmatic considerations: for example, in Portuguese H*+L, which encodes narrow contrastive focus in assertions, only combines with L%; in Catalan, the LHL% boundary only combines with L+H* to express an insistence

tune. Indeed, it is frequent that a given boundary tone only combines with a given pitch accent (as L+H* !H% in Sardinian, L* HL% in Occitan, or L+H* H!H% in Friulian and Italian). These restricted combination patterns of pitch accents and boundary tones suggest that nuclear patterns may form a tight intonational unit in Romance languages.

11.4.2. Other intonational properties

Other intonational properties of interest to cross-linguistic variation are the presence/absence of deaccenting or tonal compression, and the kinds of strategies of tune-text accommodation mostly used in a given language or variety. Although the empirical database of the previous nine chapters was not specifically designed to address these issues, a few interesting observations can be reported.

In most (if not all) Romance languages there is no deaccenting in statements, at least not to the extent found in English (or West Germanic languages). This has been reported by several authors (e.g., Ladd 2008a and references therein), and is confirmed in the nine earlier chapters. By contrast, Romance languages usually show postfocal pitch range compression with the presence of (reduced) postfocal accents (as described, for example, for Portuguese, Spanish, Catalan, Occitan, Italian and Sardinian). In most languages, the postfocal accent is usually either H+L* (Portuguese, Sardinian) or L* (Spanish, Catalan, Occitan, French). In Romanian, a different pattern is found: in yes-no questions, which have the nucleus on the verb, postnuclear accents may contrast in accent type (falling or rising) and differentiate varieties of the language.

Unlike deaccenting, tune-text accommodation strategies were found to vary across Romance languages and varieties. Tonal truncation, especially of the final low

tone in terminal falls, was described in varieties of Italian, in Friulian, in Moldavian Romanian, and in varieties of Portuguese. In Portuguese, however, the most common strategy seems to be extending the segmental string (by means of vowel lengthening, blocking of vowel deletion, or even vowel insertion), and not adjusting the tonal string. Vowel lengthening was also reported for Spanish, Catalan, and varieties of Italian. Further research is needed so that a more detailed picture of cross-linguistic variation in tune-text accommodation in Romance languages can be provided.

11.5. Towards a typology: the contribution of Romance languages

In this chapter, the main similarities and differences in the prosodic and intonation systems of the nine Romance languages and their varieties described in the previous chapters were examined. These similarities and differences were captured by properties of prosodic and intonational cross-linguistic variation that have been considered of typological interest in earlier work (Ladd 2001; Jun 2005b, 2014b; Vogel 2009; Gussenhoven 2011; Hyman 2012), as well as properties that appear to be particularly relevant in the context of Romance languages. We have focused on three groups of properties: non-intonational prosodic features, non-prosodic features, and intonational features.

Non-intonational prosodic features included word-level and phrase-level prominences, and prosodic constituent structure or phrasing as the basis for intonationally relevant constituents and for the domains for the distribution of pitch events. The common prominence pattern across Romance languages is characterized by lexical stress on one of the last three syllables of the word (French and Occitan are the exceptions) and by rightmost nuclear prominence (with the exception of Romanian and Sardinian). In most languages, the intonationally relevant prosodic

constituents are the IP and the ip (the AP being relevant for French and Occitan). All languages show a low domain for the distribution of pitch accents (PW or AP), and thus a dense pitch accent distribution with regular alternating pitch patterns (with the exception of Standard European Portuguese).

Non-prosodic features included the use of lexical and syntactic markers to convey pragmatic meanings. In most Romance languages, the presence of such markers is mild, as well as their interaction with intonation. Sardinian and Friulian, by contrast, show rich systems of lexical and syntactic marking with strong impact on the ways the relation between intonation and meaning is structured in these languages.

Intonational features included tune types and their uses, the properties of intonational inventories, and the properties of the relation between the elements of the tune and the text they associate with. Romance languages show variation in nuclear contours for the same sentence type/pragmatic meaning, and the same nuclear contour may be used to convey different meanings within and across languages. Although other commonalities were found (such as the restricted variation in the intonation patterns used in commands, or in vocatives), only for broad focus statements a more cohesive picture emerged with two clearly dominant nuclear patterns (H+L* L% and L* L%) that are geographically distributed. Prenuclear accents and nuclear accents constitute two different sets, the former being more restricted than the latter. In a subset of languages (Spanish, Catalan, Italian, Sardinian and Friulian), nuclear accents show three phonological tonal levels. Bitonal accents are more productively used in nuclear configurations in most languages (but not in French), and the nuclear contour seems to form a tight intonational unit in Romance. The tendency not to deaccent in statements and the presence of postfocal pitch range compression and

postfocal accents is also a common feature across Romance languages. By contrast, tune-text accommodation strategies were found to vary.

Importantly, both non-intonational prosodic features and non-prosodic features were shown to impact on intonation systems in relevant ways, as discussed for French, Occitan, Sardinian and Friulian. This highlights the need to take different kinds of non-intonational features into account when describing intonational variation.

Finally, the description of cross-linguistic intonational variation offered in this chapter is in many respects still preliminary. Although the nine Romance languages and their varieties were described using the same framework of analysis and a common methodology of data collection that enhances the cross-language comparability of the empirical basis used, more work is needed to further deepen a common approach to intonational analysis. For some of the languages or language varieties, the chapter in this volume was a first attempt to provide a systematic description of intonation within the AM framework. Moreover, the coverage of different regions/varieties within each language differs. It is hoped that the present account of cross-linguistic intonational variation will contribute to our understanding of similarities and differences in intonational phonology across languages and to advance our knowledge of prosodic typology.

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