Remarks on the diachronic reconstruction of intonational patterns in Romance with special attention to Occitan as a bridge language*

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Abstract

This paper approaches Romance intonation from a diachronic point of view. The position that is adopted is that this is an area open to investigation. Comparative techniques can be fruitfully employed for investigating the evolution and diversification of the intonational patterns of the Romance languages. The focus of the paper is on Occitan. This is an important bridge language whose study may elucidate how French diverged prosodically from the systems found in Ibero and Italo-Romance. It is argued that, since Occitan was retained contrasts in the position of word-accent (lexical stress), any prosodic features that French shares with Occitan are logically independent from the lack of contrastive accent in French.

Key words: Occitan, French, intonation, accent, diachronic prosody.

1. Can we reconstruct proto-Romance intonation?

Although, as far as I know, no attempt has ever been made to reconstruct the Proto-Romance intonational system, in principle there is no good reason to think that this topic is not open to investigation by a judicious application of the Comparative Method. Naturally, the successful application of comparative techniques in this area requires the previous availability of accurate descriptions for a sufficiently large number of Romance varieties. In this descriptive and analytical task, considerable progress has been made in recent years and continues to be made. To mention only a few major contributions within the Autosegmental-Metrical Model (Pierrehumbert 1980, Pierrehumbert & Beckman 1986, Ladd 1996), perhaps the dominant school nowadays, recent work on Romance intonation includes Grice (1995), D'Imperio (1997, 2002), Avesani (1995) for Italian; Prieto, van Santen &

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Hirschberg (1995), Prieto, Shih & Nibert (1996), Sosa (1999), Face (2001, 2002), Beckman et al. (2002) for Spanish; Frota (2000, 2002) for Portuguese; Prieto (2002) for Catalan and Jun & Fougeron (1995, 2000, 2002), Post (1999, 2000) for French. In a different framework, we may mention the papers in Hirst & Di Cristo (1998)'s survey of intonational systems on Spanish (Alcoba & Murillo), European Portuguese (Cruz-Ferreira), Brazilian Portuguese (de Moraes), French (Di Cristo), Italian (Rossi) and Romanian (Dascălu-Jinga). The time is perhaps ripe to initiate pan-Romance comparison with diachronic goals in mind. As in other areas of linguistic structure, whatever features of intonation are found to be common to all Romance languages can, in principle, be reconstructed for an earlier stage. When we find variation, other tried and true criteria will have to be applied. In this respect, it can be noted that recent work on the intonation of Italo-Romance and Ibero-Romance languages has revealed the existence of a number of interesting common properties (see the references above).

1.1. (Purported) limitations

Prima facie, some aspects of intonation make its reconstruction more difficult than other aspects of Proto-Romance. To begin with, a clear obstacle is that the examination of written texts reveals nothing regarding possible historical developments in intonation (as opposed to, e.g., the location of lexically stressed syllables). An additional apparent difficulty, is that, according to a traditional view, a change took place at some point in the history of the Romance languages, which radically altered the relationship between accent and pitch (cf., among others, Pei 1976:62-65, Posner 1996:99). Thus, as Pei (1976:64) puts it: «The real problem of the Classical Latin accent lies in its essential nature. It shares with its older sisters, Greek and Sanskrit, the feature of being based on musical pitch rather than the stress of the voice that is natural with us of the modern Western world». In this view, all contemporary Romance languages are, thus, considered to possess stress or 'expiratory' accent, and this is opposed to the 'musical' or tonal accent of Ancient Greek and Classical Latin.

If it were, in fact, the case that in the history of the Romance languages there have been radical changes and discontinuities in the relationship between lexical accent and intonation, this would indeed make earlier stages harder to reconstruct. In my opinion, nevertheless, the evidence for a radical change from 'musical' accent to 'stress' accent is less than fully compelling, as it relies on problematic assumptions:

a) Let us consider first what is meant by stress accent. The hypothesis is that an expiratory accent or stress will result in differentiation in duration and vowel quality between stressed and unstressed vowels, greater differences being produced by greater amounts or degrees of stress. All modern Romance languages are said to be stress languages. However, the fact is that among these languages there are considerable differences in the role of factors other than pitch, such as the relative reduction of unstressed syllables, in signaling accentual promi-

nence. Spanish differs substantially from European Portuguese (or English) in the degree to which it employs segmental stressing of accented syllables. Great differences are sometimes found even among very closely related varieties, such as European and Brazilian Portuguese.

On the other hand, one accentual property that all Romance languages share (to different degrees) is that accented syllables are used as anchors for intonational pitch-accents, which, paradoxically, would place them in the musical accent category of some traditional views. The lexically accented syllable determines the position of pitch accents and, conversely, F0 contours convey accentual information.

It seems clear that a language may go through a period where unaccented vowels are reduced without this necessarily implying any important changes regarding the function and alignment of pitch contours.

b) Consider now the term 'musical' accent. In discussions regarding the realization of accentual prominence in Latin, Ancient Greek is usually presented as an example of what is meant by this term. Some authors have suggested that upper-class Romans, who were generally bilingual in Greek, imitated the musical accent of Greek when speaking Latin as a sort of affectation.

What we know with some certainty about Ancient Greek is that this language had a contrast in the position of the peak in long syllables: the peak could occur either on the accented syllable, a following fall starting within this syllable, or, in a lexically contrastive manner, on the postaccented syllable (or towards the boundary between the accented and postaccented syllables):

> «the ancient 'pitch' accent... was in reality a contonation involving either a monosyllabic rise-fall on a single long vowel or diphthong (marked ^), or a rise (marked ') on one syllable followed by a fall (unmarked on the next)» (Horrocks 1997:4).

Lexical contrasts in peak alignment are nowadays found in Serbo-Croatian, Slovenian and Swedish dialects, among other languages. In particular, both Slovenian (Srebot-Rejec 1988) and Čakavian Croatian (Bethin 1998) have contrasts that fit the description given for Ancient Greek rather well. In a language like Spanish, on the other hand, a difference in the position of the peak in rising accents (within the accented syllable or after it) may be used for pragmatic purposes (see, Nibert 2000, Face 2001, 2002, Hualde 2002, Beckman et al. 2002).

Since the position of the peak was lexically contrastive in Ancient Greek, it is only natural that grammarians would pay particular attention to this feature. But it is important to notice that the presence of a tonal contrast of this type does not imply that there will be no durational or qualitative correlates of accent as well. In fact, in both Serbo-Croatian and Swedish duration is a major cue of accentual prominence (see Lehiste & Ivic 1986 for Serbo-Croatian)[1] and some Swedish

1. Recent work on Serbo-Croatian accent and intonation includes Godjevac (1999), Smiljanic & Hualde (2000) and Smiljanic (2002).

dialects have reduction and deletion of final unaccented vowels (see Riad 2003). It is thus erroneous to assume that the existence of a contrast in peak placement in long syllables means that Ancient Greek did not have stress correlates of accent as well. The two features are independent from each other.

Unlike Greek, Latin did not have a lexical contrast in peak placement. As in all Romance languages (and other European languages), pitch most likely was a major correlate of accent, lexically-accented syllables serving as anchors for intonational pitch-accents, but without distinctions of pitch contours with a lexical function. The degree to which segmental properties (stress), including duration, were also used to convey prominence appears to have varied at different historical points.

To conclude, the distinction that is sometimes drawn between the 'musical' accent of Latin and the 'stress' accent of *all* modern Romance languages most likely is not a real one. I believe we can safely assume that the relationship between prominence and pitch contours has remained essentially unaltered in most of Romance. That is, there is no real reason to think that Latin was any more 'musical' than modern Italian. Traditional conceptions in this respect should not discourage us from using comparative and other techniques in an attempt to gain knowledge on the evolution of Romance prosody.[2]

1.2. Conservative features (today's phonetics is yesterday's phonology)

On the positive side for the possibility of prosodic reconstruction, we may note that the Romance languages show remarkably conservative features in some aspects of their prosody.

As is well known, the location of the word-accent was completely predictable in Classical Latin: the accent fell on the penultimate syllable if this syllable was heavy (either with a phonemically long vowel or closed by a consonant), and otherwise fell on the antepenultimate. Bisyllabic words were accented on their first syllable. An oft remarked fact is that by and large the accent has remained on the same syllable of the word from Latin to the modern Romance languages. To give some random examples, the location of the accent in Italian *'popolo, 'tavola, a'mica*, Spanish *'pueblo, 'tabla, a'miga*, Portuguese *'povo, 'tábua, a'miga*, French *'peuple, 'table, a'mie* is explainable by its location in the corresponding Classical Latin words *'populum, 'tabulam, a'mi:cam*. Thus, as Menéndez Pidal (1973[1904]:36) puts it: «El acento se mantiene inalterable desde el tiempo de Plauto, de Horacio, de Prudencio, hasta el de Cervantes y hasta el nuestro, informando como un alma a la palabra».[3] It is important to note that this is by no means an expected phe-

2. For recent work on intonational reconstruction in Germanic see Riad (1998, 2000, 2003), Gussenhoven (2000).

3. «The accent is the very soul of the word and remains unaltered from the time of Plautus, Horace and Prudence to that of Cervantes and until ours.» Menéndez Pidal's words are, of course, reminiscent of the Latin grammarian, Pompeius' definition of accent: «Et quid est ipse accentus? ita definitus est 'accentus est quasi anima voci'».

nomenon. For instance, it appears that at an earlier, pre-Classical, stage Latin had initial accent and the accent shifted to the antepenultimate or the penultimate syllable. Important changes in accentuation are also assumed to have occurred between Indo-European and ancient Latin. Similarly, both Basque dialects and Slavic languages have undergone well-document shifts in accent location from one syllable of the word to a different one. Thus, within the western Basque area, Gernika Basque *lagúnena* 'the one of the friends' corresponds to Lekeitio Basque *laguné-na* and to *lágunena* in other western Basque dialects (see Hualde 1999, 2000).

Most Romance languages, besides paroxytonic and proparoxytonic words, like Latin, also have oxytonic words. Final accent resulted from the deletion of final vowels, as in Latin *can'ta:re* > Sp. *can'tar*, Latin *ciui'ta:te* > Sp. *ciu'dad*, It. *città*, or from contraction, as in Latin *a'maui* > Sp. *amé*, It. *a'mai*. An interesting restriction in Italian, Catalan, Spanish and Portuguese is that proparoxytonic accent is excluded when the penultimate is closed by a consonant. That is, in Spanish, for instance, there is *libélula* 'dragonfly' but the possible pattern represented by **libélurla* or **libélusla* is (almost) unattested. This restriction may seem anomalous from the point of view of the synchronic description of the Romance languages concerned, since, otherwise they do not have a phonological distinction between long and short vowels (which was lost in late Latin) or show any other indications of quantity-sensitivity. On the other hand, this fact is of course explainable as an inheritance from Latin. That is, it follows from the fact that in Classical Latin, a quantity-sensitive language with completely regular accentuation, such pattern was excluded given its rule of accentuation; coupled with the fact that, as mentioned above, the place of the accent has almost always remained unaltered from Classical Latin to the modern languages. Words regularly deriving from Latin or learned words form the same origin would never have the accent on the antepenultimate if the penultimate is closed by a consonant. A structure of the type CV(C).CVC.CV would necessarily be accented as CV(C).'CVC.CV in Classical Latin. This, by itself, accounts for the absence of the pattern 'CV(C).CVC.CV in Romance. The few exceptions that are modernly found in Romance are either of non-Latin origin or represent fairly irregular developments. Thus the Spanish toponym *Frómista*, which violates this restriction is of Germanic origin (from Gothic *frumisti* 'beginning', see Corominas & Pascual 1980, s.u. *límiste*) and Italian *'mandorla* 'almond', which is another exception to the rule, derives from Classical Latin *a'mygdala* through a complicated development which involved first epenthesis of /r/ in the onset of the penultimate and then its metathesis to the coda of the syllable: *a'mygdala* > *a'mandula* >*'mandola* > *'mandrola* > *'mandorla* (Cortellazzo & Zolli 1983, s.u.).

There are even more interesting phenomena of retention whose significance, as far as I know, has not been made sufficiently explicit. An important aspect of the Latin accent rule appears to have been preserved in the phonetics of modern Italian, in spite of major phonological changes. D'Imperio & Rosenthall (1999), in an experimental study on the phonetics of accentual prominence in Italian, find that accented vowels in open syllables are considerably longer than unaccented vowels, but only in paroxytonic words. This extraordinary lengthening of the accent-

ed vowel is not found in proparoxytonic or oxytonic words. This fact is unexpected given what we know about the interaction of length and accent in other languages (see de Jong & Zawaydeh 1999). To quote from D'Imperio and Rosenthall's (1999) article: «the duration of a stressed open penultimate vowel is significantly greater than that of other stressed vowels. This difference cannot be accounted for in phonetic theories based on shortening of stressed vowels due to compression or position in the word» (p. 26). Why is it that accented vowels in open syllables are lengthened in penultimate, but not in antepenultimate or final, position? This would seem to be a quirk of Italian in need of explanation. D'Imperio & Rosenthall (1999) provide an analysis of the durational facts of modern Italian in terms of constraints within a phonological grammar. In particular they propose two processes: «(i) phonological lengthening, which only accounts for the duration of the penultimate vowel, and (ii) phonetic lengthening, which accounts for the length of the antepenultimate vowel» and conclude that «[t]he significantly greater length of a stressed penultimate vowel is a consequence of constraint interactions that are best-satisfied by a bimoraic foot, which is non optimal for other positions»(p. 2). Regardless of the merits of this account as a synchronic description of the facts, I believe that the true explanation for its existence is clearly found in the history of the language.

A fact not noted by D'Imperio & Rosenthall is that this durational pattern is not a recent innovation. Just the opposite appears to be true. In many northern Italian dialects accented vowels in open penultimate syllables evolve in a different manner from the same accented vowels in antepenultimate position, in a way that is consistent with the view that penultimate vowels were longer than antepenultimate vowels (see Hajek 1997: 108-109). The explanation for all of this is found again in the accentual rule of Classical Latin and the likely subsequent developments as distinctive vowel length was lost. In Classical Latin, in words with antepenultimate accent, this syllable could be either heavy, as in *'po:pulus* 'poplar', with a long /o:/ in the antepenultimate, or light, as in *'populus* 'people', which had a phonemically short /o/. On the other hand, if the accent fell on an open penultimate and the word had more than two syllables, the vowel of this syllable was necessarily long. The explanation for the phonetic durational facts reported by D'Imperio &Rosenthall, is that the length of the accented vowel in Classical Latin *ca'te:na*, *a'mi:ca*, etc. has been preserved up to this day in Italian *catena* [ka'te:na], *amica* [a'mi:ka]. These and similar forms preserve the Classical Latin pronunciation in its phonetic detail. Although the phonological contrast between long and short vowels disappeared a long time ago, the duration of accented vowels has not been altered in this position.

As a consequence of the Classical Latin rule, accented vowels were exceptionlessly long in open penultimate syllables in words with three syllables or more. It appears that this distribution was analogically generalized to two-syllable paroxytonic words. Vowel length, which was contrastive, became predictable. Long vowels were kept and generalized in the position where there was a strong pattern of occurrence. The generalization that was obtained at the end of the Classical Latin period was, I would claim, the following one: «accented vowels in open penultimate syllables are always long, all other vowels are short». This, which was always

true in all words with three syllables of more, produced analogical lengthening in those bisyllabic words that did not already conform to this pattern, as can be seen in evolutions such as *pede* > /'pɛːde/ > *'piede*. On the other hand, as Hajek (1997:114) notes, proparoxytones did not undergo this lengthening, so that *pecora* did not become */'pɛːkoɾa/, which would give modern Italian **piecora*. This is because the generalization «accented vowels are long» only affected open penultimate syllables, where the pattern was already robust.

If this is the true explanation of the curious vowel length pattern of modern Italian, this suggests, I believe, that we can be optimistic regarding the extent to which Italian may be a conservative language in its prosodic features, including perhaps intonational patterns.[4] The existence of conservative facts regarding phonetic detail in the prosody of some Romance languages leads us to view the reconstruction of proto-Romance prosody with some optimism.

Some of the divergence within Romance may be due to non-Romance influence. Thus, Romanian presents some intonational features that are also found in other eastern European languages, but not in the languages of the *Romania continua* (as shown in Ladd 1996, Grice et al. 2000). We may also have internal developments confined to certain languages or dialects. Thus, Frota (2002) notes that the occurrence of pitch contours on lexically accented syllables is more sparse in European Portuguese than in Spanish, Italian or even Brazilian Portuguese. Typically, in a multi-word declarative sentence only the first and the last words bear a pitch accent. This appears to be an internally-motivated innovation in Portuguese.[5]

It is obvious that, intonationally, French is a particularly divergent Romance language. An interesting question is what specific changes have caused French to diverge so drastically from the Romance intonational prototype. The remainder of this paper will be devoted to this issue. In particular, we will consider what the analysis of the intonation of Occitan, the bridge language between French and Ibero- and Italo-Romance, may tell us about the evolution of French.

2. How different is French?

At first glance, the intonational system of French seems to differ greatly from that of the other Romance languages. Some researchers, such as Jun & Fougeron (2000), have in fact proposed analyses of French intonation that have little in common with those proposed by other researchers working within the same theoretical model for other Romance languages. To the extent that intonational differences between French and Spanish or Italian are substantial, we must wonder what specific historical changes gave rise to them. It seems to me that we can identify at least three aspects in which the prosodic system of French differs or may differ from that of the other

4. Pilar Prieto (p.c.) remarks that Majorcan Catalan, as well, may preserve this state of affairs.
5. As Sónia Frota (p.c.) points out the sparseness of pitch accents in European Portuguese seems to be related to the fact that unstressed vowel reduction has resulted in very different vowel allophones in stressed and unstressed position in this language. Thus, pitch information is more redundant than in Spanish or Brazilian Portuguese for the identification of the stressed vowel.

Romance languages: a) absence vs. presence of lexically contrastive accent, b) anchoring of pitch movements and c) use of pragmatically contrastive pitch accents. Let us consider these three points in more detail.

a) Lexical accent

Unlike all the other Romance languages, French does not have lexically-contrastive accent. This is an uncontroversial observation; i.e. contrasts such as Sp. *número* 'number' vs. *numero* 'I number'vs. *numeró* 's/he numbered' or It. *'ancora* 'anchor' vs. *an'cora* 'still', etc., are completely impossible in French. Where opinions seem to differ is in the issue of whether or not French lacks word-level accent altogether. For Jun & Fougeron (2000), for instance, accent in French is only a phrase-level phenomenon. Other authors, such as Post (1999, 2002), have analyzed French intonation assuming that content words do indeed have a lexically-accented syllable, even if its position is always predictable (always the last syllable of the word with a full vowel). For this to work one must add the proviso that lexically accented syllables are not necessarily associated with a pitch accent, but this is true in other languages such as English or Spanish as well.

I believe that there are, in fact, some reasons for maintaining the notion of accented syllable within the word as a useful descriptive device in French:

i) The synchronic statement of vowel alternations resulting from the different evolution of vowels in accented and unaccented syllables, as in *pouvons*/*peuvent*, *tenons*/*tiennent*, requires reference to the notion of accented syllable within the word.
ii) Certain phonemic contrasts between vowels are only made in word-final syllables. Thus, open /ɛ/ and close /e/ contrast only in final open syllables, as in *je serais* [ɛ] 'I would be' vs. *je serai* [e] 'I will be'; whereas the contrast between /ɔ/ and /o/ is limited to final closed syllables.
iii) Mid vowels in non-word-final syllables undergo height harmony triggered by the vowel of the final syllable (see Battye & Hinze 1992: 115-116, Walker 2000: 54-55), as in *bête* [ɛ] 'silly' vs. *bêtise* [e]- [i] 'silliness'.
iv) In Quebec French, vowels show different allophony in final and non-final syllables. Morgan (1975:19) notices the existence of diphthongization in «closed, accented syllables» in the French of County Beauce and also proposes distinct vowel inventories for vowels in accented and unaccented syllables in this French dialect.

Insofar as the phenomena just listed are independent of the position of the word within the phrase, they argue in favor of considering the last syllable of the word with a full vowel as accented; that is, as having greater prominence than the others. The last full syllable of the word is, in some sense, special. This syllable will receive tonal relief (i.e. will be associated with a pitch accent) if it is also phrase final. We may thus conclude that, in fact, French has not lost the property of having lexical accent. This is not a change that needs to be accounted for.

But, again, even if we assume that French has retained word accent, what is undeniable is that the position of the accented syllable within the word is not lexically-contrastive in this language, unlike in the other Romance languages.

The loss of lexically contrastive accent in French is a well-understood phenomenon. It can be seen as having taken place in two stages, the first one of which was also shared by Occitan. In all of Gallo-Romance, the proparoxytonic pattern was lost. This was mostly a consequence of the deletion of vowels on the penultimate syllable in words where the accent was on the antepenultimate, a process which was especially pervasive in this area of western Romance (less so in Ibero-Romance and only sporadic in Italian). Once this accentual pattern was lost in the inherited lexicon, learned words borrowed from written Latin were adapted to comply with the possibilities allowed by the language. Nowadays Occitan has only paroxytonic and oxytonic words (cf. Roca 1999, Meisenburg 2001 for accentuation in Occitan). In French the accentual possibilities were further limited by the reduction and loss of final vowels. To illustrate with a couple of examples: /'tabula/ > /'tablə/ > /'tabl/ 'table', /a'mika/ > /a'miə/ > /a'mi/ 'friend-fem'. Since Occitan, on the other hand, has kept those final vowels, it possesses a lexical contrast between words accented on the penultimate and words accented on the final syllable; e.g.: *canta* /'kanto/ 's/he sings' vs. *cantar* /kan'ta/ 'to sing'; *polidas* /pu'lidos/ 'pretty-fem pl' vs. *amorós* /amu'ɾus/ 'in love-masc sg'. Several vowel qualities are distinguished in final unstressed position: *dròlle* /'drɔle/ 'boy', *dròlla* /'drɔlo/ 'girl', *sentissi* /sen'tisi/ 'I feel'.

b) Anchoring of pitch movements

When we examine the intonational contours of simple declarative sentences in French and compare them with those of similar examples in Spanish or Italian, perhaps the most striking fact is that the distribution of pitch movements can be very different. In Southern Romance, pitch movements other than boundary events tend to be 'anchored' to lexically stressed syllables. In French, on the other hand, there appears to be greater freedom in the location of pitch excursions. For instance, a Spanish utterance like that in (1) would normally be uttered with two pitch accents, on the syllables that are bolded, which are the lexically accented syllables. If we consider the possible realization of the corresponding example in French, we see that (2b), with a single pitch accent or (2c), with a pitch accent on the initial syllable of the first lexical word, are as likely as (2a):[6]

(1) Spanish: el presi**den**te espa**ñol**

(2) French: a. le prési**dent** espa**gnol**

b. le président espa**gnol**

c. le **pré**sident espa**gnol**

6. Cf. the possible accentual patterns for *une jolie chanson* 'a pretty song' offered in Di Cristo et al. (2000: 334).

These facts can be interpreted as evidence for the claim that the prosodic system of French is indeed very different from that of other Romance languages, having undergone a profound restructuring. Jun & Fougeron (2000), for instance, propose that accentual phrases in French basically instantiate versions of the phrasal melody /LHiLH*/, where Hi stands for 'initial high' and is linked to a point at the beginning of the phrase, and H* is a high tone associated with the accented syllable of the phrase (the last syllable with a full vowel). This basic melody allows several modifications and optionality of some of its tonal elements, but essentially we would have one basic phrasal contour associated with texts of different length. Following these authors, the three versions of the example in (2) could receive the following analysis, where brackets indicate accentual phrase boundaries:

(3) French: a. {le prési**dent**} {espa**gnol**}
L LH* L LH* (L%)

b. {le président espa**gnol**}
L LH* (L%)

c. {le **pré**sident espa**gnol**}
L Hi LH* (L%)

In this analysis, in (3a) and (3b) Hi has been left unexpressed in all accentual phrases. These two pronunciations differ in phrasing: there are two accentual phrases in (3a) and only one in (3b). In (3c) too there is a single accentual phrase and the phrasal melody /LHiLH*/ receives full expression.

In this view, thus, intonation in French is a matter of mapping phrase-level melodies. On the other hand, all researchers working on languages such as Spanish, Catalan and Italian within the same framework assume that in these languages the basic elements are pitch events associated to lexically accented syllables (pitch accents) and independent boundary tones. Should we take this as a profound difference between French and Southern Romance needing a diachronic explanation (a change from autonomous pitch accents and boundary events to phrase level melodies)? Perhaps not, since there are alternative analyses of French that assume basically the same types of tonal elements as those postulated for other Romance languages (Post 1999, 2000, 2002). What needs to be accounted for in any event is the loosening of the connection between accented syllables and pitch events. That is, the fact that, with much greater frequency than in other Romance languages, in French 'pitch accents' occur on syllables that cannot be taken to be lexically prominent.

c) Pragmatically contrastive pitch accents

Several Romance languages have been described as possessing a choice in the type of pitch accents or tonal contours associated to lexically accented syllables. The selection of a given pitch accent over another one in a specific position has pragmatic relevance. Thus, for instance, in Spanish, in nonfinal position a rising contour

with an early peak (on the accented syllable, L+H*) can be used to express narrow focus, whereas a late peak (on the posttonic, L*+H) is the unmarked, broad focus, choice in this context. Also in final position, several Romance languages, including European Portuguese (Frota 2000), Italian (D'Imperio 2002) and a number of Spanish dialects (Sosa 1999, Beckman et al. 2002) make a contrast between a fall onto the accented syllable from a peak on the pretonic (H+L*), which expresses broad focus, and a peak on the accented syllable (L+H* preceding a L% boundary), which conveys narrow focus on the last constituent.

Jun & Fougeron (2002) do not appear to attribute pragmatic significance to the different 'instantiations' of the underlying melody that they propose for accentual phrases in French. Again, Post (2002), on the other hand, does establish a link between specific tonal contours and pragmatic meanings.

Answering the question of how different French intonation is from 'common Romance' intonation depends in part on the specific analysis of French that we adopt. If we follow Jun & Fougeron, the differences, and, therefore, the changes that a diachronic analysis must account for, are substantial. If we adopt, instead, Post's analysis, there are fewer changes that need to be explained.

Whichever view we adopt, the question must arise of how many of the properties of French which make its intonation different from that of the other Romance languages can be attributed to the fact that it lacks contrastive accent. Has perhaps the loss of lexically contrastive accent in French triggered a restructuring of the intonational system as well? To answer these questions the examination of the closest neighbors of French can be useful, since, as in other linguistic aspects, we should not expect to find unbridgeable gaps between neighboring varieties with a common origin. In particular, the study of Occitan intonation, which appears to have been rather neglected, can be very useful from a comparative point of view. Any aspects of French intonation that are replicated in Occitan are obviously independent of the absence of (contrastive) word-accent in French, since Occitan has preserved phonologically contrastive word-accent.

3. Learning from your neighbors: what Occitan can reveal about French intonation

I have not been able to find any published description of the intonational patterns of Occitan. For this reason what follows in based solely on my own analysis of Occitan recordings. As a source of data I have employed Loddo (1993), a collection of folk narratives in the Occitan variety spoken in the French Département du Tarn, in the Pyrenees, with accompanying cassette. This is a central (Languedocien) Occitan dialect. The speakers who produced the narratives were some of the last fluent native speakers who grew up with Occitan as their primary or only language. They were born in the last decades of the 19th century or first three decades of the 20th century.

The intonational analysis of these texts reveals some clear differences with respect to Spanish and other Southern Romance languages including (a) a much greater frequency of pitch events on syllables that do not bear lexical accent, even

on syllables immediately preceding the lexically accented syllable (secondary accent), and (b) the frequent use of a falling nuclear configuration, analyzable as (H+)L* L%, with a fall from a secondary accent.

Perhaps the best way to convey a first global impression of this intonational system would be the analysis of a short paragraph. The text to be examined is the following (from Loddo 1993:136):

(E el) del plaser que n'agèt, tampèt la porta e se n'anguèt sens mèmes l'embraçar.
'And he, from the pleasure he had, shut the door and left without even kissing her«.
Lo lendeman Pière-Jan ne volguèt saupre lo detalh.
'The next day Piere-Jan wanted to know the details'
Quand sapièt de la manièira que l'aviá quitada, trapa la culhièira e l'assomèt.
'When he found out how he had left her, he grabbed the spoon and hit him'

What follows is an intonational analysis of this text with the corresponding F0 curves. In the orthographic transcription below the figures, lexically accented syllables are bolded and two degrees of prominence are indicated with superscripted numbers before the syllables. With a 1 I indicate a lexically accented syllable that is perceptually prominent (primary accent) and with a 2, prominence over a lexically unaccented syllable (perceived secondary accent). The text is also provided with a provisional AM labeling. Redundantly, we differentiate in the labels between a pitch-accent associated with a lexically accented syllable, marked with an asterisk, and a pitch-accent on a lexically unaccented syllable, for which the symbol Hi is used, following Jun & Fougeron. This is for the purpose of facilitating comparison between the analyses:

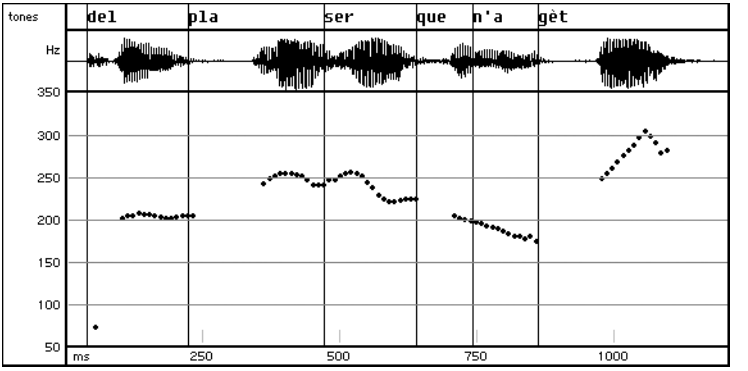

Figure 1.

(E el) del ^{2}pla^{1}**ser** que n'a^{1}**gèt**,
| | |
L+Hi L+H* L+H* M%

In this example, there is a secondary stress on the first syllable of *plaser* /pla'zɛ/,[7] which is clearly visible as a pitch contour on this syllable, even though the following syllable, which possesses lexical accent, also carries another pitch accent of the same type. After this, there is a fall to a valley at the onset of the last lexically accented vowel, with a rise throughout the final accented syllable. We indicate this rising nuclear accent as L+H*. The phrase ends in a mid tone, which conveys a sense of continuation.

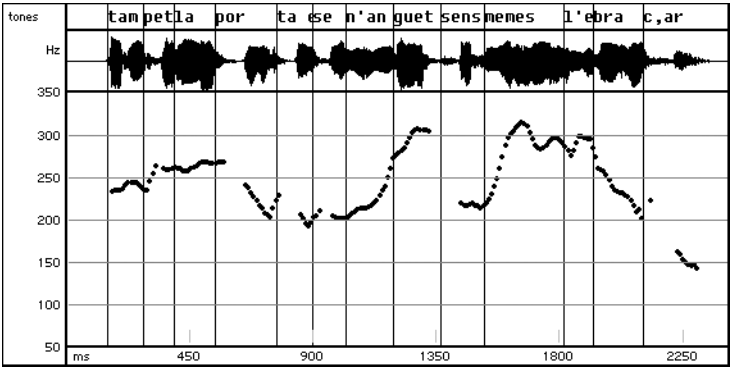

Figure 2.

tam[1]**pèt** la [1]**por**ta e se n'an[1]**guèt** sens [1]**mè**mes [2]l'embra[1]**çar**.
| | | | | |
L+H* H+L* %L L+H* H% L+H* Hi L* L%
'He closed the door and left without even kissing her'

If we consider the first phrase included in this figure, *tampèt la porta* /tam'pɛt la 'pɔrto/, there are clearly two distinct accents, a rising accent over the first accented syllable *-pèt* (L+H*), and a fall throughout the second lexically accented syllable *por-*, for which we may use the label H+L*. This is the same accent that has been reported as the neutral nuclear accent in declaratives in other Romance languages such as Catalan, Italian and Portuguese (although the same labelling is not always used, and as we will see there may be differences in the alignment of the turning point).

The phrase *se n'anguet* /se naŋ'gɛt / has a rising accent. This phrase ends at a very high level, which we attribute to a high boundary tone; that is, we have a sequence L+H* H%. In Jun & Fougeron's schema, this contour would probably

7. Representations between slanted lines correspond more or less to a structuralist (taxonomic) phonemic level and are, therefore, somewhat less abstract than the phonological representations in a typical generative analysis of the language. They can also be interpreted as a very broad phonetic transcription.

belong to the 'phonetic' category [L (HiL) H*], which is a rise from the beginning of the phrase to the accented syllable (In this notation the tones in parentheses are left unrealized).

In the last phrase of the example, *sens mèmes l'embraçar* /sɛ̃ 'mɛmej lembra'sa/, there is a clear pitch-accent on a lexically unaccented syllable, the first syllable of *l'embraçar*. The nuclear accent is of the falling type. It is worth noticing that the fall starts right after the secondary accent. We may represent this accent as L* or perhaps as (H)+L*, indicating in this way that this appears to be a version of the same falling nuclear contour as in *porta*.

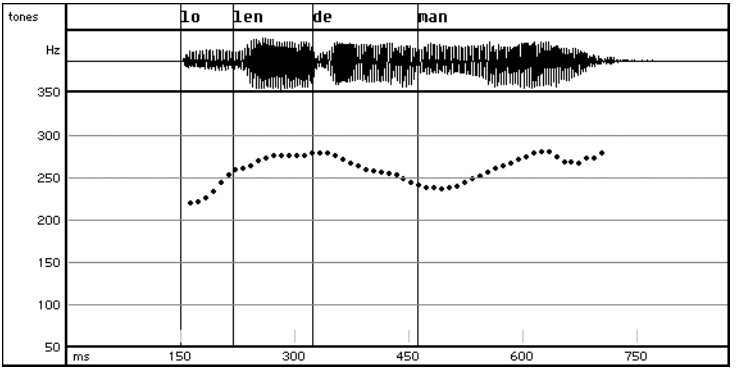

Figure 3.

Lo ^{2}lende^{1}**man**
| |
L+Hi L+H* M% 'the next day'

This example, *lo lendeman* /lu lɛ̃de'mã)/ also has two clear pitch-accents, even though there is only one lexically-accented syllable. This contour appears to correspond rather exactly to the one Jun & Fougeron consider to be the full realization of their phrasal sequence /LHiLH*/. All four tonal specifications are visible in the contour. We analyze it instead as a sequence of two rising pitch accents, one on the initial syllable of the word, a secondary accent, L+Hi, and the other on the lexically accented syllable, L+H*. Mentally translating this text into its French equivalent, *le lendemain*, with preservation of the tune, seems to me to result in perfectly natural-sounding French (as far as I can tell), whereas applying a Spanish text (such as *al amanecer* or *a la mañana*) to this tune produces rather strange results.

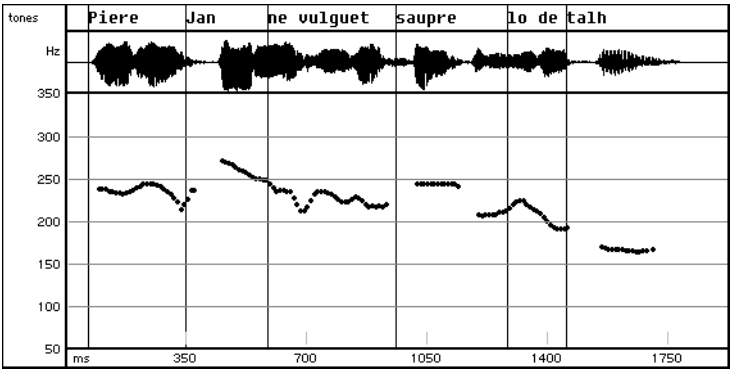

Figure 4.

[2]**Pi**ère-[1]**Jan** ne vol**guèt** [1]**sau**pre [2]lo de[1]**talh**.
| | | | | |
(L)+Hi L+H* L+H* L+Hi L* L%
'Pière-Jan wanted to know the details'

The compound name *Pière-Jan* has primary prominence on its last syllable, which bears the highest pitch-accent in the phrase. From there on, there is a declining contour. The word *volguet* 'wanted' has been deaccented (i.e. its lexically accented syllable, *-guet*, is not accompanied by tonal prominence). On the other hand, a clearly perceptible (and visible) pitch-accent has been placed on the lexically unaccented article *lo*. The nuclear accent is of the falling type. In fact, there appears to be a fall from the secondary accent on *lo* /lu/ to the end of the phrase.

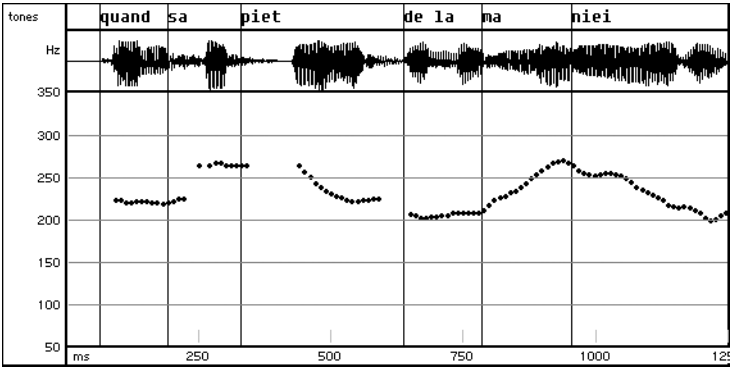

Figure 5.

Quand [2]sa [1]**pièt** de la [2]ma [1]**nièi** ra
| | | | |
L+Hi H+L* L+Hi H+L*
'When he found out the manner...'

Figure 5 shows only part of a sentence. On both words *sapièt* and *manièira* we find two pitch-accents on adjacent syllables, a rising accent on the word-initial syllable immediately followed by a falling accent on the next, lexically-accented, syllable. One reason for this analysis is that (at least to my ears) these two words have special emphasis on their initial syllable. The falling pitch-accent on the lexically accented syllable also produces an impression of deliberate elocution; i.e. the word is being emphasized and separated from what follows. Given this, perhaps both falling accents in this figure should be interpreted as nuclear accents.

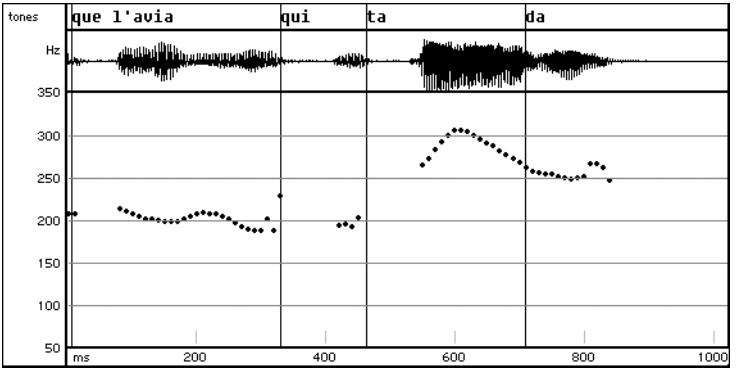

Figure 6.

que l'a[1]**viá** qui[1]**ta**da,
| |
H* L+H* M%
'...that he had left her'

As in Figures 1 and 3, this example ends with a rising nuclear accent followed by a fall to a mid level, indicating continuation. The circumflex inflection (rise from valley and fall to a mid level) within the syllable with the nuclear accent is accompanied by an extraordinary lengthening of this syllable.[8]

8. Impressionistically, this contour on *quitada* is surprisingly reminiscent of a Galician intonational pattern which has a seemingly similar discourse function (although, I do not know of any intonational analysis of the corresponding Galician contour). On Galician intonation, see Sobrino Pérez (1999). Palermo Italian also seems to have a very similar contour (Grice 1995:162).

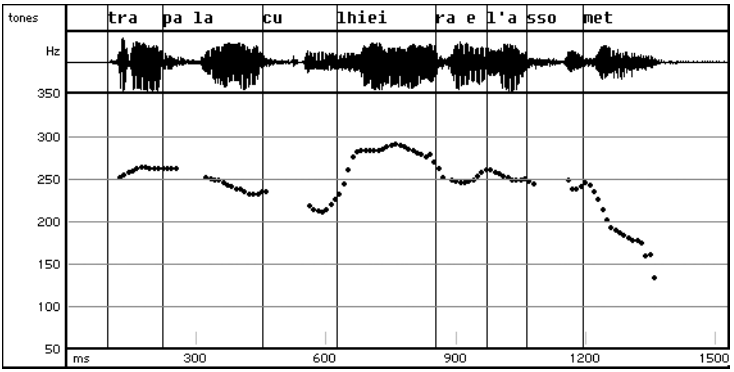

Figure 7.

[1]**tra**pa la cu[1]**lhièi**ra e [2]l'asso[1]**mèt**.
| | | |
(L)+H* L+H* L+Hi H+L* %L
'he grabbed the spoon and hit him'

This example contains 3 prenuclear accents followed by a falling nuclear accent and a boundary low tone. Auditorily the accent on *trapa* /'trapo/ 'he grabs' is subordinated to that on *culhièira* /ky'ʎɛjɾo/ 'spoon'. This is reflected in the relative height of the corresponding pitch-accents. As in other examples above, the word carrying the nuclear accent, *l'assomèt* /lasu'mɛt/ 'he hit him', also has a secondary accent on its initial syllable.

I believe the intonational contours found in this short paragraph are representative of those in the larger corpus that I have been able to examine. In spite of its brevity, it is possible from this text to get a sense of how this language differs from southern Romance and/or French in its intonation. I will now attempt to summarize our observations (which were advanced at the beginning of this section), complementing them with some further illustration.

In nuclear position, we find two distinct configurations: a rise over the accented syllable, (L)+H*, and a fall throughout the accented syllable, (H)+L*, where the H may be subsumed under a preceding H*/Hi of a prenuclear accent. This rise/fall contrast in nuclear position has been noted for several southern Romance languages. In Portuguese (Frota 2000), Catalan (Prieto 2002) and Italian (Grice 1995, D' Imperio 2002), the falling contour is the neutral nuclear accent in declaratives, and the rising contour indicates emphasis. Both contours are also found in perhaps most Spanish dialects (Sosa 1999, Beckman et al. 2002), although with differences among the dialects regarding the relative markedness of the two contours.[9]

9. Pilar Prieto (pc) points out to me that the falling nuclear contours of all these Romance languages may not be exactly identical. Whereas in both Italian and Portuguese (as well as in Majorcan Catalan, she adds) there appears to be a clear H+L* nuclear accent, in Central Catalan and (some

Prenuclear accents are rises, (L)+H*/(L)+Hi. If there are several prenuclear accents, the first one normally shows a rise, whereas following prenuclear accents may sometimes be analyzable as a simple H*.

These prenuclear accents may occur on lexically accented syllables or may constitute secondary accents at the beginning of words or phrases, for which we have employed the notation (L)+Hi. Although such secondary accents are certainly possible in other Romance languages, in Occitan, or at least in the Occitan dialect that we have examined, they occur with much greater frequency than in its neighbors and closest relatives to the south, Catalan and Spanish (see Ortiz-Lira 2000 for Spanish). In fact, the very frequent occurrence of secondary accents, even on syllables immediately preceding the primary accent, is perhaps the most salient intonational difference between Occitan and Catalan or Spanish. On the other hand, these secondary accents produce contours that are much more similar to those found in French. An aspect of this phenomenon is the possibility of nuclear falls from a prenuclear secondary accent through the end of the phrase, as in several examples above. Two further examples of this contour are given in Figure 8, which includes an emphatic yes/no question followed by an also emphatic declarative. In both cases, even though there is a fall from the syllable *tor-* to the end, the final syllable, which has lexical accent, appears to be lengthened and is perceptually accented. The first of the two contours in the figure appears to correspond to Jun & Fougeron's [LHi(L)L*] pattern.

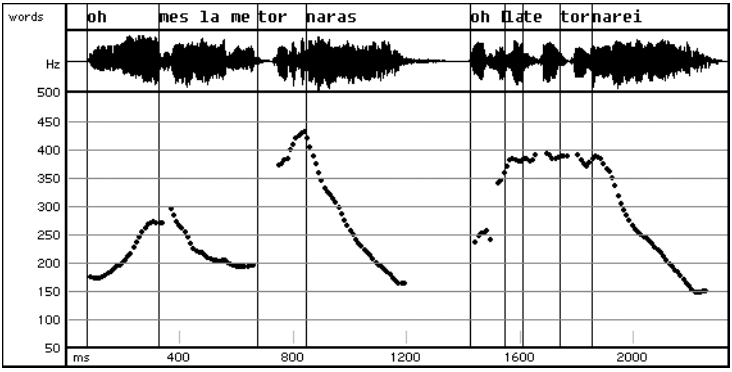

Figure 8.

oh mès la me ^{2}torna^{1}**rás**?
| | |
L+H* L+Hi L* %L
'oh, but will you return it to me?'

oh ^{1}**ben** la te ^{2}torna^{1}**rèi**!
| | |
L+H* Hi L* %L
'oh, sure I'll return it to you!'

varieties of) Spanish what one finds is a slow fall from the last prenuclear accent to the end of the phrase (see Prieto et al. 1995). Some contours analyzed in Beckman et al. (2002), however, do seem to correspond more closely to a H+L* contour (and that is the way these authors analyze them).

(Both of the examples start with a rise. The difference is that in the first example the pitch falls to a valley after the first rise, whereas in the second example it stays high. This may be analyzed as a difference between Hi and L+Hi on the syllable *tor-*, which bears a secondary accent in both cases.)

There are other cases where there is a valley, as opposed to a fall, on the nuclear syllable. The example in Figure 9 has a final L%; the example in Figure 10, a final M%. I take these L* accents to be mere variants of the nuclear (H)+L*:

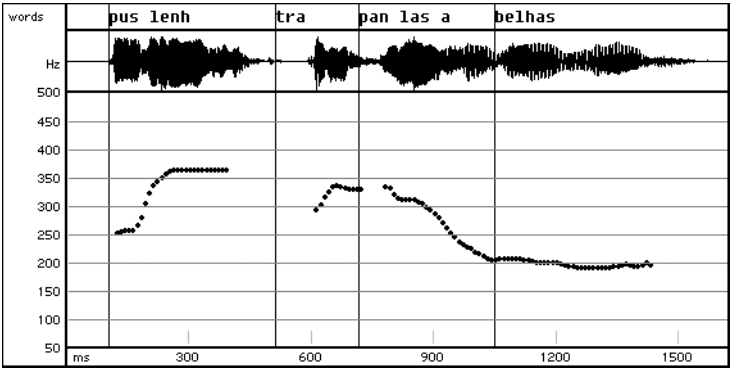

Figure 9.

pus ^{1}**lenh** ^{1}**tra**pan las a^{1}**bei**lhas
| | | |
L+H* M% L+H* L* L%
'farther, they meet the bees'

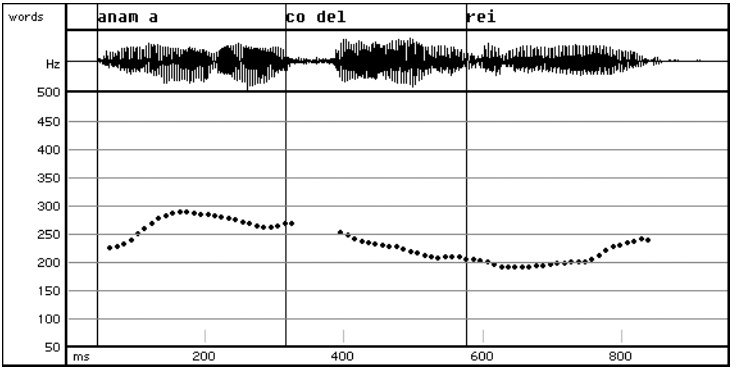

Figure 10.

a^{1}**nam** a ^{1}**co** del ^{1}**rei**
| | |
L+H* H* L* %M
'We are going to the king's place'

At this point it is worth noticing that in the corpus that I have examined, all yes/no questions have a final %L boundary tone. Nevertheless, given the nature of the corpus—folk tales where every question is immediately provided with an answer—perhaps this is not a feature of the spoken language in general. Whereas the example in Figure 8 (*tornaras*?), with a falling nuclear accent, is clearly emphatic, in other yes/no questions the nuclear pitch accent is L+H*, as in the example in Figure 11. In this example, *voletz venir?* /bu'lej be'ni/ the nuclear accent is the only one of the phrase (i.e. there is deaccentuation of non-final words) and this appears to contribute to the interpretation of the utterance as a question:

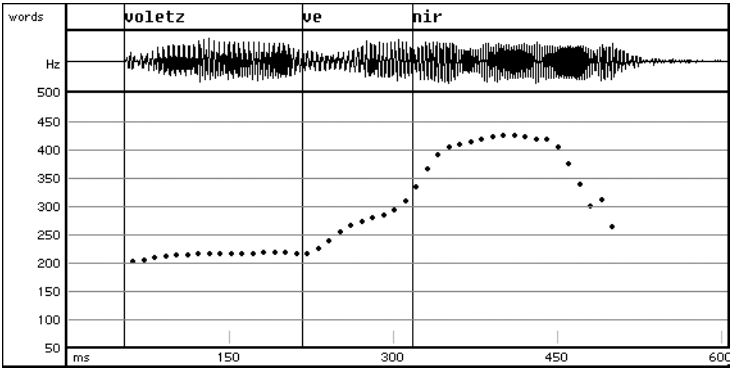

Figure 11.

vo**letz** ve[1]**nir** 'Do you-pl want to come?'

L+H* %L

In Occitan the notions of lexically accented syllable and pitch-accents intonationally associated with these syllables are necessary ones, since words contrast in the position of the accent (penultimate vs. final). We have allowed for the possibility of lexically-accented syllables not provided with a pitch-accent, of which we find only a few instances in the examples above. We have also analyzed pitch-movements at the beginning of words or phrases as secondary accents, as opposed to initial-boundary tonal phenomena, since they appear to lend prominence within the discourse to the words/phrases carrying them (although we must admit that we lack access to native-speaker intuitions to verify this point).

If we ask how this intonational system differs from that of French, as mentioned above, it seems that answering this question would depend in great part on the specific analysis of French we adopt. In Jun & Fougeron's (2000) analysis, French is a rather different type of intonational language from the rest of Romance. As analyzed by Post (1999), on the other hand, the French intonational system would seem less different from our provisional proposal for Occitan. In any event,

given the testimony of Occitan, the transition between Ibero- or Italo-Romance and French intonation appears much less abrupt.

To conclude this section, Occitan appears to share many prosodic properties with southern Romance, but it also has some features that make it more similar to French:

a) As in other Romance languages, the normal declarative contour in Occitan appears to consists of one or more rising prenuclear accents followed by either a rising or a falling nuclear accent. This pattern, including the choice between two basic nuclear accents, is a good candidate for extrapolation to an earlier stage in the evolution of Romance, given the fact that it is also found in many Ibero-Romance and Italo-Romance varieties. Nevertheless, the falling (or low) nuclear accent of Occitan appears to differ form that of the other languages. Very often we find a fall from a preceding syllable with a secondary accent.
b) Again, the most noticeable aspect in which the Occitan texts that we have examined differ from Ibero-Romance is in the frequent use of secondary accents, even on syllables immediately preceding the lexically accented one. This sometimes produces patterns which are very much like typically-French intonational contours and different from what is found in other Romance languages.[10] Di Cristo et al. (2000:333) point out (mentioning Pensom 1993, who gathers an impressively varied array of evidence), that this probably represents a very old tendency in French, even if it may have become particularly prevalent in recent times. We see, thus, that this relatively minor innovation in Occitan by itself brings the intonational output much closer to French, even if in essential aspects Occitan does not appear to differ greatly from the southern Romance languages. It is difficult, if not impossible, to know if French went through a similar stage as that found in present-day Occitan, or, rather, this use of secondary accents in Occitan represents a latter influence from French. In any event, it appears that the proliferation of pitch accents on syllables without lexical accent (weakening the linkage between lexical accent and pitch prominence) may have predated the loss of contrastive accent in French.

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10. Frota & Vigário (2000) report that rhythmic secondary accents are also common in Brazilian Portuguese. In particular, in this language a secondary accent often occurs on the initial syllable if there are at least two more syllables before the lexically accented one, as in *o **go**verna**dor*** 'the governor'. This rhythmic pattern is clearly not what we have in some of the Occitan examples that we have examined.

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