

Right-dislocations: influence of information structure on prosodic phrasing and intonation*

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This study discusses results of three experiments investigating whether right-dislocations are accented in Catalan, and whether they compulsorily form independent units. The latter hypothesis – at least in its stronger version – finds no support in either of the experiments. As for accentuation, results in Experiment 1 and 2 confirm that right-dislocations are mostly deaccented, though Experiment 3 offers contradictory results. Discrepancies are explained in terms of differences in the information structure in the discourse.

1 INTRODUCTION

Right-dislocated sentences are phrases like the clause “those girls” in “I met them yesterday, those girls” and “that vanilla ice-cream”, in “Girls like it, that vanilla ice-cream”.

According to most accounts right-dislocations belong to the class of sentence-external elements which are generally characterised by their not being dominated by any other element higher up in the syntactic hierarchy, with the possible exception of the root, the topmost node. (e.g. Bing 1984, Nespor & Vogel 1986, Truckenbrodt 1995, among others).

Prosodically, the central claim is that any element in this position is uttered as an independent rhythmic unit, set off by pauses, tonal boundaries, or lengthening of the last syllable. However, the picture appears more complicated as it is frequently reported that those phrases do not receive any accentuation at all.

Both claims are in overt contradiction, and pose a theoretical riddle for the most commonly accepted intonational framework, the Autosegmental Metrical system. One of the main tenets of the Autosegmental Metrical (AM) system is that the minimal intonational units should contain at least one pitch accent, and should be delimited by boundaries such as pauses, tonal movements, or lengthening. There is no room in such a system for phrases which are deaccented and separated by clear pauses at the same time.

This theoretical incompatibility would explain why, in the literature, such structures are sometimes described as accented and at others as unaccented. This is the first hypothesis of this study, namely that right-dislocations (and by extension, any other similar structures) are really deaccented, and their apparently erratic behaviour is just an artifact of different theoretical interpretations.

On the other hand, we cannot preclude that, in effect, the same structure can receive an accentual pattern or not depending on its role in the wider context in the discourse. This possibility was pointed out by Liberman (Liberman 1975). This would be in agreement with the repeated observations about the lack of isomorphism between syntactic and phonological structures. It is hardly ever the case that a given grammatical construction corresponds exactly with a particular phonological form. Why should this happen with right-dislocations, sentential adverbs, or any other of the so-called sentence-external elements?

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This is the second hypothesis: right-dislocations can appear sometimes as accented and sometimes as unaccented, depending on the information and focus structure. If this is true, their behaviour would not be dictated by their syntactic properties. The implication is that neither should we expect the other sentence-external elements to fall into a single unified category.

In order to test these two hypotheses regarding the accentual status of right-dislocations, I have devised and carried out a series of three experiments. In sections 2.2, 2.3 and 2.4 I discuss briefly the methodology and results of the three experiments. Finally, in section 3, I suggest a possible explanation for the intonational divergences found so far with dislocations.

2 ACCENTUATION OF RIGHT-DISLOCATIONS IN CATALAN

2.1 Previous work

Previous work in Catalan intonation has made no strong claims about the accentual status of post-sentential or right-dislocated phrases. By implication, they have an accentual pattern of their own, though compressed and subordinated to that of the main phrase. However, they are also described as lacking any perceivable prominence at all (e.g. Bonet 1984, Prieto 2002a, 2002b, Recasens 1993, Payà 2003).

2.2 Experiment 1

Experiment 1 tested the hypothesis that the target structures were indeed accented. The experimental material contained eight to eleven instances of appositions, relatives, parentheses, quotations, dislocations, and vocatives, as well as three pairs of sentential and manner adverbs. Dislocations were of the form:

- (1) *Dislocations embedded in declaratives*
 - (a) Dislocated subject
“Volia un lloro, ma mare” (‘She wanted a parrot, my mother’)
 - (b) Dislocated object
“Ja en beuria, de rom” (‘Of course I would drink it, rum’)

- (2) *Dislocations embedded in interrogatives*
 - (a) Dislocated subject
“Que us he separat, tu i el Norman?” (‘Have you split, you and Norman?’)
 - (b) Dislocated object
“I què faries si els guanyessis tu, els diners?” (‘What would you do if you win it, the money?’)

The dislocated interrogatives listed in (2) were intended as a control. There were just these two examples, against six tokens of dislocated declaratives as in (1).

Masking noise was used to elicit an increase in voice volume which in turn induced an increase in pitch: the so-called Lombard effect (e.g. Harlan & Tranel 1971, Castellanos, Benedí & Casacuberta 1996, Junqua 1996). The noise was recorded in a busy Cambridge street at peak hour. It was a mixture of noise coming from building works, traffic, and people.

The subject (MR, a female Central Catalan speaker), was asked to wear a set of headphones from the start. She read the text containing the target structures three times. These

were embedded in short dialogues supposedly taking place in the street. The first time she read the text without background noise (condition 1). The second time, she was hearing the street noise (condition 2). The third time, the noise was set at an even higher volume (condition 3). In this way, the same set of sentences was elicited at three different pitch ranges with a minimum of variation.

The technique worked well, as the results showed a significant increase in pitch scaling of all the target syllables. In fact, all tonal targets went up, except the final low. This was less variable, by far. The near constancy of the final low for this subject, across the different experimental conditions, is in line with Pierrehumbert's observations (e.g. Liberman & Pierrehumbert 1984, and elsewhere). On the other hand, 'speaking up' also implied a rephrasing of most of the contours in different intonational units.

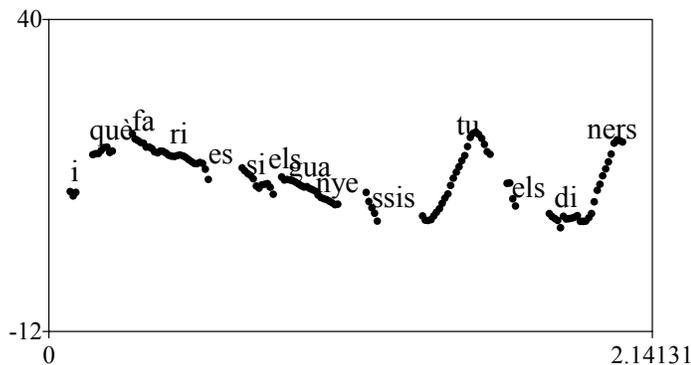
2.2.1 Results

2.2.1.1 Interrogative dislocations

In line with the literature (Bonet 1984, Prieto 2002a), I expected to find a divergence in the behaviour of right-dislocations in interrogatives versus declaratives. While declarative dislocations are described as "flat, very low, without any prosodic prominence", that is, they are described as deaccented, interrogative right-dislocations tend to repeat the pattern of the main phrase in a lower tone (Prieto 2002a).

First of all, this dichotomy did not hold strictly, for, of the two examples of interrogative dislocations that we saw above in (2), one repeated the previous pattern, while the other one received a different interrogative contour. We see these contours in the pitch traces presented in (3) and (4). In this paper, primary stressed syllables are marked with the IPA symbol [ˈ], and secondary stressed ones, when present, with the symbol [ˌ].

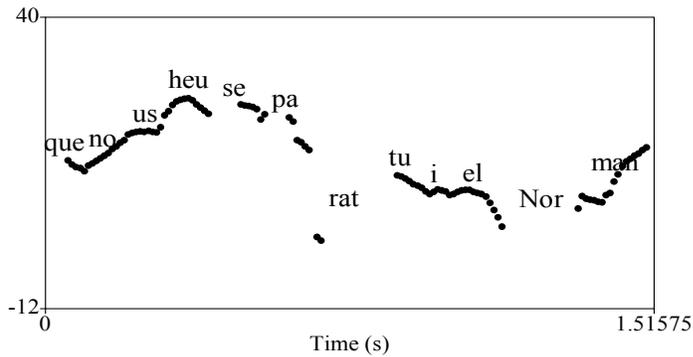
- (3) "I què fa'ries si els guan'yessis tu, els di'ners?"
('What would you do if you win it, the money?')



We observe in the pitch traces obtained with Praat that main clause and dislocated subject form two independent intonational phrases, each characterised by a fall to a low target aligned with the last stressed syllable of each unit (L*) and a rising ending (H- and H-H% respectively, or both H-H%).

The contour in example (4) below also has two intonational units:

- (4) “Que no us heu sepa'rat, tu i el 'Norman?”
 (‘Have you split, you and Norman?’)



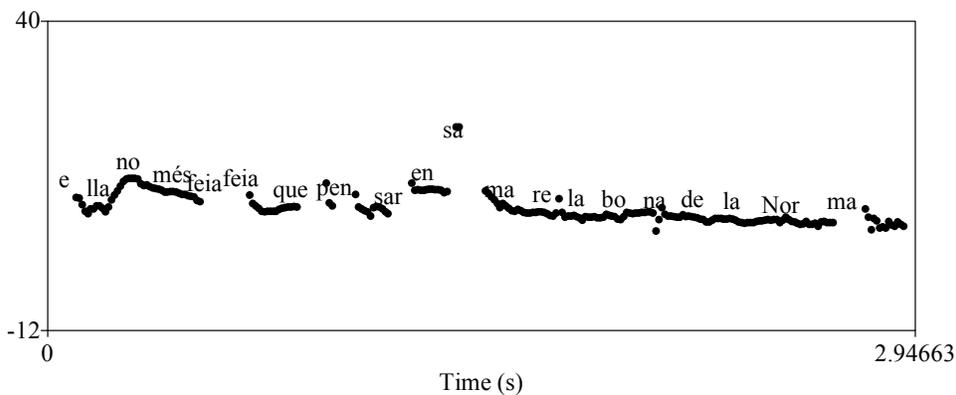
The first intonational phrase receives a downstepping interrogative contour, which is high on the pre-nuclear syllable (that is, the syllable preceding the last stressed syllable or nucleus, [pə], and falls through the nuclear syllable [rat]). The second unit gets the falling-rising pattern that we have seen before in (3). Consequently, reduplication appears to be optional rather than strictly compulsory.

2.2.1.2 Declarative dislocations

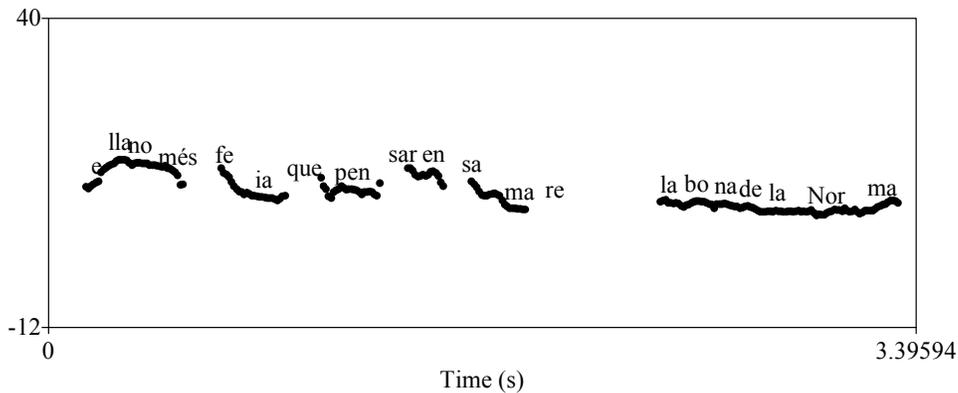
As for the phrasing, declarative right-dislocations tend to form independent units (67% of total), and are mostly separated by clear pauses (75% of the cases). As regards their accentuation, to the ear, they sound weak and devoid of any prosodic prominence. Arguably they are deaccented. We see two examples below, corresponding to the lower and the higher pitch range versions of the sentence “Ella només feia que pensar en sa mare, la bona de la Norma” (‘She was thinking all the time about her mother, good Norma’).

- (5) “Ella no'més feia que pen'sar en sa 'mare, la 'bona de la 'Norma”

(a) lower pitch range



(b) higher pitch range



In (5a), the dislocated subject, “la bona de la Norma”, is included in the same intonational phrase with the main clause and is deaccented. In (5b), the dislocation is deaccented as well although it constitutes an independent intonational phrase, which is separated by a clear pause. Whether accented or not, the dislocated element can end in a compressed rise, as in the example.

When measured instrumentally, though, we find some instances of “miniature accents”, little “bumps” with an average excursion size of 13 Hz. They tend to occur only in the higher pitch range versions, or in the one case when they appear across the three pitch range levels, they show a proportional increase in their scaling. They appear indistinctly in cases where the dislocated element forms a single tonal unit with the main sentence, and in other cases when they constitute two independent units.

2.2.2 Possible post-focal accents

If the existence of totally deaccented phrases which are still separated by clear pauses constitutes a serious theoretical contradiction for the AM system, the presence of “post-focal” accents (i.e. very reduced accents following the nuclear one in the same tonal unit) poses another theoretical problem, albeit a lesser one. Post-focal accents have been identified so far in narrow focus sentences in Catalan (Estebas 2000); in Spanish (Zubizarreta 1998); in Italian (Grice 1995, D’Imperio 2002); and in Germanic languages such as Icelandic (Nolan & Jónsdóttir 2001).

It is doubtful, though, whether these “bumps” correspond to a pitch accent, however reduced and subordinated to that of the main phrase, or whether they are a mere side-effect of the higher sub-glottal pressure concomitant to a stressed syllable. It could be argued, as well, that all syllables, regardless of their metrical prominence, were equally affected by the raising in pitch. Furthermore, the type of noise (non-continuous and with fluctuations in volume) might have induced some of the variation found in the present data.

The next set of experiments was intended to address these questions. They were designed as separate experiments, and they aimed at manipulating the level of prosodic prominence, the level of background noise, and in the last one (for which I don’t have results yet), possible contrasts in information structure. All three were recorded at the same time.

2.3 Experiment 2

Experiment 2 was designed to decide whether the “bumps” identified in Experiment 1 were true accents (providing thus another argument for the existence of post-focal accents) or whether they were mere stress-induced pitch alterations. To that effect, the methodology was

changed. Instead of using masking noise to elicit contrasts in pitch range, this time the levels of prosodic prominence were manipulated. As I mentioned above, the use of background noise might have induced an increase in the scaling of all syllables, regardless of their metrical prominence.

This was a very tightly controlled experiment. The target syllables had identical segmental composition but different degrees of stress – unstressed, secondary stressed, and primary stressed. Syllables were initial in disyllabic words with stress on the first syllable (as in *'Vila*, familiar name for a well-known football club), in words with stress on the last syllable (as in *Vi'la*, quite frequent family name), and finally, in 4-syllable words with secondary stress on the target syllable and primary stress on the last one (as in *,Vila'malla*, a place name). Therefore, the three stress conditions were:

- (6) *Stress conditions*
- (a) Stress 0: [bi'la] Vilà (surname)
 - (b) Stress 1: [ˈbilə] Vila (football club)
 - (c) Stress 2: [ˌbiləˈmaɾə] Vilamalla (place name)

There were eighteen words in total, embedded in six right-dislocated subject and object phrases. Half of the target syllables contained high vowels and half contained low and central vowels. The material was balanced in that way to level out vowel-specific pitch differences (e.g. Lehiste 1970, Lehiste & Peterson 1972).

Both the information structure and the semantic/pragmatic context were kept constant. To that effect, the sentences were introduced by a question calculated to elicit an out-of-focus interpretation, as in:

- (7) (a) “Va guanyar la lliga, el Viladecans?” (‘Did they win the league, the Viladecans’)
 (b) “Va guanyar-la, el Vila” (‘They won it, the Vila’)

The target structures were mixed, in random order, with other phrases intended to act as “distractors”, to prevent subjects from falling into a sing-song reading style. Thus prepared, the text was read by twelve Central Catalan speakers, of whom I have analysed the first six, three males and three females (see Astruc 2003b).

2.3.1 Results

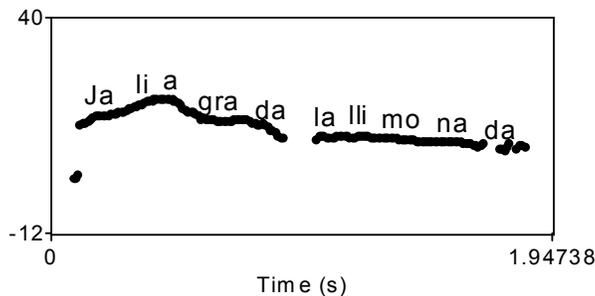
We expected stressed syllables, both those with primary and those with secondary stress, to be scaled higher than their unstressed counterparts. But if syllables with primary stress were significantly higher than those with just secondary stress, this would indicate that they received pitch accents, not mere “stress bumps”.

The results though, do not support the “accenting hypothesis”. The dislocated sentences appeared to be deaccented, both auditorily and instrumentally. However, as in Experiment 1, we found that dislocations tend to form separate tonal units. We can see that in the two pitch traces below, both corresponding to the sentences “Ja li agrada, la llima” (‘She likes it, lime’) and “Ja li agrada, la llimonada” (‘She likes it, lemonade’):

(8) “Ja li a'grada, la 'llima”

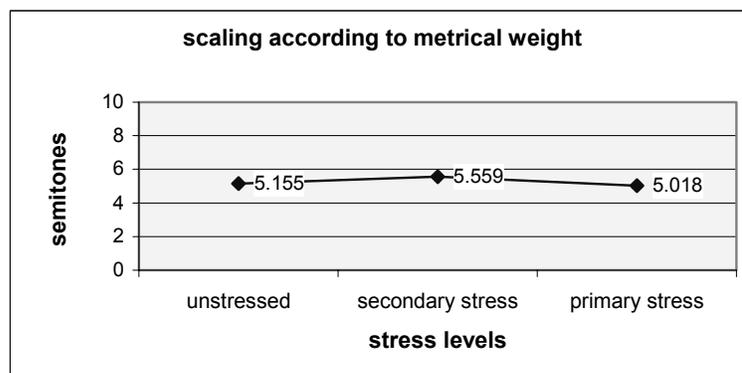


(9) “Ja li a'grada, la llimo'nada”



In both cases there is a pause between the main phrase and the dislocated phrase, which has a rather flat pitch range compared with that of the main phrase. The differences in scaling between all three stress conditions were not significant, as confirmed by a 2-factor repeated measures mixed ANOVA run on the data of all six speakers for the three stress conditions. Statistically, there were no significant effects of stress level upon scaling ($F(2,8)=0.516$, $p=0.615$). We see that in the figure below:

(10) *Figure showing the F0 increment in semitones (vertical axis) as a function of prosodic prominence (three stress levels, on the horizontal axis).*



As we see in the graphic, the F0 level measured over the unstressed syllables is virtually identical to that of the target primary stressed syllables. This is interpreted as evidence against the existence of pitch accents.

2.4 Experiment 3

Experiment 2 was tightly controlled for segmental, semantic and pragmatic variation. Following this strict methodology, we unmistakably found that right-dislocated phrases are totally deaccented – at least when their focus and information structure are kept constant.

In Experiment 3, we looked at matching pairs of sentences, containing in turn appositions and dislocations, as in:

- (11) *Apposition*
 (a) Apposition
 “Va veure la Núria, la núvia” (‘s/he saw Núria, the bride’: Núria was the bride)
 (b) Right-dislocation
 “Va veure la Núria, la núvia” (‘she saw Núria, the bride’: the bride saw Núria)

There are seven sets of ambiguous phrases like those. They were repeated twice at each of the five voice levels, which makes a total of ten tokens of each phrase, and a total of 70 dislocated sentences and 70 appositions by each speaker. They were read by five Central Catalan speakers. As in Experiment 1, background noise was fed into a set of headphones to elicit ‘Lombard speech’. Unlike in Experiment 1, this time both the quality and the level of the noise were carefully controlled.

Dr. Tom Baer, from the Department of Experimental Psychology, kindly provided 60 minutes of noise randomly generated by computer. This noise is of the type normally used as masking noise in perception experiments, as its spectrum broadly covers that of average human speech (500–24,000 Hz).

The volume of the masking noise was incremented in steps of 10 dB (from 65 dB to 95 dB) giving thus four noise levels, plus a control factor (i.e. absence of noise). As before, the speakers were asked to wear headphones from the start.

As in Experiment 1, the speakers reacted to the increases in the background noise with a greater vocal effort, and with changes in the type and distribution of tonal breaks. They were both aiming at speaking louder and at speaking more clearly. This reaction seems to confirm that the so-called ‘Lombard effect’ is actually a different speaking style (as suggested in Junqua 1996).

2.4.1 Results

In line with previous work in Catalan (Bonet 1984, Recasens 1996, Prieto 2002a), and with the findings in Experiment 1, we expected dislocations to be deaccented and appositions to be accented, with a strong tendency to reduplicate the pattern of the main phrase. In both cases we expected to find that the sentence-external element tends to form an independent intonation unit.

The analysis of the data of the first two speakers (RG, male, and CT, female) partially confirms these assumptions. Appositions were mostly accented and separated by tonal breaks. They had reduplicating patterns in more than 70% of the cases. The subordinated pattern, the one corresponding to the apposition, was uttered in a lower voice and also in a lower pitch. The pitch span, that is, the distance from the highest to the lowest point, was about the same as in the main phrase.

Dislocations, though, showed much more variation than in Experiment 2, which was more tightly controlled. Table 12 below shows the number of accented tokens (of a total of 70 per speaker) and the number and type of tonal breaks, for the first two speakers:

(12) *Partial results of Experiment 2*

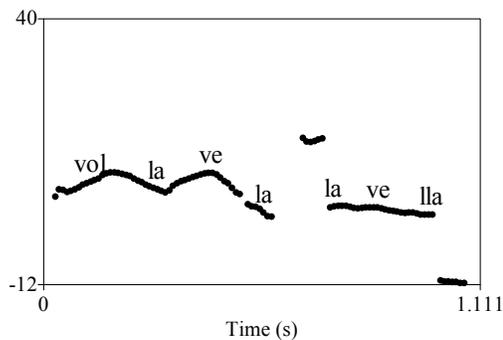
speakers		CT		RG	
		tokens	per cent	tokens	per cent
accents		39	55.8 %	7	10 %
tonal breaks	no breaks	19	27.1 %	49	70 %
	tonal boundaries	35	50 %	10	14.5 %
	pauses	16	22.9 %	11	15.7 %

As we see in the table, there is substantial inter-speaker variation. Speaker CT reads more slowly and tends to accent dislocations much more often (55.8 % of the time) than the other speaker, RG (just 10 %). As a consequence of the differences in reading style, CT produces dislocation and tag as a single unit in 27 % of the cases, while RG does so in 70 % of the cases. Both speakers use pauses with broadly comparable frequency (22.9 % against 15.7 %), while they differ in the use of tonal boundaries, as CT, the slower reader, uses them in nearly twice as many cases as he uses pauses (50 % versus 10 %).

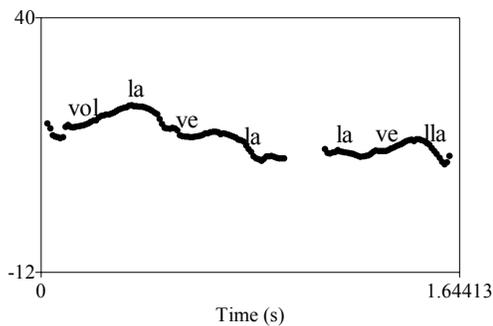
Interestingly, the accented tokens tend to belong to the same sentences. For instance, in the case of sentence 2, (“Vol la vela, la vella” (‘She wants the candle, the old lady’)), all ten tokens are accented, by CT, and two by RG. We see an unaccented token in (13a) and an accented token in (13b):

(13) *‘Vol la ‘vela, la ‘vella’*

(a) Unaccented dislocation (speaker RG, first level of noise)



(b) Accented dislocation (speaker CT, without noise)



The nuclear word in the dislocated clause, “vella”, receives a high accent, an H* in AM terms. This tends to be the case with all the accented dislocations that form a separate unit. If accented at all, they get this rising accent, which can be very compressed.

In the next section, I discuss the reasons for the divergences in the accentuation of dislocated phrases in this experiment. As opposed to Experiment 1, this time the background noise was carefully controlled and monitored, and was increased in equal steps. Variations in pitch cannot be attributed to sudden decreases in the intensity of the noise. Contextual factors though, were not so meticulously controlled.

3 INFLUENCE OF INFORMATION STRUCTURE

In this paper I will assume a theory of information structure as first proposed by Halliday (1967), and subsequently developed in work by Steedman (e.g. Steedman 1989, 1991, 2000) and others. Very schematically, it postulates that intonational structure is constrained by meaning, and “in particular by distinctions of focus, information, and propositional attitude towards concepts and entities in the discourse model” (Steedman 1991: 260).

Focal and intonational distinctions conflate in a 4-way division into *theme* (‘what the utterance is about’) and *rheme* (‘what the speaker says about the theme’). Within both *theme* and *rheme*, there is a part which is accented and hence salient as it contains new, contrastive or otherwise important information. This is the *focus*. The rest is *background*: information which is already known, or assumed to be known by the speaker.

As mentioned above, syntactic dislocation is a means for marking grammatically that a part of a given utterance is already present in the discourse, that is, it is a theme. The normal assumption is that the theme would come before the rheme. Right-dislocations run-counter to this expectation, and they require some discourse motivation or justification (Reinhart 1983). Hence, speakers find it more natural to interpret the right-detached element as a rheme rather than as a theme. The more obviously a right-dislocation refers back to an element already present in the discourse, the more easily speakers would interpret it as information already known. This notion can be roughly assimilated to the concept of “recoverability” (see for instance Geluykens 1992) and “topic accessibility” (as in Lambrecht, e.g. 1994). Unfortunately, a detailed discussion of the conceptual and functional differences between all three frameworks lies beyond the scope of this study.

The most transparent examples in the corpus are the pairs used in Experiment 2:

- (14) (a) “El nen, que en vol, de llimonada?” (‘The boy, does he want any, of lemonade?’)
 (b) “Ja en vol, de llimonada” (‘Of course he wants some, of lemonade’)

The introductory question sets the dislocation as a theme. It is already known information, and freshly introduced in the discourse space, in addition. It is still present in both the speaker’s and the listener’s window of attention. Therefore, it *has* to be deaccented. Not surprisingly, in Experiment 2, such sentences were deaccented every time.

The relation of ‘lemonade’ in (14b) with the previous mention of it in (14a) is marked by the presence of the pronoun “en”, which can be roughly translated as an indefinite quantifier such as “some” or “any”. This and other pronouns act as place-holders for the detached element. Furthermore, in these dislocated sentences in Catalan there is a clear anaphorical relation between a pronoun and its antecedent, as for instance in:

- (15) (a) “Ja en vol, de llima” (‘Of course he wants some, of lime’)
 (b) “Va guanyar-la, el Vila” (‘They won it, the Vila’)

I would argue, loosely following the theory of anaphorical interpretation developed in Reinhart (1983), that this constitutes a special instance of backward anaphora. The dislocated object NP is interpreted co-referentially with the pronoun in the main phrase. This makes it a theme, that is, a highly recoverable referential expression. For that reason it is compulsorily deaccented.

When there is no pronoun in the place of the detached element, and the referent is not easily retrieved from the immediate context, the dislocation tends to be interpreted as lacking co-referential meaning and is thus accented. This is the case of sentence 8, in Experiment 3 (I quote the introductory sentences as well):

- (16) (a) “Recordes aquella història terrible? Sí, tot un drama: la dona que va assassinar l’home i després es va penjar? On va passar?”
 (‘Do you remember that terrible story. Yes, it was a real drama: the wife murdered the husband and then hanged herself? Where did it happen?’)
- (b) “Va passar a Dallas, el drama”
 (‘It happened in Dallas, the drama’)

This sentence was accented by both speakers (CT, three out of ten; RG, one instance). We might think that the speakers reacted to the rather capriciously macabre tone of the story with a more vivid rendition, that is, with accentuation. In line with Geluykens (1992), we can argue that such accented dislocations fulfil an emotive function in the discourse.

The case of the sentence in (17b) below is quite similar, but this time, the “vivid reading” interpretation is not so likely.

- (17) (a) ‘La Lena està de tres mesos. Encara no saben si és nen o nena. Què vol ella?’
 (Lena is three months pregnant. They don’t yet know whether it is a boy or a girl. What does she want?)
- (b) ‘Vol una nena, la Lena’ (‘She wants a girl, Lena)

The personal pronoun “ella” (‘she’) refers back to the NP ‘La Lena’. The mother-to-be’s given name is already present in the discourse, but arguably, not in the immediate vicinity of the dislocated subject NP. Besides, Lena is not a frequent given name – which makes it even less likely to be easily retrieved.

The case of the interrogative phrases in Experiment 1 also shows how hierarchical differences in the structure of information in the discourse can be encoded intonationally. Recall that one of the two sentences was accented, with a pattern that would copy that of the main clause. The other, against what was expected from descriptions in the literature, did not show reduplication.

In the case of the sentence, in (2b), (‘What would you do if you win it, the money?’), the duplication of the rising contour (L* H-H%) highlights the last lexical noun in both tonal units. I would argue that the interrogative has in this way two separate focal points, two themes, one in *what happened*, and another in *what was obtained*:

- (18) ‘What would you do if you would WIN it, the MONEY?’

On the other hand, the accentual pattern that we find in (4) (‘Have you split, you and Norman?’), with a first descending contour (H+L* H-L%), followed by a more marked rising one (L* H-H%), draws attention specially towards the second element. Very tentatively, I would argue that the interrogative has two focal points as before, though the last one stands out much more, because of the rising tones:

(19) ‘Have you SPLIT, you and NORMAN?’

In the short dialogue that introduces these sentences, two women meet in the street and talk about their holidays. It turns out that one of them went alone, without her husband, Norman. Her interlocutor asks how come, and the first woman confirms that they are not together anymore. The question is interpreted as an expression of surprise at receiving this unexpected piece of news. But the issue of marital problems between them had been present in the discourse. It had been the main topic of the conversation. There is no need to mark it as something newly introduced in the discourse. It does not contrast either with any other element, hence the dislocated phrase “you and Norman” receives a nucleus, a broad focus interpretation, and auditorily overrides “split”, the nucleus in the main phrase.

4 CONCLUSIONS

It is generally accepted in phonological studies that right-dislocations are a type of sentence-external element, and as such, they share some special syntactic, semantic and prosodic properties that are supposedly related to, or even determined by, their syntactic derivation. They are assumed to form independent intonational units, as a consequence of their detached position in the syntactic structure. At the same time, it has been observed that they sometimes lack prosodic prominence, while at others they are accented. The purpose of the series of experiments reported in this study was to establish whether right-dislocations were accented, and whether they always formed independent units.

In the first experiment (Astruc 2003a) we observed that quotations and right-dislocations embedded in declarative sentences were nearly always unaccented. However, we observed occasionally a discrete increase in pitch over some stressed vowels – the tell-tale signs of a pitch accent. We noticed as well that, of the two examples of right-dislocated interrogatives, one showed reduplication, as was expected, while the other did not. These two phrases were not controlled for segmental and contextual factors as much as the declaratives were.

Experiment 2 was tightly controlled for segmental, semantic and pragmatic variation. Following this strict methodology, we concluded that right-dislocated phrases, when tightly controlled for information structure and other contextual factors, are found to be totally deaccented (Astruc 2003b).

Finally, in Experiment 3, where a certain degree of contextual freedom was allowed, we observed some patterns of variation in the accentuation of the target structures. These patterns can be explained on both semantic grounds and on terms of the distribution of the information structure over the phrasal unit.

The possibility that the behaviour of dislocations and sentence-external elements in general might be amenable to general principles of information structure and textual organization, rather than to the influence of syntax, was suggested by Liberman (1975: 185). It is also implicitly contained in Ladd’s notion of “structural pitch range effects” which find a manifestation in downstep and other phenomena in which pitch range shifts are used to signal syntactic and textual structure (Ladd 1996: 279). Indeed, we have observed that right-dislocations signal their usual peripheral or rhematic role in the discourse, either by being totally deaccented – when in the discourse background – or, if accented – when they appear in the discourse foreground – by means of a dramatic compression in pitch range.

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