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Abstract

It has often been claimed that Spanish tends to keep the nucleus at the end of the intonation phrase and resorts mainly to word order variation for marking focus. This paper aims to explore cases of early nucleus placement in Argentinian Spanish, which reveal that defocalisation is possible with or without a contrastive interpretation. These cases are accounted for from the perspective offered by Relevance Theory, in which focal prominence is considered a procedural resource to reduce cognitive effort by pointing out the most relevant part of utterances.

The competing theories which explain the relation between focus and prosodic prominence (Ladd, 1996) are related to the two aspects of communication: the inferential aspect and the coding aspect. There are both purely ostensive-inferential uses of prosodic prominence, and uses where the position of the nuclear accent is determined by the metrical component.

The general conclusion drawn from the data is that it would be wrong to try to subsume the whole phenomenon of focus to either aspect, since nucleus placement reflects both the natural side and the linguistically coded side of communication.

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Keywords: Focus; Prosodic prominente; Pragmatics; Relevance Theory; Argentinian Spanish

1. Introduction

Linguists have studied the ways in which natural languages enable communicators to organise the information they want to convey through the syntactic, prosodic or morphological component of the language to facilitate comprehension by their addressees.

In the study of the syntactic arrangement of constituents to express information structure, an informational division has been found to underlie sentence structure, a division between a more informative and a less informative part, the latter serving as a sort of frame for the introduction of

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the former. This intuition has been described and explained in terms of such distinctions as theme-rheme, topic-comment, presupposition-focus, and ground-focus (Vallduví, 1992).

Studies of the contribution of the prosodic component for the expression of information structure have centred on *prosodic prominence*, with special attention being paid to the last prominence, or nuclear accent, in the intonation phrase. Prosodic treatments of focus have been concerned with such issues as the scope of focus, what constitutes given or new information, and the relation between the scope of focus and the location of the nuclear accent, marked and unmarked accent, and the possibility to shift nuclear accent to different constituents in the intonation phrase.

Although focus has been treated as a component of the grammar of languages, either of the syntactic or the phonological component, scholars have usually made reference to the communicative value and appropriateness of the utterances with a given focus marking to the discourse of which they are part. Information structure specialists are becoming increasingly aware of the need to take into account the speaker's intentions, the addressee's interpretation and the context of utterance to explain focus phenomena.

The purpose of this paper is to explore the interface between the prosodic expression of focus and the domain of pragmatics. More specifically, I attempt to account for prosody and focus in Argentinian Spanish from the perspective provided by Relevance Theory (Sperber and Wilson, 1986, 1995). In section 2, I offer an account of Relevance Theory and its contribution to the explanation of focal prominence. In section 3, I briefly revise some characterisations of prosodic prominence in Spanish which strongly suggest that nuclear prominence regularly falls on the last constituent of the intonation phrase and defocalisation of final constituents is not possible, unless it has a contrastive meaning. In section 4, I outline the aims of the research, and introduce the corpus and the methodology used. I analyse cases of defocalisation with both a contrastive and non-contrastive interpretation, and of reaccenting. I also briefly discuss a tonal strategy in relation to background information. In section 5, I argue that the approaches to the relation between focus and prosodic prominence are reflections of the two general theories of communication, and claim that prosodic prominence has both a coding and a natural aspect. In section 6, I conclude that prosodic prominence in Argentinian Spanish, though mainly ruled by the coding aspect, also exhibits an inferential aspect related to the ostensive act of pointing.

2. Pragmatics: Relevance Theory

Relevance Theory is a cognitive pragmatic theory proposed by Sperber and Wilson (1986, 1995) which offers a suitable framework for the treatment of focus. It starts from the proposal that both human cognition and communication are guided by considerations of relevance. Information is relevant when it is capable of yielding large cognitive effects in exchange for small cognitive effort. *Cognitive effects* are derived when new information is processed in the context of existing information, yielding conclusions that bring about an improvement of one's representation of the world. *Cognitive effort* is needed to decode the linguistic content, access contextual assumptions and compute the effects of utterances in the context. The greater the cognitive effects, the more relevant the information will be. Conversely, the greater the cognitive effort to achieve those effects, the less relevant the information will be. The least effort condition of the definition of relevance means that those assumptions which are more accessible are easier to construct or retrieve, so they are more likely to be used as part of the context for processing new information.

An essential notion in the theory is that of *cognitive environment*. An individual's cognitive environment is the set of facts that he can represent mentally and accept as true or probably true. When two individuals share part of their cognitive environments, and it is manifest to them that they share it, they are said to share a *mutual cognitive environment*. To communicate is to modify the mutual cognitive environment the communicator shares with her audience.

The universal tendency to maximise relevance makes it possible to predict and manipulate the mental states of others to some extent: that is to say, communicators will try to produce a stimulus which is likely to attract the audience's attention, encourage the retrieval of certain contextual assumptions and point to certain conclusions. As regards the audience, the fact that human cognition in general, and linguistic utterances in particular, are geared to the maximisation of relevance motivates the use of a *comprehension procedure*: "follow a path of least effort in computing cognitive effects; in particular, test interpretative hypotheses in order of accessibility; stop when your expectations of relevance are satisfied" (Sperber and Wilson, 2002:7).

In this broadly Gricean framework, inferential communication is not seen as just a matter of intending to affect the thoughts of an audience. It is also a matter of getting them to recognise that one has this intention. In other words, it involves two layers of intention: an *informative* and a *communicative intention*. This is called *ostensive-inferential communication*. In this perspective, pragmatic interpretation presupposes our mind-reading ability in the inferential attribution of intentions.

Sperber and Wilson (1986, 1995) propose that in processing an utterance, a series of *anticipatory hypotheses* are made, constituent by constituent, about the possible continuations of the utterance until the hypothesis about the proposition the speaker has expressed is reached. These hypotheses concern both the syntactic structure and the propositional form and content of the utterance, are logically related to one another by analytic implication and form a focal scale. Each implication on the scale may raise a relevant question in the hearer's mind, which the next implication will, at least partially, answer:

/ Jennifer admitted STEALing /

[[NP Jennifer] [VP]]

What did Jennifer do?

Jennifer did something.

[[NP Jennifer] [VP [v admitted] [NP]]]

What did Jennifer admit?

Jennifer admitted something.

[[NP Jennifer] [VP [v admitted] [NP stealing]]]

Jennifer admitted stealing.

(Sperber and Wilson, 1995:205–210)

Each implication in the focal scale can contribute to the overall relevance of the utterance in two ways: (a) either by reducing the effort needed to process it; (b) or by increasing its contextual effects. Those implications which contribute to relevance by reducing processing effort do so by giving access to a context in which the contextual effects can be achieved, and are called *background implications*. Those implications which are relevant in their own right are *foreground implications*. On encountering the focused element, the hearer is instructed to construct the last anticipatory hypothesis by inserting a variable in the place of this element, and he will thus obtain the proposition being expressed by that utterance. The *focus* of an utterance is the smallest constituent whose replacement by a variable yields a background implication. It is the constituent which dominates all the information that contributes directly to relevance. Although each anticipatory hypothesis must be used in processing the utterance, earlier hypotheses tend to play a

background role. Of course, a hypothesis which is a foreground implication at a certain point in the discourse will also play a role as a background implication for the next hypotheses as the discourse proceeds.

Different accent assignments induce different *focal scales*. When focal accent falls on the final element, the set of anticipatory hypotheses coincides with the focal scale; that is, the scale of anticipatory hypotheses determined by left-to-right processing of constituents coincides with the scale of potential foci of the utterance. This is a natural place for nuclear accent, [Sperber and Wilson \(1986, 1995\)](#) claim, in the sense in which it is natural to ask a question before answering it, or to communicate a complex piece of information step by step. When focal accent is not on the last word of the sentence, the focal scale, determined by accent placement, will not entirely correspond to the scale of anticipatory hypothesis. However, these cases can also be treated as guided by considerations of relevance:

/ Jennifer adMITted stealing /

[[NP Jennifer] [VP]]	Jennifer did something.
What did Jennifer do?	
[[NP Jennifer] [VP [V] [NP stealing]]]	Jennifer did something regarding stealing.
What did Jennifer do regarding stealing?	
[[VP Jennifer] [VP [v admitted] [NP stealing]]]	Jennifer admitted stealing.

/ JENnifer admitted stealing /

[[NP] [VP [v admitted] [NP stealing]]]	Someone admitted stealing.
Who admitted stealing?	
[[NP Jennifer] [VP [v admitted] [NP stealing]]]	Jennifer admitted stealing.

(Sperber and Wilson, 1995:205–210)

In these cases, the focus will, at least in part, precede the background. Post-nuclear material, [Breheny \(1996, 1998\)](#) points out, gives rise to an expectation of *predictability*: that material is just a reminder; it contains information which is weakly implicated and can be inferred from contextual information.

According to Relevance Theory, linguistically encoded information provides the input to the inferential phase of comprehension, which involves constructing and manipulating conceptual representations. The grammar provides two types of information for this purpose: information concerning the propositional content, called conceptual information, and information about how to manipulate propositional content, or procedural information ([Wilson and Sperber, 1992](#)). Procedural information can impose constraints on which hypotheses can be made, or it can promote the accessibility of certain types of hypotheses over others. Breheny treats focus as *procedural* and *pro-active*: it reduces processing effort by making accessible certain assumptions and forcing them to be used as part of the context in the processing of utterances.

The linguistic form of utterances has a direct influence on the hypothesis formation stage of the interpretation process. In other words, the order in which the information is presented determines the way in which the context is accessed. Given the general goal of keeping effort to a minimum and the communicator's aim to formulate her utterance in a way that helps the recovery of the intended interpretation, it is reasonable to expect natural languages to have formal devices such as accent, or prosodic prominence, which can be used to highlight or draw attention to

particular constituents of an utterance which are likely to bring about cognitive effects in the audience (Carston, 1993). Sperber and Wilson (1986, 1995) advocate a natural linkage between linguistic structure and pragmatic interpretation: given the existing grammatical and temporal constraints, the speaker adapts her utterance to the way the hearer is likely to process it.

3. Prosodic prominence in Spanish

Spanish has been characterised as a language with relatively free constituent order (Escandell Vidal, 1996; Hernanz and Brucart, 1987) in which information structure is expressed mainly through word order variation. It has also been claimed that it keeps focal prominence at the end of the intonation phrase. Following Vallduví's characterisation (1992, 1996), it has a *non-plastic accent pattern*.

Spanish has been cited by Cruttenden (1997) as a typical example of a language in which focal prominence tends to have a fixed position in the intonation phrase. This author points out that pressure to keep the nucleus at the end of intonation groups, more specifically on the last lexical item of the group, can even result in the accenting of old information, a phenomenon referred to as *re-accenting*. He identifies French and Spanish as having the highest incidence of re-accenting, while English and German as having the lowest.

In his study of the intonation of Latin-American Spanish, Sosa (1991) claims that nuclear accent is always located at the rightmost lexical item of the intonational phrase, and coincides with the designated terminal element of metrical phonology. The fact that nuclear prominence cannot be shifted results in the restructuring of the intonation phrase into smaller phrases to highlight particular words.

Zubizarreta (1998) explores the relation between focus and prosody in Germanic and Romance languages. She suggests that focus marking through prosodic prominence in Spanish is constrained by the *Nuclear Stress Rule* which, in her formulation, is a late rhythmic rule which assigns focal accent to the lowest, most embedded constituent in the phrase.¹ All cases of non-final, phrase-internal focal accent are generated by an independent rule, the *Emphatic/Contrastive Stress Rule*. Emphatic stress has a purely metagrammatical function to signal correction or repair. It may also be used to reassert or deny the hearer's presupposition. Contrastive stress is partly metagrammatical and partly focus-related (as it introduces a variable and a value for it). Stress associated with contrastive focus is freely assigned. Thus, in Spanish the Nuclear Stress Rule applies in all non-contrastive configurations, and non-final prosodic prominence can only have an unambiguous narrow, contrastive focus interpretation.²

Essentially, prosodic prominence in Spanish is stipulated in the metrical structure, particularly through the Nuclear Stress Rule (Hayes, 1995³; Zubizarreta, 1998), which establishes relative prominence relations between prosodic constituents at different levels of the prosodic hierarchy (Nespor and Vogel, 1986) and assigns prominence to the rightmost member. In this view, metrical structure mediates the relation between focus structure and intonation.

¹ In fact, Zubizarreta (1998) argues for a modular version of the NSR: one part of the rule, sensitive to selectional ordering, applies mainly in Germanic languages like English and German; the other, sensitive to constituent ordering, governs nuclear stress placement in Romance languages like Spanish and Italian.

² Zubizarreta (1998) suggests that Spanish would rather move constituents to the end of the phrase, where they can receive nuclear prominence through the NSR, than shift focal prominence from that position. Within the Minimalist Programme, she proposes movement of constituents motivated by prosodic reasons, which she calls P-Movement (prosodically motivated movement).

³ Hayes (1995) calls it the End Rule at a phrasal level.

Therefore, focus scholars working in different theoretical frameworks agree that Spanish is essentially a language in which focal accent falls on the last constituent in the intonation phrase, and information structure is expressed through syntactic restructuring.

4. The research

The main purpose of this paper is to try to account for focal accent in some Argentinian Spanish data from the pragmatic perspective offered by Relevance Theory. More specifically, it is meant to find out:

- a. whether or not Argentinian Spanish can shift nuclear accent from the position assigned to it by the Nuclear Stress Rule;
- b. whether or not it can shift nuclear accent only in cases of metalinguistic correction or contrastive use, or when denying or reaffirming assumptions attributed to the audience;
- c. the pragmatic value of defocalised constituents in relation to the context in which the utterances are produced.

A 45 min interview broadcast on an Argentine cable TV channel was used as corpus. In the programme chosen, a well-known Argentinian writer, composer and radio presenter was interviewed about a wide variety of topics. The prosodic analysis involved primarily auditory identification of nucleus placement. The most outstanding examples which seemed to involve defocalisation of final constituents were analysed using a PC sound-processing software⁴: the fundamental frequency was used as a guide to the identification of pitch accents. Intensity was used as an aid to segment the speech continuum into individual sound segments. Special attention was paid to the last pitch accent owing to its central role in marking the right-edge scope of focus and defocalisation of phrase-final constituents. Pitch movement was analysed in terms of the ToBI tonal tier as applied to Argentinian Spanish by Gurlekian et al. (2001). The set of conventions of Sp_ToBI were also taken into account (Beckman et al., 2002). Finally, the cases of non-final nuclear accent were grouped under the following headings, describing its relation to the context of utterance: (a) repetitions; (b) paraphrases; (c) inferable material; (d) anaphoric noun phrases; (e) illocutionary adverbials and (f) quotation devices.

In the following examples, intonational phrase boundaries are shown by means of slant bars, and prominent syllables with capital letters. Focal accent is marked by capitals and underlining. Given the importance of the toneme in Spanish (Sosa, 2003),⁵ the final pitch contour is marked as a shorthand by means of arrows: rising↑ level→ falling↓. Defocalisation is shown by italics. The phonological analysis is couched in terms of the ToBI system, showing phonetic transcription, tones and breaks, and other details in a ‘miscellaneous’ tier. The examples are translated into English, and the original word order is preserved in the translation as far as possible. The relevant intonation units are highlighted. Full analysis for some of the examples is shown in the figures.

⁴ The ANAGRAF (Speech Sound Analysis Lab) software was designed by Gurlekian (1997) at the LIS (Laboratorio de Estudios Sensoriales)-CONICET and it provides a spectrogram, wave amplitude, total energy and fundamental frequency analysis of speech.

⁵ The category “toneme” was initially proposed for Spanish by Navarro Tomás. In A-M terms, it consists of the last pitch accent (the nucleus) and the boundary tone (including the phrase accent). These tones account for the final pitch contour of the intonation unit. The arrows used in this paper are a shorthand representation of that final contour.

4.1. Final focal accent

A brief look at any section of the interview shows that the focal accent falls on the last content word of the intonation phrase. This extract belongs to the very first part of the interview:

- (1) O'Donnel: Dolina, alguna vez le he escuchado un fascinante ... catálogo ... de
Dolina, I once heard you talk about a fascinating catalogue of
 paraísos disponibles para el ser humano
paradises available to humans.

Dolina: / aSI ↓ES / en una ↓CHARla / que DImos por a↑HI /

Transcr.		a	s	i	e	s		e	n	u	n	a	t	ʃ	a	r	l	a		k	e	ð	i	m	o	h	p	o	r	a	i	
Tones		L%	H*	L*	L%		L%	H*+L	L%		L%	H*+L		H*	H%																	
Break I.		4		0		4	0	1		4	1		1	0	4																	
Miscell.																																

That's right

in a talk

we gave around

/ en la biblioTEca nacio↑NAL / reco↓RRamos / los para↓Isos /

e n l a β i β l j o t e k a n a s j o n a l											r e k o r i a m o s					l o h p a r a i s o h					
L%		H*+L			H*		H%		L%		H*+L		L%		L%		H*		L%		
1		1		1			4			4			1		4						
Chuckles																					

at the National Library

we toured

the paradises

/ que el HOMbre so↓ÑO / o vislum↓BRO / a traVÉS de la his↓TOria /

kel ombre sono												oβihlumbro												atraβehðelihtorja																							
L%				H*+L				H*				L% L%				H*				L% L%				H*				H*+L				L%															
0				0				1				4				1				4 1				1				1 0																			

/ that man dreamt of

or glimpsed

throughout history

This example shows that Argentinian Spanish is on the non-plastic side of the cline, that it prefers to keep focal accent on the final constituent. It also tends to segment speech into small intonation units to give prominence to individual words, rather than group them into longer units. However, as we will see in the next examples, defocalisation and movement of focal accent to internal constituents in the intonation unit is possible, both with a contrastive and a non-contrastive value.

4.2. Non-final focal accent: contrastive cases

The next three examples show that defocalisation is possible in *metalinguistic and contrastive uses*, or “when accent is used to reassert or deny the hearer’s presupposition” as pointed out by Zubizarreta (1998:44–45).

In example (2), the interviewee is discussing political nationalism and fanaticism and its consequences in the twentieth century. He explains how political paranoia can give rise to conflicts among nations. On its second mention, the term “nation” is defocalised, and focal prominence is shifted to the possessive determiner “my”. A contrast is thus established between the speaker’s country and other countries:

(2) Dolina: / viSIOnes / según las CUAles por eJEMplo / que se YO /
views according to which for instance I don’t know

hay un GRUpo de na↑CIOnes / que QUIEren la destrucCION de ↓MI nación /

ai un grupo de nasjoneh					ke kjer en la Destruksjonde mi nasjon									
L%		H*		H*	H%	L%		H*		H*		L-	L%	
4	0	1	1	1	4	1	1	1	1	1	1	1	4	
hesitates														

there is a group of nations which want the destruction of my nation

In a previous section of the interview, the participants discuss the different types of criminals. The interviewee proposes two categories: common criminals and messianic criminals. The former are aware of their wrong-doing, while the latter lack awareness of their criminal acts and think they are in fact doing good and have a mission to fulfil. The contrast between presence and absence of awareness of wrong-doing is expressed by shifting focal prominence away from the final constituent in the intonation phrase to the verb “know”, thus defocalising the final portion of the intonational phrase, “that they are committing a crime”, which is a fact that the audience can be entrusted to supply as part of their background knowledge. In other words, the post-nuclear material is a background contextual assumption, rather than the main point of the utterance (see Fig. 1):

(3) Dolina: / PORque... el caNAlLa que se sabe TAL / el laDRON de BANcos /
because the criminal who knows he is a criminal the bank robber

/ que ↓Sabe que..... *está cometiendo un delito* /

Transcr.	k e s a ß e k e e h t a k o m e t j e n d u n d e l i t o							
Tones	L%		H*+L		L-		L%	
Break I.	4	1	1	3	1	0	1	4
Miscell.	length. sil							

who knows that he's committing a crime

/ a lo meJOR un DIa se reDIme /
perhaps one day redeems himself

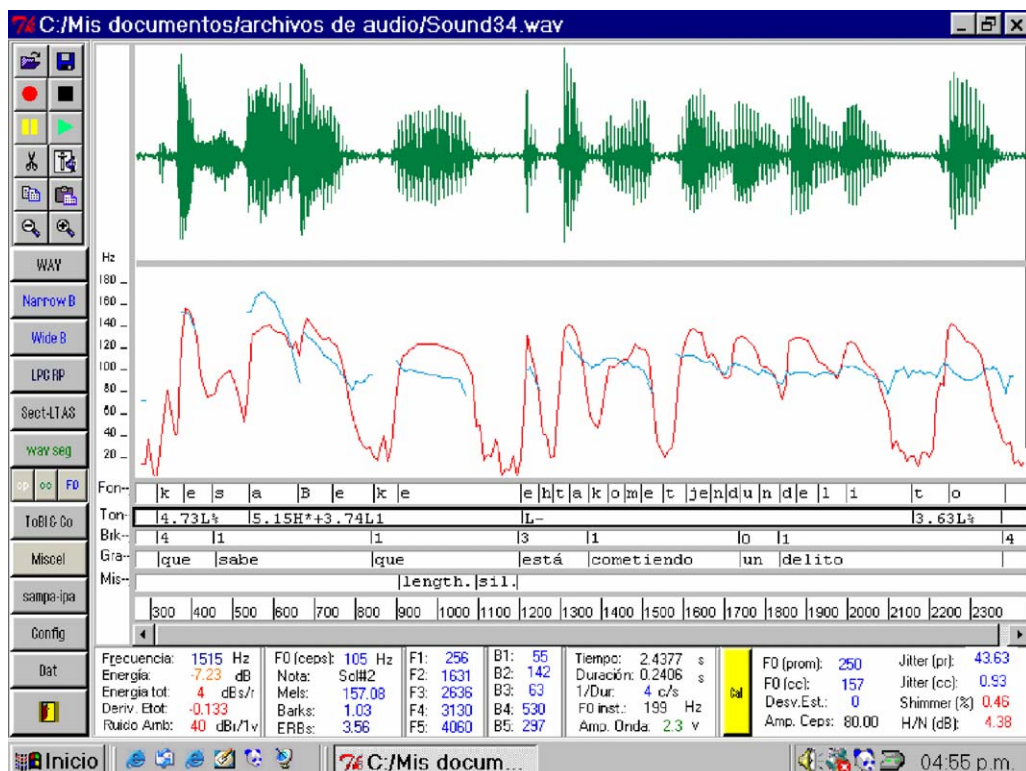


Fig. 1. The ANAGRAF 2 display. The broken track (F0) shows pitch movement. The continuous track (intensity) was used for segmentation purposes. The ToBI analysis module from top to bottom includes: (a) the phonetic transcription; (b) the tonal tier, with pitch height measured on the ERB scale on the left of the H/L marks; the number to the right of H/L marks the number of syllables over which the pitch tone spreads; (c) the break index (0–4); (d) the ordinary spelling transcription and (e) miscellanea such as voice quality, vowel lengthening and silence. Example (3), with a contrastive meaning, shows a nuclear tone on “*Sabe*” and defocalisation of the post-nuclear segment “*que está cometiendo un delito*”.

In the following extract, the interviewee has just referred to Swedenborg’s views on the religious notions of heaven and hell. In mentioning the popular religious belief that ‘one gets sent to hell as punishment’ to contradict it, the speaker defocalises “hell” as this information is easily accessible in the context of the discussion, once the hearer has accessed the concept of “being sent to x”. The contextual effect intended by the speaker (in fact attributed to Swedenborg) is that of contrasting two possibilities, ‘choosing to go’ and ‘being sent’ and contradicting a widely held assumption attributed to the audience:

(4) Dolina: / de modo TAL que Swedenborg deCIA que /

Consequently, Swedenborg said that

/ a NADie lo man↓DAban al...al infierno / era una elecCION /

Transcr.	a n a ð j e l o m a n d a ß a n a l a l i n f j e r n o					
Tones	L%	H*+L	H*+L	L-	L%	
Break I.	4	1	1	1	0	3 0 4
Miscell.				silence	devoiced	

nobody got sent to..... to hell

it was a choice

As regards contrastive accent, Breheny (1996) finds no reason to assume that the nature of focus for presentational sentences with neutral accent in the most embedded constituent is different from contrastive cases, since this difference can be attributed to the type of context in which the utterance is to be processed. Focal accent leads to the evocation of alternatives, and contrastive accent is a signal to process the utterance in a context with a limited set of options.

4.3. Non-final focal accent: non-contrastive cases

Non-final focal accent has usually been claimed to be a feature of West Germanic languages such as English, German and Dutch. Relative semantic weight and informativeness seem to be a key factor in the location of accent in these languages, and anaphoric phrases with an explicit or implicit antecedent in the discourse can be deaccented. In contrast, Romance languages such as Italian or Spanish are said to resist deaccenting, and to achieve similar effects by rearranging the order of constituents, such that the most informative part of the sentence ends up at the rightmost position to receive nuclear accent there (Cruttenden, 1997; Ladd, 1996; Zubizarreta, 1998).

Zubizarreta (1998:73–78) asserts that non-final nuclear prominence in Spanish can only have a contrastive or emphatic interpretation, and is to be treated as contrastive or emphatic focus. However, as we will see in the following examples of non-final nuclear accent, there need not be any obvious contrast, emphasis or contradiction of attributed assumptions for an intonation phrase to contain a defocalised segment. In fact, the defocalised constituents are either *repetitions or paraphrases* of linguistic items in previous discourse, or can be *inferred* from previously mentioned facts. In other words, they are taken by the speaker to be present in the mutual cognitive environment she shares with the hearer. The defocalised constituent is *predictable*, that is to say highly accessible in the context in which the utterance is to be processed, as discussed by Breheny (1996, 1998). As such, it is not considered to effect a substantial modification of the common cognitive environment, but is treated as part of the context, and is consequently defocalised.

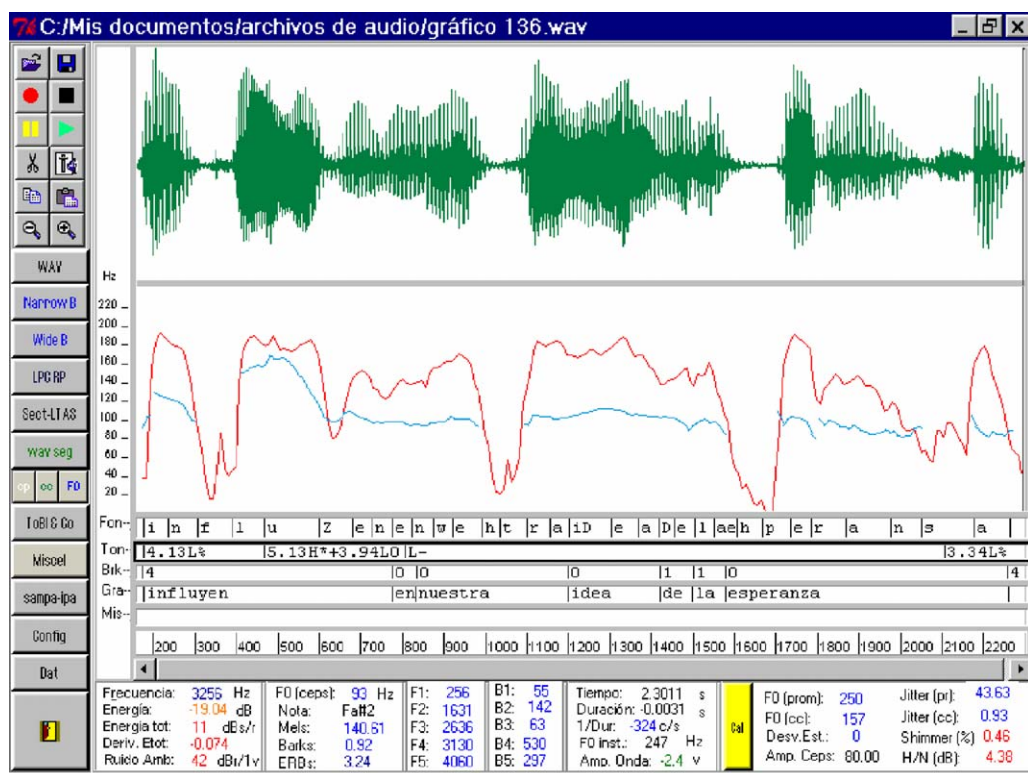


Fig. 2. Example (5) is a case of defocalisation with a non-contrastive meaning. The nuclear accent is on “influyen” and the rest of the intonational phrase is defocalised due to its anaphoric nature.

In example (5), the interviewer introduces the topic of hope. The interviewee takes it up to comment on the influence of events on our idea of hope. The speaker places the nuclear prominence on “influence”, defocalising “our idea of hope”, and there is no apparent contrast between “influencing” and any other accessible concept in the context, or any correction of an assumption attributed to the interviewer, the audience, or the interviewee himself (see Fig. 2):

(5) O'Donnell: / usted ha penSado / usted ha haBLADo sobre esperanza /

You have thought about, you have spoken about hope

Dolina: / SI / es ineviTable penSAR queE ... los suCESos que nos ro↓↑DEAn /

Transcr.	los s u s e s o h k e n o h R o ð e a n					
Tones	L%	H*+L			H*+L H%	
Break I.	4	1	1	1	1	4
Miscell.						

Yes, it's inevitable to think that... the events around us

in↓FLUyen en nuestra idea de la esperanza / de un Modo ... treMENdo /

influʒen en wehtra i ðea ðela ehperansa									
L% H*+L		L-		L%					
4		0	0		0	1	1	0	4
influence our idea of hope					very strongly				

In discussing totalitarianism, the interviewee mentions the fact that intolerance has reached and contaminated even artistic circles. The relevance of the utterance lies in the rather unexpected fact that those kinds of circles should have been affected. The fact that artists are part of society is somehow predictable. Quoting Sperber and Wilson (1995:211), it is “a confirmation of an interpretation which the hearer should have been able to arrive at unaided.” Consequently, the word “society” is defocalised (see Fig. 3):

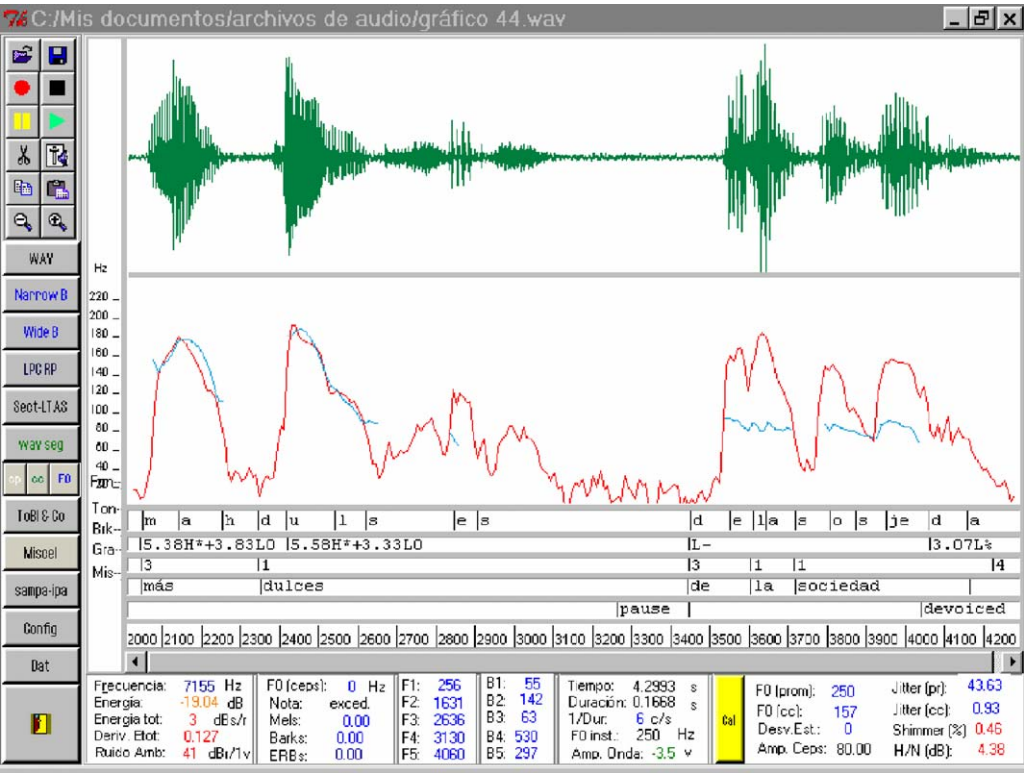


Fig. 3. The final part of example (6) shows defocalisation without a contrastive meaning. The nuclear accent is on “dulces”, and the phrase “de la sociedad” is defocalised as it is predictable from the context. Devoicing of the final stressed syllable in “sociedad” provides further evidence of defocalisation.

- (6) Dolina: / pero lo lamenTable / es que... hay una CIERta contamina↓CION /
but what's unfortunate is that.... there is some tainting

/ en el sentido de ese pensa[↑]MIENto /
in relation to that thinking

/ que HA afectAdo a los secTOres MÁS ↓ DULces *de la sociedad* /

ke			fektað o a lo sektores				mah ðul ses		de la sosjeða						
L%		H*+L		H*+L		H*+L		H*+L		H*+L		L-		L%	
4		0		0		0		1		0		3		1	
3		1		3		1		3		1		1		4	
pause						pause						devoiced			

which has affected the most tender parts of society

In the example below, talking about dictators and their messianic view of themselves, the interviewee points out that some of the most notoriously criminal characters that have ever existed have believed themselves to be saints. The fact that they “have ever existed” is defocalised, as it is predictable. It is also information which the speaker expects the hearer to use as context in which to process the utterance.

- (7) Dolina:/alGUNas de las perSONas MÁS cana↓↑LLEZcas *que han existido nunca*

algunah ðe lah personah mah kanaꝑehkah ke an esihtido nunka																				
L% H*+L			H*+L			H*+L			H*+L L-			H%								
4			1 1 1			1			1			3 0 0			1			4		

some of the most despicable people *that have ever existed*

/ se han creído a sí mismos ↓SANtos /
have believed themselves to be saints

Other linguistic devices which have been found to be defocalized and are not amenable to a contrastive interpretation are anaphoric expressions such as the determiners esto (this), eso/esa (that), en todo eso (in all that) este asunto (this affair), esas cuestiones (those issues); illocutionary adverbials such as seguramente (most probably); discourse connectives such as de todos modos (anyway), por ejemplo (for example); and quotation devices used to attribute the utterance to oneself or to other and to express one's opinion to it, such as quiero decir con esto (I mean by this), como usted dice (as you say). Similar findings have been reported by Ortiz-Lira (2000:34) for the Spanish of Santiago de Chile. All these expressions seem to contribute to the relevance of the utterance as background rather than foreground, and are part of the context in which the utterance acquires its optimal relevance.

Accessibility plays a central role in processing assumptions, since those assumptions which are more accessible are more likely to be used as part of the context for processing new information. Assumptions derived from previous discourse are the most likely candidates for context, since they are highly accessible. The recently processed assumptions from previous discourse constitute a minimal context for processing other utterances in the ongoing discourse (Sperber and Wilson, 1995:142–151). Those concepts and assumptions which are highly accessible are likely to be defocalised, since they are to be processed as part of the background in which to process foregrounded information.

4.4. Background information with a rising tone

Another phonological strategy, comparable to defocalisation, has been found to be operative in the data examined: the use of a *rising/falling-rising toneme* to mark the content of that intonational phrase as *background*. In contrast, the foregrounded information has a falling tone.

In the following example, the interviewee refers to Bertolt Brecht and his love of freedom. The second mention of that trait is uttered on a rising tone:

(8) O'Donnel: / era en cierto MOdo un liber↓TArio /

he was somehow a libertarian

/ un a↓MANte / de la liber↑TAD /

Transcr.	un a m a n t e			D l a l i B e r t a		
Tones	L% H* +L L% L%			H* H%		
Break I.	4	0		4	0 1	4
Miscell.						

a lover *of freedom*

/ inCLUso sus oBRAS / reFLEjan ese enCOno.../

even his works *reflect that ill-feeling ...*

After having discussed in detail intolerance, fanaticism and messianic views, the interviewee points out the fact that those views have contaminated even the most unlikely circles of society. The anaphoric reference to those fanatical views is uttered on a rising tone, and functions as a contextual reminder in which the main point achieves its relevance. As Sperber and Wilson (1995:149–150) have pointed out, a reminder may be relevant by making available to the hearer information which he would otherwise have had to retrieve from memory at a greater processing cost. In other words, the reminder gains relevance by reducing processing effort. Thus, the rising tone may be taken to be an indication of how the utterance is best processed.

(9) Dolina: / pero lo lamenTAble / es que... **hay una CIERta contamina**↓**CI**ON

Transcr.	a i u n a s j e r t a k o n t a m i n a s j o n
Tones	L% H*+L H*+L L%
Break I.	4 0 1 1 4
Miscell.	sil.

but what's unfortunate is that.... there is some tainting

/ en el senTIdo de ese pensa↑MIENto /

Transcr.	e n e l s e n t i d o s e p e n s a m j e n t o
Tones	L% H* L* H%
Break I.	4 0 1 0 0 1 4
Miscell.	

in relation to that thinking

/ que ha afecTAdo a los secTOres MÁS ↓DULces de la sociedad /
which has affected the most tender parts of society

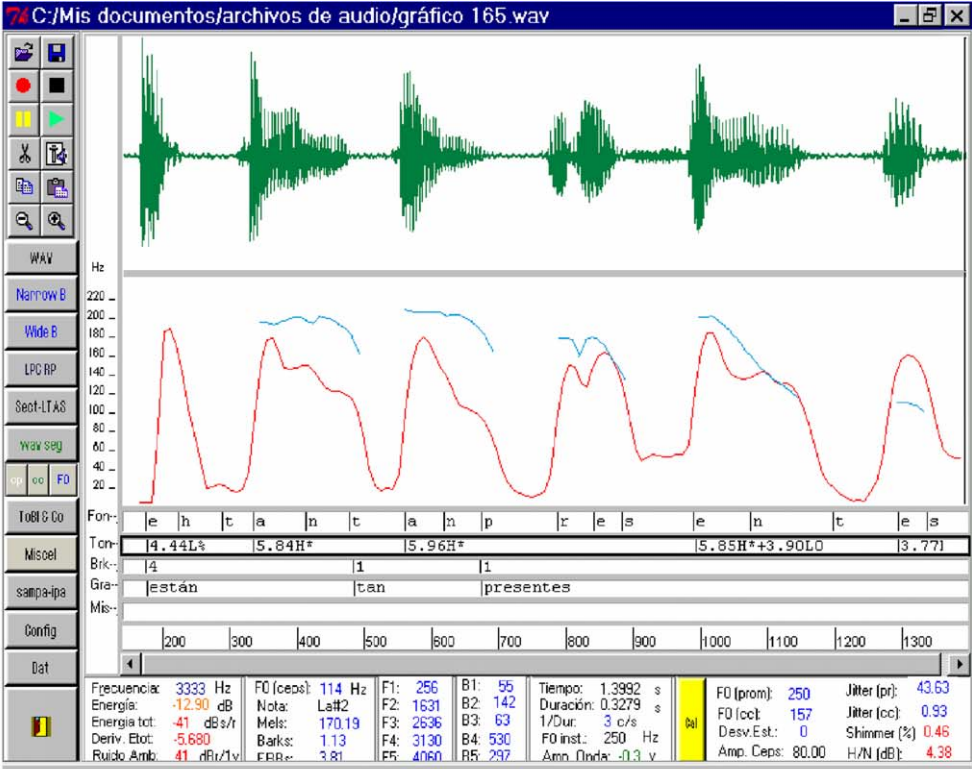
In the following example, both participants have just discussed the importance of elephants in the works of Rudyard Kipling. The interviewee draws a parallel with a comment made by Borges about the presence of camels in the Koran. The fact that camels are part of the life of Arabs is uttered on a rising tone since it can be inferred as part of the cultural context, which the hearer is expected to have accessible for the comment to achieve optimal relevance (see Fig. 4a and b):

(10) Dolina: / esTAN TAN pre↓SENtes / en la VIda del ↓↑Arabe

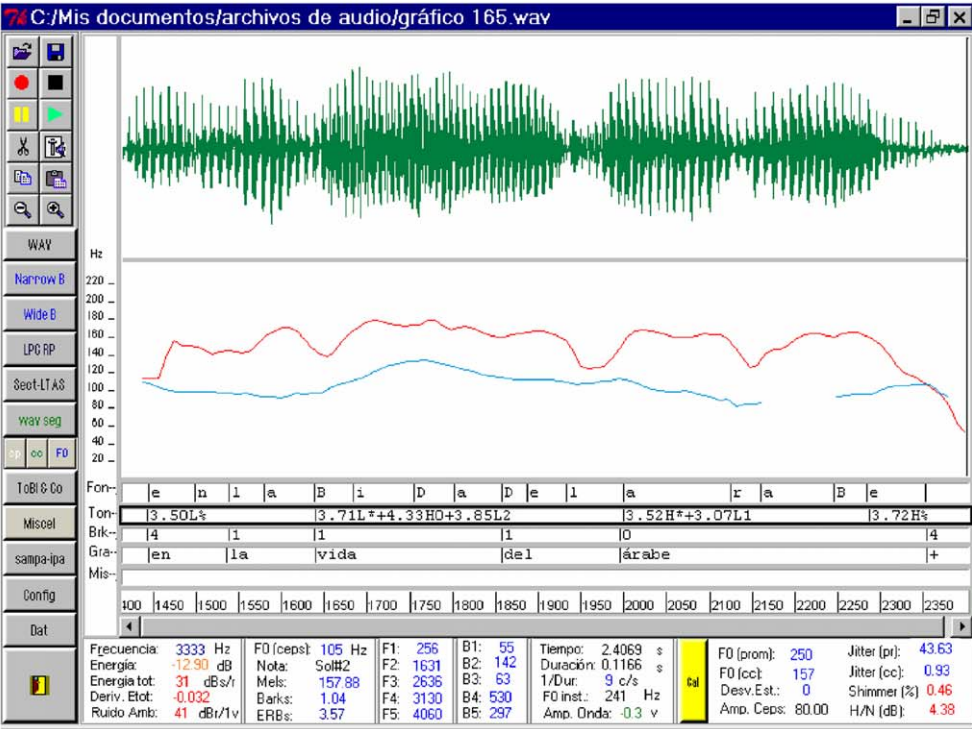
Transcr.	e h t a n t a n p r e s e n t e s e n l a β i ð a ð e l a r a β e
Tones	L% H* H* H*+L L% L% L*+ H +L H*+L H%
Break I.	4 1 1 4 1 1 1 0 4
Miscell.	

they are so present in the life of Arabs

/ que no hace FALta po↓NERlos /
that there is no need to write them in



(a)



(b)

It could be argued that the rising tone may be a high boundary tone, indicating non-finality and signalling the speaker's intention to continue his turn. However, from the phonetic point of view, the presence of an intonational phrase boundary (break 4 index) marks off the unit with the rising tone as a separate intonational gesture. From the pragmatic point of view, as the following example shows, the backgrounding function of the rising tone is revealed where there is no question of non-finality. The interviewee is making a point about fanatical beliefs when the interviewer breaks in to introduce a quotation from a famous writer. He starts making his contribution but realises he has interrupted the interviewee. He briefly interrupts the quotation to apologise for the interruption:

(11) Dolina: Yo no digo ques esté mal cierta fe, pero cuando esta fe se dispara para el

I'm not saying it is wrong to have some faith but when this faith goes astray

lado de los tomates, es peligrosa, es peligrosa, [y fijese]

in the wrong direction it's dangerous, it's dangerous,[and look at]

O'Donnell:

[hay una frase]

[*There's a quotation*]

Dolina: ¿si?

Right

O'Donnell: una frase muy bella... **disculpemé que lo interrumpí...** de un muy buen

A very beautiful quotation sorry for interrupting you by a very good

escritor español, José María de Pereda, ¿se acuerda?

Spanish writer José María de Pereda do you remember him?

Dolina: Aha.

I see

/ disCULpe↓ME

/ que lo interrumpí↑/

Transcr.	d i h k u l p e m e	k l o t e r u m p i
Tones	L% H* L* L% L%	H* H%
Break I.	4	4 0 0 4
Miscell.		

Sorry

for interrupting you

Fig. 4. The second part of example (10), “en la vida del árabe”, shows the use of a falling-rising toneme (falling on the nuclear pitch accent followed by a high boundary tone) to mark the informational content of the intonational unit as background. In contrast, the first part, “están tan presentes”, has a falling toneme (falling on the nuclear pitch accent followed by a low boundary tone) to mark the content as foreground.

The apology is expressed in a self-contained digression from the speaker’s topic. In the falling tone phrase, the speaker introduces the directly relevant act, that of apologising, and in the rising tone phrase he expresses the reason for apologising. The rising tone marks the content of the intonation phrase as background, and as such has the purpose of facilitating the processing of the apology as such.

Brazil et al. (1980) and Brazil (1985) suggest that the rising tone in English is used to mark parts of the message of belonging to the common ground, the area of assumed convergence between the participants, but when it has need of reactivation. The speaker who uses the rise is seen as reminding the hearer and taking the initiative in invoking common ground.

Non-contrastive intonation phrases with a rising tone in Spanish have also been found with quotation and self-quotation expressions. The rising tone could be considered an alternative to defocalisation, perhaps used as an indication that the content of the intonation phrase is to be processed as a reminder, and thus deemed to be less accessible than defocalised material.

4.5. Reaccenting

As pointed out above, *reaccenting old information* has been found to be a typical feature of languages which tend not to shift focal prominence away from the final position determined by the Nuclear Stress Rule (Cruttenden, 1997; Ladd, 1996). A similar observation has been made by Ortiz-Lira (1995, 2000) for the Chilean Spanish of Santiago de Chile. Cases of reaccenting are fairly frequent in the data examined. In the following example, the interviewee identifies a part of the audience in his radio programme which consists of young students. He might have deaccented the verb ‘study’ on its second and third mention, shifting focal prominence to the previous verbs; yet he reaccents it:

(12) Dolina: / yo VEO ... MUchos / quizá una mayoRIa de.. / de muCHAchos que /
I see many perhaps a majority of young people who
/ o HAN estu↑DIAdo / o esTÁN estu↑DIANdo / o PIENsan estu↓DIAR /

o	a	n	e	h	t	u	D	j	a	D	o		o	e	h	T	a	n	e	h	t	u	D	j	a	n	d	o		o	p	i	e	n	s	a	n	e	h	t	u	D	j	a	r
L%		H*								H*		H%	L%		H*												H*		H%	L%	H*+L									L*	L%				
4		0		0						4		0		0													4 1			0										4					
Length																																													

either have studied or are studying or are planning to study

Cases of focal prominence like these have been claimed to result from the blind application of the Nuclear Stress Rule, which regularly assigns prominence to the most embedded constituent in the sentence. But other examples show that even reaccenting can arise from pragmatic considerations having to do with the relevance of the utterance. As has been pointed out by Carston (1993), foregrounded information is often new, but it need not be new. Likewise, backgrounded information tends to be given or presupposed, but it need not be given or presupposed. Old information can be relevant in its own right, and the speaker may need to reaccent it to make

manifest or more manifest the intended interpretation. Examples (13) to (17) may be analysed in such terms.

As was shown before, cases of metalinguistic correction or contrastive uses can lead to deaccenting and defocalisation. Likewise, they can lead to reaccenting. In example (13), in which the interviewee draws a parallel between elephants in the works of Kipling and camels in the Koran, reaccenting the previously mentioned term “camels” has the effect of correcting an utterance which may lead to a mistaken interpretation, not desired by the speaker:

(13) Dolina: /dice que en el CoRAN no hay ca↓MEllos /...

Transcr.	di se ken el ko ran no ai ka me ʒ os
Tones	L% H* L* L%
Break I.	4 1 0 0 1 1 0 1 4
Miscell.	devoiced

he says that in the Koran there are no camels

/ KIpling necesitaba eleFANtes / el CoRAN NO / es cuRIOso /

Kipling needed elephants the Koran didn't it's curious

/ el CoRAN no necesitaba ca↓MEllos /

Transcr.	el ko ran no ne se si ta ka me ʒ os
Tones	L% H* L* L%
Break I.	4 1 1 1 1 4
Miscell.	

The Koran didn't need camels

After discussing the effects of technological advances, the interviewer asks the interviewee's opinion of progress. He suddenly realises that the topic he is trying to introduce as new is, in fact, very much the one discussed in a previous part of the conversation, and makes a point of that fact by reaccenting “progress”. The effect he achieves is that of reinforcing the topic of conversation, and acknowledging a possible objection attributed to the interviewee and/or the audience, and the example acquires a contrastive value:

(14) O'Donnel: / qué PIENsa del pro↓GREso / bueno estábamos haBLANdo /

Transcr.	ke p j en sa ð el pro ɣ res
Tones	L% H*+L L* L%
Break I.	4 1 1 1 4
Miscell.	devoiced

What do you think about progress? well we were talking about

/ **estábamos haBLANdo del pro↓GREso** /

Transcr.		t	a	β	a	β	l	a	n	d	o	d	e	l	p	r	o	y	r	e	s	o				
Tones		L%					H*					H*					L%									
Break I.		4					1					1					1					4				
Miscell.																								devoiced		

were talking about progress

In discussing the cultural impoverishment brought about by globalisation, the interviewee finds this phenomenon to be very serious. Reaccenting the term “serious”, he emphasises how serious he considers the phenomenon to be:

(15) Dolina: / ESt**e** aS**UN**to / como gra↓V**I**simo /

Transcr.	e h t e	a s u n t o		k o m o	γ r a β i s i m o
Tones	H%H*	H*+L	M%	L%	H*+L L%
Break I.	4	0	4	1	4
Miscell.					

This issue as very serious

/como Uno de los feNO**me**nos cultu**RA**les / **MAS** ↓GRA**V**es de este tiempo/

Transcr.		m a h		γ r a β e h ð e h t e t j e m p o							
Tones		L%	H*+L	H*+L		L-		L%			
Break I.		4		1		3		1		4	
Miscell.											dev.

as one of the cultural phenomena most serious of our time

Sperber and Wilson (1986, 1995) have examined the effects of repetition on utterance interpretation as guided – like other aspects of utterance interpretation – by the principle of relevance. In all cases, the extra processing effort demanded by the repetition is outweighed by extra cognitive effects. Reaccenting may reinforce or amplify the intended interpretation by making it more manifest, either at the explicit or implicit level.

In example (16), the speaker emphasises the topical repetitiveness of radio programmes by reaccenting the second mention of an example of such a topic. The repeated accentual and tonal pattern helps to focus on the repetitiveness of the topic, and thus make it more manifest. It also makes more manifest the speaker’s feelings and attitude to that kind of programme as one of tediousness and disapproval:

(16) Dolina: / SI / en la RAdio / se produce también ese FENOmeno / que termina un

Yes on the radio there is also that phenomenon a programme

/ proGRAma / en el que se ha haBLAdo... / supongaSE / que se YO

ends where they have discussed let's say I don't know

/ de las CRisis... esteh... en la ↑BOLsa / y empieza el Qtro /

Transcr.	ð e l a h k r i s i s e h t e e n l a β o l s a									
Tones	L%		H*+L			H*		H%		
Break I.	4	1	1	0	2	1	1	4		
Miscell.	hesit. creaky voice									

the crisis in the stock exchange

and another begins

/ y se HABla.. otra VEZ de la CRisis en la ↑BOLsa /

Transcr.	o t r a β e h ð e l a k r i s i s e n l a β o l s a									
Tones	L%		H*+L			H*+L		L* H%		
Break I.	4	1	1	1	1	0	1	1	4	
Miscell.										

and they speak once again about the crisis in the stock exchange

/ y ASI hasta que llega la NOche /

and so on and so forth until the evening arrives

The alternative accentuation pattern with shifted focal accent and defocalisation would probably have achieved the same cognitive effects by highlighting the concept ‘once again’: / y se HABla otra ↑VEZ de la CRisis en la BOLsa /. But the effect would have been achieved at greater processing cost because of the disruption of the regular prominence pattern, and the intended interpretation – that of repetitiveness and tediousness – would not have been conveyed to the same degree.

A similar explanation applies to other effects triggered off by structural parallelism. In example (17), the interviewee concludes that it is mistaken to think that art reflects contemporary life as it is. He would rather think that very often it goes against the grain of fashion and habit. So he explicitly contradicts this purported similarity by careful syntactic, semantic and phonological parallelism. The identical segmentation into intonational phrases and reaccenting of words serves to make manifest the perception of similarity, which is then explicitly contradicted as ‘mistaken’:

(17) Dolina: / por eso yo CREo que es un eRROR / el penSAR /
That's why I believe it is mistaken to think
/ como se penSAba en cierto moMENto /
as people used to think

/ que la MUtica PROpia de una Epoca como la NUEStra /
that the typical music of a time like ours

/ una Época vertigi→NOsa / ur→ GENte /

	u	n	a	e	p	o	k	a	β	e	r	t	i	x	i	n	o	s	a		u	r	x	e	n	t	e		
	L%		H*+L						H*+L									M%		L%		L*					M%		
	4			0						1										3								4	
lengthened										lengthened																			

a hectic urgent time

y LLEna de de de de→RUIdos / de pre↓↑SIOnes /

	ɜ n a ð e ð e ð e ð e r w i ð o h																d e p r e s j o n e s															
	L%	H*+L										H*					M%		L%	H*+L					H%							
	4		1		1		1		1												4							4				
repetition																																

and full of noise, of pressure

/ tuVIEse que ser →tamBIEN /
should also be

/ una MÚtica vertigi↓NOsa / ur↓GENte /

	u	n	a	m	u	s	i	k	a	β	e	r	t	i	x	i	n	o	s	a		u	r	x	e	n	t	e	
	L%		H*+L							H*+L		L%						L%		H*+L					H%				
	4			1						1									3								4		
lengthened																													

a hectic urgent music

/y llena de pre↓SIOnes/

i	ɜ	e	n	a	ð	e	p	r	e	s	j	o	n	e	
L%	H*+L				H*+L				L%						
4	1		1	1											4
														voice overlap	

and full of pressure

Shifting nuclear prominence to ‘también’ (also) would have had a similar effect to the one discussed for (16) above:

/tuVIEse que ser tam↓BIEN una música vertiginosa, urgente y llena de presiones/

Besides the greater effort brought about by the disruption of the NSR, the intensifying effect achieved by segmentation and by focusing on each epithet would have been lost.

These examples come to prove that reaccenting is not always the result of the impossibility to defocalise constituents, and the blind application of an accentual algorithm, as has often been pointed out for Spanish, since it achieves contextual effects which, though not describable as a specific, definite or propositional meaning, nevertheless *indicates* a line of interpretation for the utterance, however weakly, which is intended by the speaker.

5. Discussion

The data examined above reveals that Argentinian Spanish can defocalise parts of the utterance both in metalinguistic and contrastive uses, and in non-contrastive repetitions, paraphrases and in cases of inferrable material. Defocalisation also applies to anaphoric expressions, illocutionary adverbials, discourse connectives and quotation devices. On the other hand, reaccenting of ‘old’ information can also have a metalinguistic or contrastive value, and like reaccenting, it can be used to enhance the intended interpretation.

Ortiz-Lira (1995) examines different varieties of Spanish and analyses the accentuation of given information in narrow focus utterances, particularly in Chilean Spanish. He shows that ‘given’ information in Spanish is usually reaccented. However, he points out that deaccenting ‘given’ information is still an option, though a much less frequent one than in English. In a later study, Ortiz-Lira (1995) finds that about 90% of the tone units produced by Chilean speakers of Spanish had the nuclear accent on the last word. The remaining 10% which had phrase-internal accent ended in defocalised adverbial expressions and discourse markers (in broad focus utterances) and anaphoric expressions (in narrow focus).

As regards other Romance languages, Zubizarreta (1998:73) states that French is less rigid than Spanish in the positioning of the nuclear accent, as this language can defocalise anaphoric and inferrable expressions in non-contrastive contexts. European Portuguese (Cruz-Ferreira, 1998) closely follows the principle of end-focus: the nucleus is always the last lexical item in the intonation group and it is not moved from that position. In contrast, according to Zubizarreta (1998:84) Brazilian Portuguese is similar to French in allowing defocalisation of non-contrastive focus and in cases of anaphoric constituents.

Intonational prominence in Catalan falls on the clause-final position according to Vallduví (1992:86) and Vallduví and Engdahl (1996:476–482). Shifting the nuclear accent to the left is not possible. The cases where the intonation peak is not on the last lexical item are actually cases of clause-external detachment. In Catalan “the association of nuclear stress and focushood is attained only through the mediation of syntax” (Vallduví and Engdahl, 1996:477).

Ladd (1996:176) claims that Romanian and Italian resist deaccenting, but that even in such languages accent can be shifted away from the default position for metalinguistic correction or repair. He also points out (1996:177–178) that “Italian also fairly readily allows deaccenting of large constituents, especially when the resulting accent is on an auxiliary, and especially in negative sentences”, but with clear syntactic restrictions. He concludes that Romance languages do not allow direct deaccenting, but they all have a number of morphosyntactic strategies for achieving similar effects, such as right dislocation.

What seem to be missing from many of these analyses are spontaneous, naturally-occurring cases, and a serious consideration of the pragmatic context in which the examples are uttered. More often than not, the pragmatic aspect is restricted to brief comments where such notions as given and new information and relevance are invoked, and to the use of questions which are intended to capture the context in which the utterances analysed were supposedly used.

It is now generally accepted that sentence accentuation reflects – in some way – the intended focus of an utterance. Words and constituents in utterances can be focused for various reasons, and focused words and constituents are marked by pitch accent (Focus-to-Accent Theory). In discussing the relation between focus and accent, Ladd (1996) points out that there is such a thing as focus on individual words, but there is also focus on whole constituents, or broad focus. So signalling focus is not simply a question of “putting accents on individual words, but of applying principles that determine which word takes the accent when a given constituent is focused” (1996:163). Ladd identifies two possible ways of dealing with (broad) focus:

- (a) *The structure-based approach* which, in an attempt to reconcile the notion of focus with the notion of normal stress distinguishes between the distribution of focus and the distribution of accents as two complementary but separate aspects. Once the focused part of the utterance is identified, the accent pattern follows from language-specific rules and constituent structure. The structure-based FTA can also accommodate narrow focus on individual words, but it recognises the existence of unmarked or default patterns which determine the location of accent in cases of broad focus on whole constituents or sentences.
- (b) *The highlighting approach* holds the view that broad focus requires no special account but follows from general principles relating focus to discourse context and speaker intentions. The distribution of accents within focused constituents is assumed to depend on the same pragmatic factors determining focused constituents, such as the relative semantic weight or informativeness of words. Besides, the validity of a bidirectional relation between focus and accent is advocated: if a word is accented, then it is focused; if it is focused, then it will be accented. Quoting Ladd once again, “accents . . . are part of some universal (and possibly pre-linguistic) intonational highlighting function . . . the application of some universal highlighting gesture to individually informative words.” (1996:167)

From a pragmatic point of view, these two approaches to focus and to prosodic prominence may be analysed as reflections of two different views on language and communication: the code model and the inferential model. According to the *Code Model*, communication is achieved by encoding and decoding messages. A code is a system which pairs messages and signals, and

enables communicators to convey internal representations by modifying the external environment through a signal. Communication is achieved by encoding a message, which cannot travel, into a signal, and by decoding the signal at the receiving end, and enable communicators to produce stimuli which evoke an associated response in an audience. Natural languages are codes that pair phonetic and semantic representations of sentences. The alternative to the Code Model is the *Inferential Model*, which evolved from proposals made by the philosopher Grice (1989). In this perspective, communication is achieved by producing and interpreting evidence, and comprehension is a process of inferential recognition of the communicator's intentions. The communicator engages in ostensive behaviour, and the audience starts from certain assumptions suggested by the communicative behaviour, including the communicator's utterance, which, combined with contextual assumptions, lead to certain conclusions, through an inference process guided by pragmatic principles. One of Grice's central contributions was to show that inferential communication is per se enough to characterise human communication, and this is the view advocated by Relevance Theory.

How do the Code Model and the Inferential Model inform these two views of focus and prosodic prominence? The Structure-based theory invokes an indirect relationship between focus and accent. Language-specific rules determine constituent structure and the location of accent. This view seems to reflect the Code Model. An interpretation is encoded when it is stipulated in the grammar. The Nuclear Stress Rule, which determines the location of accent on the rightmost lexical item of the intonation phrase, or on the most embedded constituent, is an example of such a stipulation. It applies in the phonological component as an algorithm that determines a default location for the nuclear accent within the intonation phrase with a broad focus interpretation. But this stipulation can also have a cognitive explanation: as an utterance is produced and processed over time, the audience will access some of its constituent concepts before others. As Sperber and Wilson (1986, 1995) have pointed out, for a speaker aiming at optimal relevance, efficiently exploiting this temporal sequencing is crucial, since it may reduce processing effort. It is natural for given information to come before new, for the background to be presented and recovered before the foreground: our cognitive life is such that we look for answers to previously raised questions, and we consider new information in a context of existing information. Thus it is natural for focal accent to come at the end, since that's where the directly relevant information is to be found. This arrangement is the most natural in that it places the least demand on the hearer's processing resources (Carston, 1993). The scale of anticipatory hypotheses determined by left-to-right processing of constituents coincides with the scale of potential foci of the utterance, and this is felt to be the most natural, unmarked arrangement of information. Thus, prosodic structure reflects cognitive considerations.

According to Breheny (1996, 1998), focus encodes procedural information on how to process an utterance, an instruction to manipulate the set of anticipatory hypotheses at the interface⁶ which affects the realignment of these hypotheses and channels processing effort in particular directions to create certain cognitive effects.

The Inferential Model is reflected in the Highlighting approach, which claims that accents are direct signals of focus or discourse salience, and defends a bi-directional relation between focus and accent. In this view, prosodic prominence is part of a universal highlighting function. Like pointing or other ostensive gestures, focal prominence qualifies as an ostensive-inferential stimulus, designed to attract the hearer's attention and focus it on the speaker's intentions. An

⁶ The interface is where the on-line processing of linguistic stimuli takes place. Breheny (1996, 1998) considers that interface strategies are informed by both grammatical and pragmatic principles.

ostensive stimulus is one that comes with the communicator's guarantee of relevance. By producing the stimulus, the speaker requests the audience's attention, focusing it on those parts of the utterance which are directly relevant. Conversely, defocalising a constituent is a signal that the assumption conveyed by that constituent plays a contextual role rather than a directly relevant one. Focal prominence amplifies the relevance of the linguistic stimulus by directing the audience's attention to the directly relevant information, and by encouraging an active search for the intended context in which to process that information.

Human communication involves both coding and decoding processes and inferential processes. Linguistic communication is a complex form which combines both the use of a linguistic code with inference. The specific proposal in Relevance Theory is that the output of the decoding process constitutes the input to the inference process. The coded meaning of an uttered sentence falls short of encoding what the speaker means. It is just a piece of evidence which has to be contextually enriched at the explicit and implicit levels in order for the audience to recover the speaker's intended meaning. Along these lines, prosodic prominence should be treated not only as a coded stimulus, but also as an ostensive stimulus, designed to attract the hearer's attention and focus it on certain assumptions in the utterance.

As with the Code Model and the Inferential Model, the problem arises when one tries to treat focus and prosodic prominence as a unitary phenomenon, to be accounted for only in terms of a single theory, thus ignoring either its coded aspect or its ostensive-inferential aspect. Just as human communication combines both coding and decoding with inferential processes, so does the expression of focus through prosodic prominence in those languages which use the phonological component for the expression of information structure. Reducing focus and accent assignment either to an algorithm determined by the prosodic component, or to its highlighting, natural aspect would conceal the fact that both aspects are present to a certain extent, and that there is a gradient of cases ranging from the purely gestural to the purely structural.

Concerning the evolution of communication, Relevance Theory makes a specific proposal about the articulation of coding and inference (Sperber and Wilson, 1995; Sperber, 2000): ostensive-inferential communication preceded coded linguistic communication. We can picture a stage in the development of the human species, as Origgi and Sperber (2000) suggest, in which its members were able to use gestures, even in the absence of a code, or perhaps in combination with a very primitive and limited one, and yet communicate and infer each other's intentions. Coded linguistic communication came later to enhance and strengthen the metarepresentational, ostensive-inferential mechanism to infer intentions. In this perspective, having devices such as improvised gestures to focus attention on a stimulus which is likely to be relevant to the addressee, to elicit the retrieval of certain background information, and to encourage the joint processing of the stimulus and the background information in order to derive certain inferences must have constituted an advantage in the species. The pointing gesture must have been translated from the visual medium to the vocal-auditory medium, and developed into a code which associated greater salience with greater importance or relevance. Later, incorporating ostensive-inferential gestures through intonation and prominence as standardised devices into the grammar of natural languages may also have been advantageous, because these may help reduce the cognitive effort necessary to process the linguistic stimulus. But the device has not lost its original pre-linguistic pointing function. In any case, the device, even in its purely coding aspect, is to be treated only as evidence which is to be combined with a context in order to infer the communicator's meaning.

Following Gussenhoven's (2002, 2004) proposal, prominence could be considered a speaker-controlled manifestation of the physiological conditions that affect speech production for

communicative purposes. One of such ‘biological’ codes, the *Effort Code*, links greater energy expenditure with greater articulatory precision and wider pitch excursions. The universal function of these effects of phonetic implementation in relation to the message associates articulatory precision and wide pitch excursions with emphasis on significant parts of the message.⁷ On the contrary, slurring articulatory gestures together is naturally linked to informationally unimportant parts of the message.

Focus results from the grammaticalisation of the Effort Code, and issues arise such as the size of the focus constituent, broad or narrow focus, different types of focus, deaccentuation and the linguistic resources to express focus marking. Grammaticalised meanings often mimic the natural meanings of the biological codes, but as they are subjected to linguistic change, arbitrary form-function relations may arise: linguistic meaning is potentially arbitrary. The natural relations may not be maintained and loss of iconicity may ensue. Through grammaticalisation the form may also be discretely coded in the phonological structure and the meanings systematised, but other devices, for instance morpho-syntactic ones, may wholly or partly take over the expression of information structure.

As Wilson and Wharton pointed out at the Prosody and Pragmatics Conference (2003), Gussenhoven’s notion of an Effort Code involves the speaker’s effort, while Relevance Theory discusses the hearer’s effort. Greater effort to achieve clear articulation may increase the speaker’s effort, but it may decrease the hearer’s effort and serve the purpose of facilitating the processing of utterances. A marked, more process-costly alternative of prominence allocation (such as non-final nucleus placement in Spanish) may do the job that an unmarked, less costly alternative may not, and thus lead to extra cognitive effects that would not have been achieved through the unmarked, less costly formulation.

In Spanish, information structure is expressed mainly through the morpho-syntactic component: constituents can be rearranged in such a way that they occur at the end of the sentence, where they receive the prosodic prominence as stipulated in the metrical component of the phonology through the Nuclear Stress Rule. However, the universal highlighting function of the Effort Code is still evident not only in contrastive or metalinguistic cases, but also in non-contrastive cases where iconicity is preserved to signal the direct relevance of some parts of the message through prosodic prominence, and the contextual value of other parts through deaccentuation.

The overwhelming preference for the morpho-syntactic expression of information structure in this language may bias our perception of the contribution of the phonological expression, however small or marginal it may seem to be.

6. Conclusion

The corpus presented here shows that, contrary to what is predicted by most phonologists who have studied focus marking through prosody in Spanish, Argentinian Spanish can defocalise constituents with or without a contrastive interpretation. Likewise, final nucleus placement can have a contrastive or a non-contrastive interpretation. These facts become obvious when

⁷ While the biological codes suggested by Gussenhoven are based on the physiological properties of the production process, in order to express the associated meanings speakers do not need to create the actual physiological conditions. Rather, it is enough to create the effects. For instance, they may adapt their pitch range in such a way that they can be understood to be exploiting this natural form-function relation. Alternatively, pitch peak delay may substitute for high peaks, since late peaks sound more prominent than early ones.

pragmatic considerations are taken into account in the analysis of the data. The application of Relevance Theory to the data reveals that prosodic prominence is both a linguistically coded and a natural device, that feeds the inferential phase of communication. It is both a manifestation of a natural and a linguistic code. Prosodic inputs range along a continuum from natural to language-specific (Gussenhoven, 2002). As pointed out by Wilson and Wharton (2003), “prosody guides the comprehension process by increasing the accessibility of the intended interpretation,” by narrowing the search space for inferential comprehension, “altering the saliences of particular contexts, contents and cognitive effects.” We can think of prosodic prominence as ends of a cline. At the coding end is final focal accent which results from the application of the Nuclear Stress Rule as a reflection of metrical prominence relations among prosodic constituents in the intonational phrase and is conventionally associated with broad focus. At the natural end is final/non-final focal accent as a reflection of a pre-linguistic signalling gesture, and defocalised constituents as a sign of predictability and high accessibility.

Like other coded aspects of verbal communication, prosodic prominence provides a very general indication of the speaker’s intentions, channelling the hearer’s effort in the direction in which the utterance achieves optimal relevance and thus reducing processing effort.

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