

Intonational Patterns of Focus Preposing Constructions in Hijazi Arabic

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ABSTRACT

This study has two aims. First, it introduces an under-studied construction in Hijazi Arabic (HA) and investigates its intonational, semantic, pragmatic, syntactic, and information structure properties. This construction is termed as focus preposing. It is a non-canonical syntactic option used to express a specific aspect of information structure such as contrastive focus (e.g., Moutaouakil, 1989). Second, it aims to investigate whether a focus preposing in HA is associated with a particular intonational tune. To fulfill this aim, 480 declaratives were constructed. These sentences were elicited from sixteen native speakers of Hijazi Arabic. These sentences were embedded in question-answered paradigms to evoke contrastive focus on the preposed item realized at the left periphery of the HA clause. The intonational structure of this construction shows to have a nuclear pitch accent [L+H*] placed on the stressed syllable of left-realized word, followed by post-focus compression till the end of the structure. This finding provides evidence for Liberman & Sag; Marandin's (1974; 2006) claim that the tune determines the meanings.

INTRODUCTION

This paper deals with focus preposing constructions in Hijazi Arabic. Focus preposing construction is characterized by left-dislocating an item to be realized at the periphery of the clause (Ward & Birner, 1998). An example is shown below.

(1) a. Who did John meet yesterday? Peter?

b. Mary, John met _____ yesterday.

In (1b), *Mary* is realized ex-situ in syntax by virtue of being realized at the left periphery of clause, left an empty trace behind at its canonical position. This construction exemplified above has a meaning of its own. Its meaning is not the sum total of the meaning of its words. The sentence in (1b) has the pragmatic presupposition /John met X yesterday/ and the pragmatic assertion is /Mary/. The informational unit /Mary/ carries unpredictable information that stands in a contrastive relation with other individuals including /Peter/. By uttering (1b), the speaker asserts that the alternative preposition expressed by the speaker of (1a) '*John met Mary yesterday*' is false.

The left-realized word is required to carry contrastive focus in the utterance. Following much previous research (Chafe, 1976; Dik et al., 1981; Kiss, 1998; Choi, 1999; Neeleman et al., 2009), contrastive focus

also referred to as 'identificational focus' and 'corrective focus' describes an information unit that carries unpredictable information that stands in a contrastive relationship with other informational units. More precisely, we define contrastive focus following Kiss (1998) as:¹ A typical context that requires a contrastive focus is in 'correction' cases, as exemplified in (1b) above.

It is claimed that this type of construction has its own intonational structure. For example, Face (2002) finds that this type of construction in Spanish is characterized as having the nuclear pitch accent realized on the left-dislocated word, followed by either deaccentuation or post-focus compression till the end of the utterance. To my knowledge, studies investigating the intonational patterns of focus preposing in Arabic in general and in Hijazi Arabic in particular are rare. Therefore, this study fills the attempts to investigate whether this non-canonical construction has its own intonational structure in this vernacular.

¹ Kiss (1998) uses the term 'identificational focus' to refer to contrastive focus referred here. Since the term 'contrastive focus' is widely used, we keep it.

Hijazi Arabic is a variety of Arabic that is spoken in the western region of the Kingdom of Saudi Arabia. This dialect is further subdivided into two dialects: urban Hijazi Arabic and bedouin Hijazi Arabic. Bedouin HA is spoken by those who live in the countryside whereas urban HA is spoken in the cities of Makkah, Madinah, Jeddah and Taif.

Word order

Like other Arabic varieties, HA is a null-subject language in which subject can be omitted under some information-structural conditions. Word order in HA declarative sentences is not determined by grammatical functions or by thematic roles. It is triggered by pragmatic factors. A piece of evidence that confirms our finding is that HA manifests VO, VSO, SVO and VOS word order as shown respectively in (2).

- (2) a. ?akal ?at-tufāha.
eat.pfv.3sgm the-apple'
Verb Object
'He ate the apple.'
- b. ?akal ali ?at-tufāha.

apple'	eat.pfv.3sgm	Ali	the-
	Verb	Subject	Object
	'Ali ate the apple.'		
tufāha.	c. ali	?akal	?at-
apple'	Ali	eat.pfv.3sgm	the-
	Subject	Verb	Object
	'He ate the apple.'		
	d. ?akal	?at-tufāha	
	ali	eat.pfv.3sgm	the-apple
	Verb	Object	Subject
	'Ali ate the apple.'		

These word order variations shown above are common in HA. Other word orders such as OVS and OSV are also possible and common. The verbs in the examples in (3a) and (4a) host a pronominal clitic (in boldface) referring back to the element realized in initial position. As for the verb in (3b) and (4b), it does not host a pronominal clitic referring back to the left-realized item.

- (3) a. ?akal ?at-tufāha ali.
eat.pfv.3sgm the-apple Ali
Verb Object
Subject
'Ali ate the apple.'
- b. ?at-tufāha ?akal
ali
the-apple eat.pfv.3sgm
Ali
Verb Object
Subject
'Ali ate the apple.'
- (4) a. ?at-tufāha ali ?akal.
the-apple Ali
eat.pfv.3sgm
Object Subject Verb
'Ali ate the apple.'

b. ?at-tufāha ali ?akal
 the-apple Ali
 eat.pfv.3sgm
 Object Object Verb

‘Ali ate the apple.’

I have chosen to show these word order variations in order to show that word order in this dialect is not determined by grammatical functions or by thematic roles. However, these variations in word order serve pragmatic functions. This is not surprising indeed because Li & Thompson (1976) classify Arabic in general among with other languages including Chinese to be a topic-oriented language in which grammatical functions plays a very little role in determining word order.

Hijazi lexical stress

Arabic is a stress-accent language in which stress is acoustically manifested (Jun, 2005). Studies including De Jong & Zawaydeh (1999); Chahal (2001); De Jong & Zawaydeh (2002) and Hellmuth (2006) investigate the acoustic correlates of stress in different Arabic dialects including Jordanian, Lebanese, Egyptian, and others. It has been found that acoustic features including F_0 , intensity and vowel duration distinguish between stressed and unstressed syllables in Arabic (see Chahal 2001, Ch. 3 and Hellmuth 2006, Ch. 4 for more details).

Al-Mohanna (1998) thoroughly investigates the stress and syllable structures in urban HA. He shows that syllable weight and syllable position determine where stress is located in HA. This is what Watson (2011) captures briefly when she says ‘[a]ll Arabic dialects exhibit word stress; however, the socially and geographically diverse area over which Arabic is spoken leads to differences in the mechanics of word stress assignment [. . .] In all cases stress location is a function of both syllable weight and syllable position, but dialects differ in the distribution of syllable types, the leftmost extent of stress (third or fourth syllable from the right)’ (ibid., p. 2990).

Beginning with syllable weight, Al-Mohanna (1998) shows that HA, like Arabic in general, distinguishes three types of syllable weight: light (CV), heavy (CVV, CVC), and superheavy (CVVC, CVCC). These three syllable types are illustrated with examples in Table 1 below from Al-Mohanna (1998).

Table 1 **HA Syllable weight. Syllable of each type is in boldface** (Al-Mohanna, 1998, ch. 5).

Syllable Weight		Segmentation	HA Examples	Position
Light	<i>open</i>	CV	/ʃa.ɡa.ri/ ‘my trees’	-
Heavy	<i>open</i>	CVV	/ka.sat/ ‘glasses’	-
	<i>close</i>	CVC	/mak.tu b/ ‘a letter’	-
Superheavy	<i>close</i>	CVVC	/fa.nu.s/ ‘a lantern’	final
	<i>doubly close</i>	CVCC	/ʔa.kalt/ ‘I ate’	final

As Al-Mohanna (1998, p. 222) points out, light and heavy syllables are unrestricted in terms of their lexical position, whereas superheavy syllables are restricted to being realised in lexical-final position, as exemplified above. Based on syllable weight, he proposes four rules determining the position of HA stress. They are as follows:

- (5) a. Stress a final superheavy syllable.
- b. Otherwise, stress a heavy penult.
- c. Otherwise, stress a heavy antepenult.
- d. Otherwise, stress the penult or the antepenult, whichever is separated from the first preceding heavy syllable or (if there is none) from the beginning of the word by an even number of syllables. (Al-Mohanna, 1998, p. 222)

Based on Al-Mohanna’s (1998) study, we adopt the rules in (5) to locate the stress in the target items used in our test declarative sentences.

METHOD

The aim of the study is to find an answer to whether focus-preposing construction has a specific tune in HA. This is done by making comparison between the default intonational patterns in HA and its counterpart realized in focus preposing constructions.

Reading materials

We use the question-answer paradigm to investigate the relationship between focus preposing and intonation in this vernacular. Each target sentence was preceded by a prompt question that triggers different types of focus on a specific word. In order to create background contexts in the subject's mind so that the answer produced is as natural as possible, we prepared short anecdotes made up of four to nine short sentences that were designed to resemble the way a native speaker speaks. One anecdote at a time was projected onto the wall for the subject to read silently. Once the subjects finished reading the short anecdote, they were asked to read a target sentence as an answer to a prompt question (i.e. regarding one aspect of the anecdote read out) asked by the researcher (a native speaker of HA). Subject and researcher sat side-by-side and worked in a pair. The prompt question and its answer were projected onto the wall and seen by both participants (i.e. the subject, the researcher).

The target declarative sentences were made up mostly of sonorant sounds. This was to obtain clear F_0 contours (Himmelfmann & Ladd, 2008). The target sentences differ in one dimension. They differ in terms of syntactic structures: neutral declarative and focus preposing. This variation is designed to check whether a difference in syntactic structure leads to a difference in intonational structure. The total number of tokens examined is 1200 tokens (3 sentences x 2 test conditions x 5 repetitions x 16 speakers = 480 sentences). The test materials used in the experiment are below. Stressed syllables are in bold.

- (6) **Rā**.mi **mar** **Lī**.na ?ams.
 Rami visited Lina
 yesterday
 'Rami visited Lina yesterday.'

Prompt Question	Target Answer
waš sār? 'What happened?'	Rāmi mar Līna ?ams. _F 'Rami visited Lina yesterday.'
man Rāmi mar ?ams? Rāna? 'Who did Rami visit yesterday? Rana?'	Līna Rāmi mar ?ams. 'Lina, Rami visited yesterday.'

- (7) **Ra**.na **saw**.wat mar.yūl li-
manāl.
 Rami made school-
 dress for-Manal
 'Rana made a school dress for
 Manal.'

Prompt Question	Target Answer
waš al-mawdu ^C ? 'What is the topic?'	[Rana sawwat maryūl li-Manāl.] _F 'Rana made a school dress for Manal.'
waš sawwat Rana li- Manāl? miryalah? 'What did Rana make for Manal? An apron?'	maryūl Rana sawwat li-Manāl. 'A school dress, Rana made for Manal.'

Prompt Question	Target Answer
waš sār? 'What happened?'	[Rāmi hājar li-landan al- barih.] _F 'Rami emigrated to London yesterday.'
wein hājar Rāmi al- bāriḥ? li-as-su ^C ūdiah? 'Where did Rami emigrate to? To Saudi?'	li-landan Rāmi hājar al-barih. 'To London, Rami emigrated yesterday.'

- (8) **Rā**.mi **hā**.jar li-
lan.dan al-**bā**riḥ.
 Rami emigrated to-London
 the-yesterday
 'Rami emigrated to London
 yesterday.'

3.2 Recording procedure, data extraction and participants

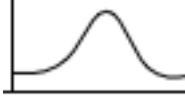
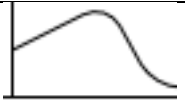
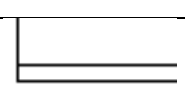
The recording was done in a quiet room. Sixteen native speakers of Hijazi Arabic (Taif dialect) (eight females and eight males aged between 23 and 35) took part as subjects. The test sentences and their prompt questions, generated from a randomized list, were shown one pair at a time projected onto the wall. Each subject recorded each pair of precursor and test sentence six times in separate randomized blocks. The speech was captured using the Zoom H2 Recorder2 with a built-in microphone and a MacBook Pro laptop, and these were placed in front of the subjects. All the recording files were saved directly onto the MacBook Pro as wav files. Only the last five recordings were taken for analyses.

The F_0 plots were generated using a Praat script (Xu, 2013), with ten points taken from each word at equal proportional intervals. For each point, the F_0 values were averaged across the 80 repetitions for the 16 speakers so that the contribution of different speakers, especially with respect to gender, was equally weighted (Xu, 2005).

3.3 Recording procedure, data extraction and participants

Based on the AM approach to intonational analysis (§2.4.1), tones are first identified by ear and when necessary by examining the fundamental frequency (F_0) in PRAAT (Boersma & Weenink, 1992–2011).³ Then, the stressed syllables in the target sentence were determined in order to locate the placement of the pitch accents (i.e. tones). If the target tone occurs within the accented syllable, it was associated with a star, following the AM convention. As for the phrase accent, it is represented with (-)4 whereas the boundary tone is represented with (%). Based on the survey of the HA data presented in the present study, we propose the following inventory of phonological pitch accents, phrase accents and boundary tones.

Table 2 Schematization of tones in HA data

	Tones	Schematic	Description
Pitch Accent	[L+H*]		It starts from a low point in the speaker's range to the high
	[H*]		It starts from a mid point in the speaker's range to a high peak (slight rise)
	[L*]		Mainly low pitch accent
Phrase Accent	L-		Low phrase accent
Boundary Tone	L%		Low boundary tone

[L+H*] This pitch accent is the most common type of pitch accent in the data produced by HA speakers. This bitonal pitch accent starts from a low point in the speaker's range to the high point. The peak of this accent is always realized within the lexically stressed syllable (about in the middle). This pitch accent has been observed by Chahal (2001) and Hellmuth (2006) to be the most common pitch accent used by Lebanese speakers and Egyptian speakers, respectively.

[H*] This pitch accent is the second most common type of pitch accent in the data produced by HA speakers. This monotonal pitch accent starts relatively high in the speaker's range and continues to rise even higher. In Lebanese Arabic, Chahal (2001) recognizes this pitch accent as a most common pitch accent in this Arabic dialect. This pitch accent is not observed in Egyptian Arabic (Hellmuth, 2006).

[L*] This pitch accent is mainly low pitch accent. In Lebanese Arabic, Chahal (2001) finds this pitch accent as 'a nuclear pitch accent in yes/no question [...] [and] also occurs with other tune types, as well as in prenuclear position'² (ibid., P. 65).

[L-] This phrase accent indicates that this accent is realized low in the speaker's range, following the AM approach. This pitch accent marks the end of the intermediate phrase.³

[L%] This tone indicates a low boundary tone. All the declarative sentences examined in this paper end with this tone.

1. Analyses and discussion

The three target sentences in (6), (7) and (8) are embedded in the question-answer contexts in (2), (3) and (4) respectively to evoke neutral declarative (i.e., default intonational patterns in the d) from which we compare it with focus preposing constructions. In this section, we compare the intonational patterns of neutral declaratives with that of focus preposing. This is to identify those features which are mostly significantly co-occurred with focus preposing, and those features that co-occur with neutral declaratives. The aim is to find answers to how focus preposing is realized phonologically.

The time-normalized mean pitch contours for all the three target sentences under focus preposing are presented in Figure 1 below, averaged across all speakers' repetitions.

² Prenuclear position refers to the position where the stressed syllables occurring before the nuclear pitch accent occurs. It is termed as Head in British model of intonation.

³ The phrase accent [H-] is not observed in our data.

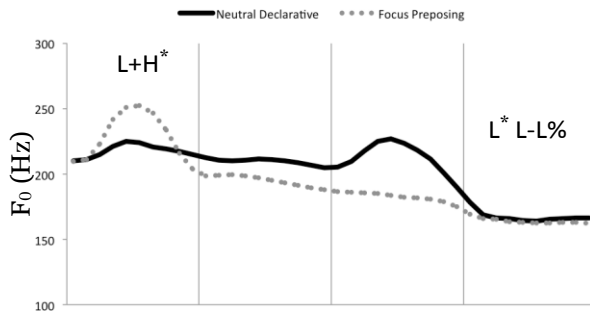
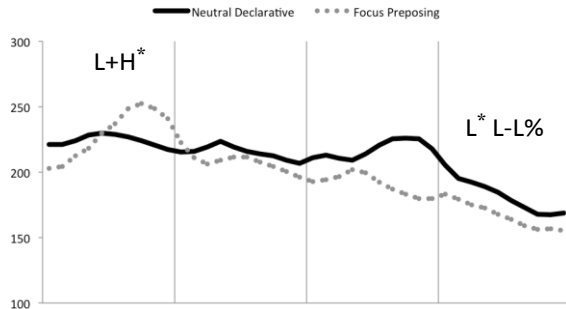
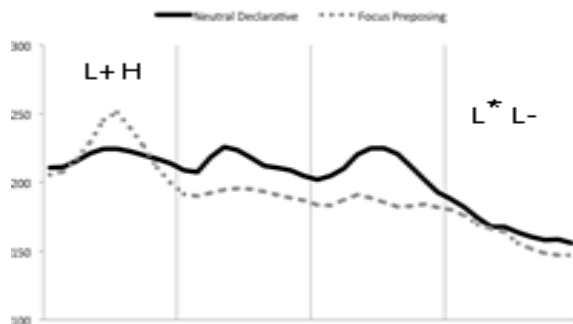
(a) /*Līna*_{CF}, *Rāmi* mar ?ams/(b) /*maryūl*_{CF}, *Rana* sawwat li-manāl /(c) /li-landan_{CF} *Rāmi* hājar al-bārih /

Figure 1 Time-normalized mean F₀ Contour. Each curve is an average of 80 repetitions by 16 subjects. The vertical lines mark the word boundaries. The black contour is neutral contour (default intonation), and the dotted grey contour is the focus preposing wherein the object carrying contrastive focus in the discourse is left-dislocated. The key word is in boldface. Tones displayed on the figures are based on F₀.

From the graphs in Figure 1, we can see clearly the intonational patterns of focus preposing constructions, compared with the default intonational patterns exhibited in neutral declaratives. We observe the following:

1. Every word in the neutral sentences has local F₀ maxima, apart from the sentence-final word that is affected by the boundary tune of the whole structure L%. However, in focus preposing sentences, not all the words in sentences have clear local F₀ maxima.
2. The F₀ peak of the left-dislocated word in the focus preposing sentences is the highest in the structure. This is visible in all the graphs in Figure 1.
3. The F₀ peaks of all the words occurring after the left-dislocated word are very compressed.
4. The F₀ peaks of all the words occurring within the lexically stressed syllable including the left-dislocated word. This is visible in all the graphs above.
5. The F₀ domain of the pitch accent (local F₀ maxima) is local. That is, it starts a rise from around the onset of the syllable, then it reaches the highest point around the middle of the stressed syllable, and then falls steadily towards the end of the prosodic word.

Table 6 summarizes the result from the auditory analyses of the target sentence (6), (7) and (8).

Table 3 The frequency in percentage of the pitch accents distributions in the focus preposing with the ex-situ contrastive- focused word occurs at the left periphery of the clause (noncanonical position). The percentage between parenthesis indicates the percentage of the tokens (80 repetitions) produced by 16 subjects.

Focus Region	On-focus region	Post-focus regions			
		<i>Līna</i>	<i>Rāmi</i>	<i>mar</i>	<i>?ams</i>
Sentence 1(a)	<i>Līna</i>				
	L+H* (100%)	L* (75%) H* (25%)	L* (72.5%) L+H* (8.75%) H* (18.75%)	L* (92.5%)	
Sentence 1(b)	<i>maryūl</i>				
	L+H* (96.25%) H* (3.75%)	L (48%) H* (36.25%) L+H* (3.75%)	L (63.75%) H* (32.5%) L+H* (3.75%)	L* (88.75%)	
Sentence	<i>li-</i>	<i>Rāmi</i>	<i>hājar</i>	<i>al-bārih</i>	

e 1(c)	<i>landan</i>			
	L+H* (100%)	L* (61.25 %) H* (32.5%) L+H* (3.75%)	L* (66.25 %) H* (30%) L+H* (3.75%)	L* (92%)

The auditory analyses summarized in Table 6 above reveals that the left-dislocated word in the left periphery of the clause was mostly produced with the bitonal pitch accent [L+H*]. As for the words occurring after the left-dislocated word, they are mostly compressed. Post-focus compression seen in all the graphs in Figure 1 and in Table 6 is taken to be a phonological process employed by the HA speakers to express focus preposing. This indicates that HA speakers do not only use syntax to express focus-preposing constructions but also use prosody.

The typical pitch tracks in Figure 2, 3 and 4 are produced by the same speaker coded A4 (male speaker).

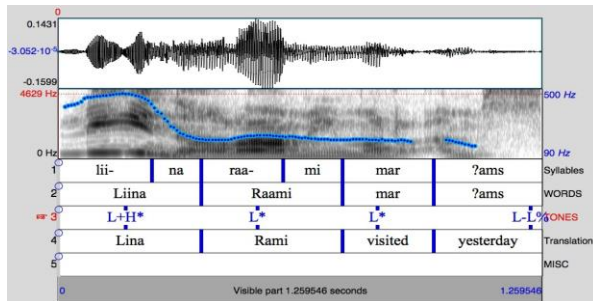


Figure 2 Male Speaker (Coded A4): Focus preposing.

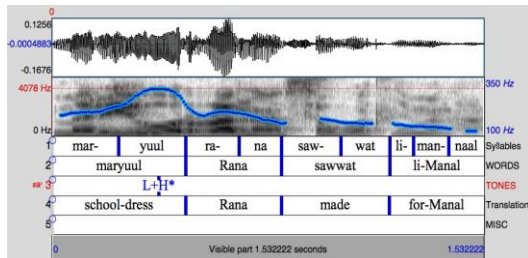


Figure 3 Male Speaker (Coded A4): Focus preposing.

Figure 4 Male Speaker (Coded A4): Focus preposing

All the typical pitch tracks in Figure 2, 3 and 4 represent the typical intonational patterns of the focus preposing in HA. That is, the tune structure of the focus preposing is made up of a nuclear pitch accent [L+H*] placed on the stressed syllable of the ex-situ contrastive-focused word occurring at the left-periphery of the clause, followed by post-focus compression towards the end of the structure.

The global intonational patterns of focus preposing in HA have been found to be in other languages. For example, in Spanish Face (2002) shows that when an item carrying contrastive focus is in the sentence-initial position, it was produced with the nuclear pitch accent of the sentence, followed by deaccentuation till the end of the structure, as shown in Figure 5 below. In addition, he shows that there are cases where the pitch accents on the post-focus items occurring after contrastive focus are compressed, as in Figure 6 below

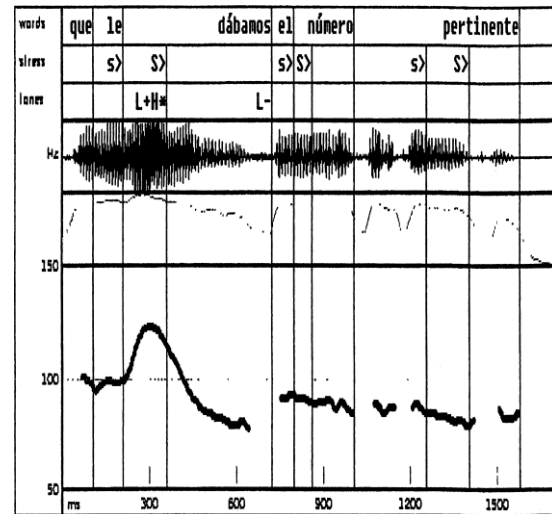
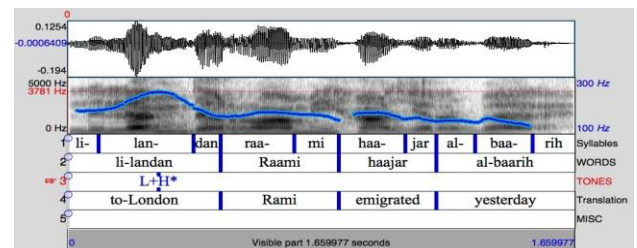


Figure 5 Reading of the sentence/Que le dab'amos el número pertinente/ 'That were were giving him the relevant number' with contrastive focus on the word /d'abamos/ 'were giving'. This figure is taken from Face (2002, P. 65).



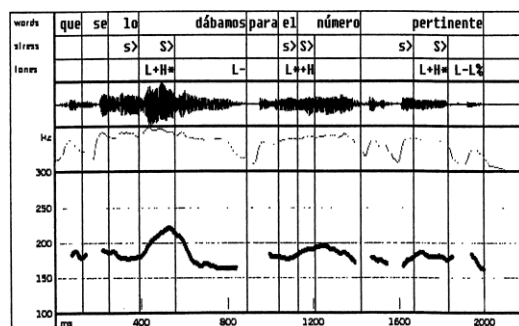


Figure 6 Reading of the sentence/Que le dabamos el número pertinente/ 'That were were giving him the relevant number' with contrastive focus on the word /d'abamos/. This figure is taken from Face (2002, P. 66).

The analyses provided in this section suggest that focus preposing in HA is defined by the following specific intonational pattern: a nuclear pitch accent of the type: the bitonal pitch accent [L+H*], placed on the ex-situ contrastive-focused word in the left periphery of the clause, followed by post-focus compression to the utterance end.

2. Conclusion

The intonational pattern of the focus preposing construction in Hijazi Arabic was studied in this paper. This construction has its own specific intonational patterns, so it's meaning does not only come from its syntax but also comes from its tune. This construction places a nuclear pitch accent of the whole utterance on the left-dislocated word, followed by mostly post-focus compressions till the end of the utterance. We conclude, then, that this global intonational pattern is a strategy used by HA speakers for this type of noncanonically syntactic construction.

ABOUT THE AUTHOR

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