Contrastive Focalization on Clefts in Taqbaylit Berber

Amina Mettouchi*

Abstract : This article investigates the prosodic characteristics of clefts in Taqbaylit Berber (Afroasiatic). The location of the F0 peak on the 'relative pronoun' rather than on the focused XP leads us to study the syntactic and informational structure of those clefts. Following Hedberg (2000), we analyze the 'relative pronoun' as the head of the cleft sentence and the XP as its dependent. We ascribe the location of the pitch prominence to the head-marking nature of Taqbaylit Berber.

1. Introduction

Taqbaylit is a Berber language spoken in the North of Algeria, belonging to the Afroasiatic phylum. Its accentual phrase is defined by the verbal or nominal core accompanied by its clitics. NPs are accented on the penultimate syllable, while VPs are accented on the last full vowel of the phrase, or the last syllable of the verbal core (Chaker, 1991). Taqbaylit's non-plastic intonation pattern (in the sense of (Vallduví, 1991)) correlates with important word order variation, which in turn reflects information structure (topic/focus articulation).

In Taqbaylit Berber, what we shall call 'clefts' are realized by a nonverbal constituent (XP), preceded by particle "d" if the XP is neither adverbial nor quantificational, and followed by a clause (which we will call the 'cleft clause') introduced by marker 'i'.

<div align="center">

d aɣɾum i neċċa
d bread **i** we-eat(perfect/ive)
It is bread that we ate/have eaten.

</div>

Generally speaking, clefts are not necessarily correlated to contrastive focus, as shown for instance in (Prince, 1978), (Geluykens, 1991), (Clech-Darbon & al., 1999), and (Rialland & al., 2002). Similarly, contrastive focus appears in non-clefted structures, as shown for instance in (Selkirk, 2002). Our study concentrates on contrastive-focus clefts, which will be defined in terms of information structure and morpho-syntax.

2. Methodology

This work is based mainly on spontaneous recordings, but also on elicited materials (presented in (Mettouchi, Smaïl & Louali, to appear)).

• Elicitation consisted in exchanges initiated by the researcher, in Taqbaylit Berber. Two speakers were recorded (a man and a woman), and various items used as XPs.

Three types of structures were elicited :

 a) Isolated XP (by asking the question "what is it?" in front of a picture), to obtain a citation form,
 b) d + XP (by asking the question "what did we eat for lunch, I can't remember ?"), to obtain an informative utterance,
 c) d + XP + cleft clause (by telling the speaker "tell me that it is bread and not meat that we ate at lunch"), to obtain an utterance with contrastive focus.

• Spontaneous recordings were made in Kabylie, Algeria, in June 2002. The recordings used for this study involved two monolingual female speakers, aged 52 and 55, discussing the family's genealogy.

Spontaneous and elicited materials were recorded on MiniDisks (Sharp MD-MT99), using a microphone per speaker (Sony ECM-717). The acoustic analysis was conducted with Praat.

3. Results

Elicited materials showed that for contrastive clefts, the location of the F0 peak was not on the XP (as is the case in many languages), but on the marker introducing the cleft clause, "i".

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* Université de Nantes (Acoustique Acquisition Interprétation) & INALCO, Paris (Centre de Recherche Berbère).
mailto:amina.mettouchi@humana.univ-nantes.fr.

The pitch track just below shows the location of the F0 peak (with a value of 252 Hz for this example).
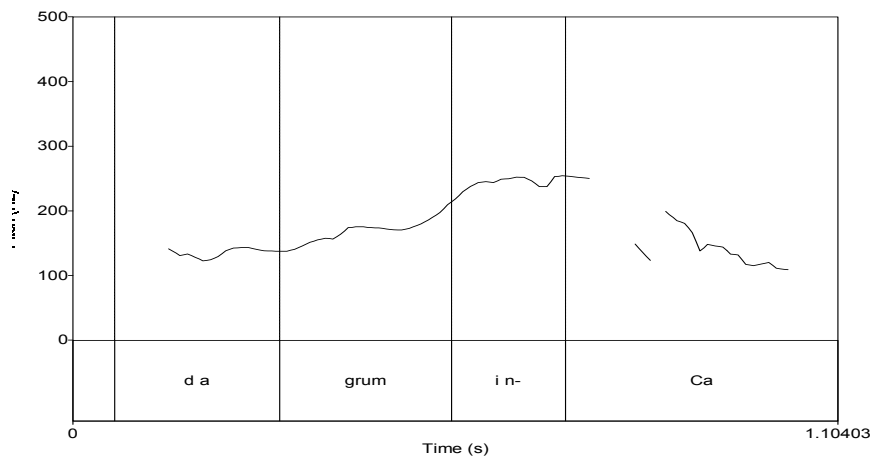

Figure 1: *d aɣṛum i neČČa*

We can notice that the contour is the mirrored-image of English or French contours for similar utterances. It features an upstep from 145 Hz on the first vowel, to 175 Hz on the second, to 252 Hz on marker "i", then a steep fall on the last syllable to 150 Hz (measured at 2/3 of the vowel).

The second remark concerns the location of the F0 peak, which is on marker "i", and not on the semantico-pragmatic focus, *aɣṛum*. There is therefore a lack of alignment between the semantico-pragmatic focus and the prosodic focus.

The same contour and location were observed for various items in the contrastive clefts produced by the two speakers under elicitation. Besides, this prosodic realization is not idiosyncratic. It is regularly observed in our spontaneous corpus.

Those results call for investigations : is this realization typical of contrastive clefts ? How can we analyze those clefts syntactically ? How can we account for this particular mapping of the morpho-syntactic and the prosodic levels ?

4. Discussion

The systematic lack of alignment between semantic focus and intonational focus points to prosody/syntax and prosody/information structure interfaces. We shall start with the study of information structure, based on examples taken from our spontaneous corpus[1]. The sound files and full transcripts are on the accompanying CDRom.

4.1. Prosody and information structure

Prince (1978), in her study of wh- and it- clefts in English, classifies them according to the "known" vs "given" character of their presupposition. GIVEN refers to "information which the cooperative speaker may assume is appropriately in the hearer's consciousness", and KNOWN to "information which the speaker represents as being factual and as already known to certain persons (often not including the hearer)" (1978:903). The cleft-clause of contrastive it-clefts, which resemble the most the Taqbaylit structures under study, is associated to known information, while the XP in focus is associated with new information.
Further examination of the givenness hierarchy (Gundel et al., 1993), applied by Hedberg (2000) to clefts, allow to distinguish between various cleft-clause types (Hedberg, 2000:899-903). In our Taqbaylit data, only one of those types was found, namely the "in focus"[2] type, in which the content of the cleft clause can be assumed to be already in the addressee's focus of attention. However, this status does not necessarily entail the removability of the cleft clause in Taqbaylit.

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[1] Many thanks to the speakers : Saïd Doumane, Zouina and Yamina-Zahra Mettouchi, Ouzna Ouaksel.
[2] This term must not be confused with the prosodic or the pragmatic focus. 'In focus' only means that the presupposition is considered as being in the addressee's current focus of attention.

Starting from the data, in a bottom-up perspective, we managed to identify three types of clefts :

1)   Clefts which are actually non-contrastive and non-restrictive. For instance :

<div align="center">

tlata yergazen i D yeǧǧa
three men **i** proximal particle he-leave(perfect/ive)
three sons he left

</div>

It is difficult to provide a translation, since an it-cleft would here point to a contrast which is not intended in the Taqbaylit example. This utterance is simply the summarized reformulation of the answer to the question "who did he leave (=give birth to)", which was "he left three sons" (*yegga D tlata yergazen*). The cleft clause is here a reminder of the topic under discussion, and this reordering of constituents is typical of subtopic closure in Taqbaylit discourse : the speaker here indicates that she is considering shifting to another subtopic, which she does when she broaches the subject of those three sons' descendants. The cleft clause is 'in focus' : it can be truncated and is immediately recoverable from the context. What is more, the argumentative status of the structure is neutral. By this, we mean that the speaker is not presenting her own viewpoint in opposition to her co-speaker's. Both speakers agree on the XP *tlata yergazen*. The F0 measures are 235 Hz (*tlata*), 192 Hz (*yergazen*), 178 Hz (*i*), 145 Hz (*D yeǧǧa*).

2)   Clefts which are restrictive but not contrastive. For instance :

<div align="center">

ala Aɛmar i yesɛa
only Aɛmar **i** he-have(perfect/ive)
(come on, you know that) he only has Aɛmar.

</div>

In the preceding context, speaker B had enumerated Šrif's five children by name. Speaker A miscalculated and summarized the list as 'three daughters and one son'. Speaker B rectified the number of daughters, but speaker A, following her own train of thoughts deduced that if there were five children, and among them three daughters, then there must be two sons. It is this last statement which is rejected by speaker B, not as a competing opinion, but as an appeal for common sense. The utterance could be glossed "oh come on, you know that, he has only Aɛmar (therefore he cannot have two sons)".
This pragmatic context, where we do not have a common presupposition and competing foci (Aemar and another son vs Aemar only, in a closed set), but a common presupposition and a restrictive focus (one vs more than one sons, in an open set) supposedly shared by both speakers, triggers a pitch prominence that is still on marker "i", but lower than the preceding pitch prominence, on the restrictive adverbial "ala". The F0 measures are 280 Hz (*ala*), 190 Hz (*Aɛmar*), 221 Hz (*i*), 183 Hz (*yesɛa*).
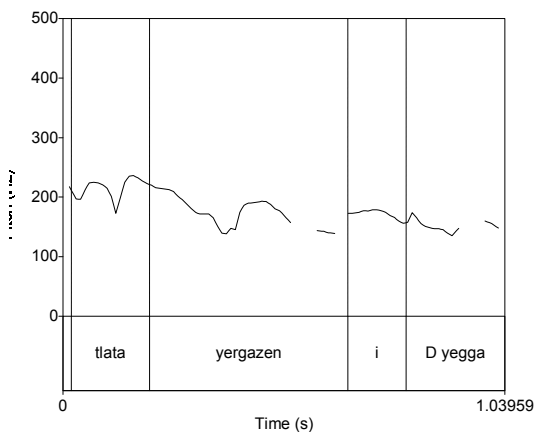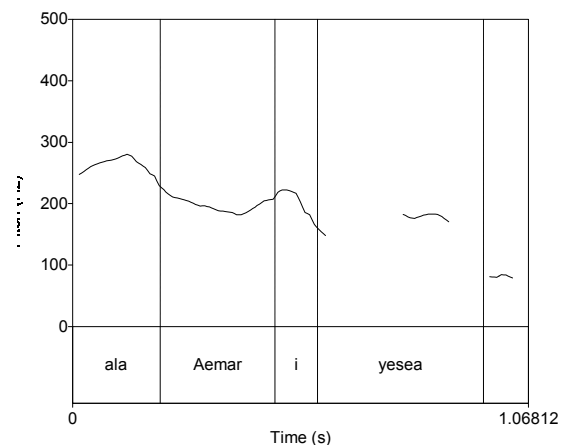

Figure 2: *tlata yergazen i D yeǧǧa*

Figure 3: *ala Aɛmar i yesɛa*

3)   Clefts with a contrastive focus. For instance :

<div align="center">

d lḥaǧ Rabaḥ i yuɣen sebɛa
d lḥaǧ Rabaḥ **i** he-marry(perfect/ive) seven
it is lḥaǧ Rabaḥ who married seven (women)

</div>

Here the XP (*lḥaǧ Rabaḥ*) is selected in contrast to another one, also mentioned in the previous context (*lḥaǧ Ṭahaṛ*). The F0 measures are 223 Hz (*d lḥaǧ Rabaḥ*), 339 Hz (*i yu-*), 169 Hz *(-ɣen sebɛa)*. The other speaker does not agree, since she utters the following sentence (with the following F0 measures : 247 Hz (*d Ṭahaṛ*), 358 Hz (*i*), 337 Hz (*yu-*), 171 Hz *(-ɣen sebɛa)*) :

<div align="center">

d Ṭahaṛ i yuɣen sebɛa
d Ṭahaṛ **i** he-marry(perfect/ive) seven
it is Ṭahaṛ who married seven (women)

</div>

In the last contrastive cleft of our short excerpt, there is a shift in the presupposition, from the identity of the man who married seven women to the number of women *lḥaǧ Ṭahaṛ* married. But we still have a contrast (implying comparison) between three and seven. The F0 measures are 183 Hz (*tlata*), 230 Hz (*i*), 159 Hz (*yuɣ*).

<div align="center">

jeddi lḥaǧ Ṭahaṛ tlata i yuɣ
grandfather lḥaǧ Ṭahaṛ three **i** he-marry(perfet/ive)
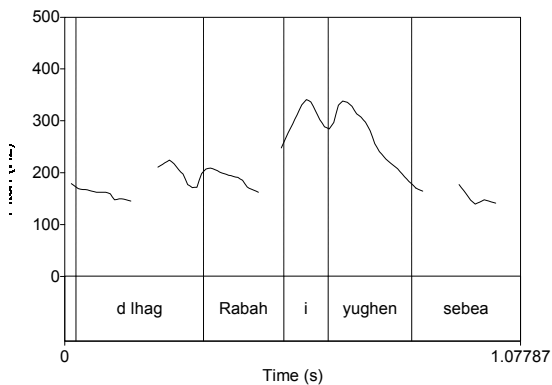my grandfather lḥaǧ Ṭahaṛ, he married THREE women

</div>

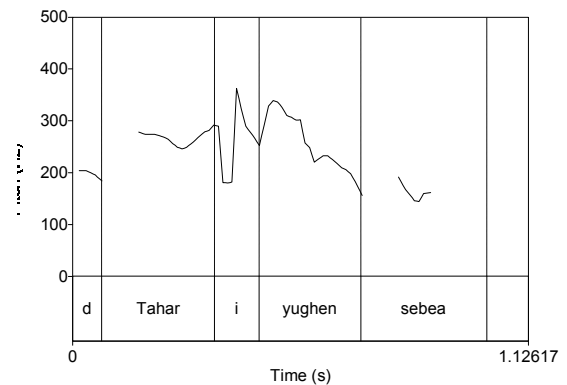**Figure 4:** *d lḥaǧ Rabaḥ i yuɣen sebɛa*
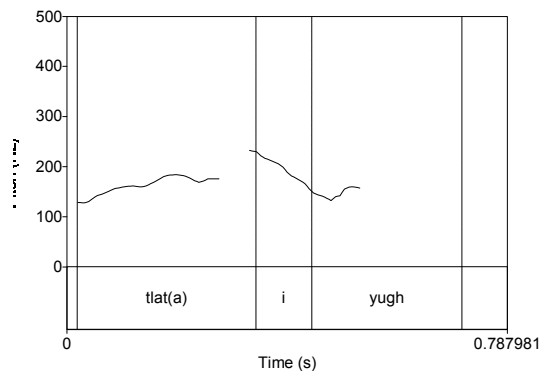

Figure 5: *d Ṭahaṛ i yuɣen sebɛa*

Figure 6: *tlata i yuɣ*

It is obvious from the contours in figures 4 to 6 that contrastive focalisation on clefts triggers F0 peaks on marker "i", with very high differential values : if we compare the first and the second types (figures 2 & 3) to the third one (figures 4 to 6), it appears that in the latter, extreme peaks, sometimes at the limits of the speaker's pitch range, can be observed, whereas types 1 and 2 (figures 2 and 3) consistently show medium pitch prominence on marker "i".

Our claim is that this variation in pitch height signals the degree of convergence in the speakers' XP choices. If the speaker who utters the cleft anticipates divergence from speaker B, then the F0 peak will be very high. If not, it will be medium high. Those observations are consistent with the remarks made on French by Morel & Danon-Boileau (1998). According to those authors, F0 variation (in terms of degree of prominence, not peak location) can be ascribed to what they call "co-énonciation", namely the way a speaker imagines and anticipates the other speaker's viewpoint on the linguistic representation they are jointly building. F0 extremely high values point towards diverging, competing viewpoints.

Setting aside these quantitative variations of F0 values on "i", we can notice that marker "i" is the systematic locus of a pitch prominence, whereas the XP is not. This leads us to examine the syntax/prosody interface.

4.2.Prosody and Syntax

This location of the pitch prominence on marker "i" instead of on the semantico-pragmatically focused XP is systematic in Taqbaylit. This is a strong argument in favour of the 'structural FTA' approach and against the 'radical FTA' view, which states that "accents are direcltly meaningful signals of focus or discourse salience". Obviously here, "focus involves language-specific constituent structure, and language-specific principles (or general structural principles [...]) relating individual accents to constituents of various sizes" (Ladd, 1996:167). Indeed, as stated by Van Valin & LaPolla (1996:209), following Lambrecht (1994) : "the new information in the focus is not the constituent itself, but the establishment of a relationship between the referent and the presupposed proposition".

Our claim is that this placement of the prosodic focus is correlated with the head-marking nature of the language, which implies that syntactic relations be morphologically marked on the head of a constituent (vs the dependent) (Nichols, 1986). This feature of Taqbaylit is manifest for instance in the fact that in this language, a minimal utterance must be composed of a predicate with a subject clitic (*yeswa*, he drank), which can be expanded by an NP (*Aɛli yeswa* / *yeswa Aɛli*, Ali drank (lit. Ali he drank / he drank Ali)). Objects can appear directly as NPs (*yeswa lbirra*, he drank (the) beer), or if they appear in the form of a clitic, they can be expanded by an NP (*lbirra yeswa t*, he drank the beer (lit. beer he drank it)). Those expansions are unmarked[3], and their positions are linked to their informational status in the givennness hierarchy.

Syntactically speaking, Taqbaylit clefts generally involve particle "d", which is in fact a copula, and obligatorily involve marker "i", which is a grammaticalized nominal called "support de détermination" in Berber studies. According to Galand (1984:93), "i" is both an antecedent and a relator, and can be glossed by "celui" (≈ "that which"). This, and other factors which cannot be summarized here for lack of space, leads us to analyze the cleft structure in the following way :

<div align="center">

d aɣɣum i neċċa
d bread **i** we-eat(perfect/ive)
cop. *bread* **cleftpro+rel.** *we-eat(perfect/ive)*
It is bread that we ate/have eaten.

</div>

The abbreviation "cleftpro+rel" refers to the fact that the status of "i" is not that of a simple relative marker. This analysis based on the distribution of marker "i" in Taqbaylit and on cross-dialectal comparison, is consistent with Hedberg's (2000) assumptions about the link between cleft pronoun and cleft clause in English : "the cleft pronoun and the cleft clause form a discontinuous constituent because they function together pragmatically and semantically like a definite description" (2000:917). Definite descriptions "can be viewed as comprised of two parts : an INDEXICAL component, which is expressed by the determiner head and determines the relation of the referent to the context, and a DESCRIPTIVE component, which is expressed by its nominal complement and describes the referent" (2000:894). Hedberg adds that "treating the cleft pronoun and cleft clause as forming a discontinuous definite description allows the function of identificational focus to automatically be assigned to the clefted constituent via the copula".

This analysis seems to fit very well with the Taqbaylit cleft structure : the "i+cleft clause" can be considered referentially as a unit (a definite description), and the XP can be viewed as a semantic expansion which represents the referent. As the determiner of the definite description, "i" is the head of the unit.

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[3] Except for the subject expansion in postcore position.

If the cleft pronoun is analysed as the head of the cleft structure, and the focused XP as its dependent in both English and Taqbaylit, one still has to explain why the F0 peak is on "i" in Taqbaylit and on the XP in English or French. Our proposal is to ascribe this difference to the typological feature of head- versus dependent-marking. In English or French clefts, the intonational focus is located on the dependent, the XP. In Taqbaylit clefts, the intonational focus is located on the head, marker "i".

This hypothesis should be tested with other head-marking languages, but if it proves correct, then we could postulate that the head- versus dependent-marking feature is not only valid at the level of morphosyntax, but also at the level of prosody.

5. Conclusion

In this paper, we have investigated the prosodic characteristics of clefts in Taqbaylit, concentrating on contrastive-focus clefts. Two factors have been studied : the pitch contour on the one hand, and the location of the F0 peak, on the other hand. Pitch contour, together with degree of pitch prominence and constituent order variations, signal information structure and pragmatic value in terms of co-enunciation. The location of the intonational focus is related to syntactic and typological factors. Having determined that the head of the cleft sentence was marker "i" and the dependent the XP, we proposed to consider that focus placement was linked to the head- versus dependent- marking nature of Taqbaylit Berber.

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