



Discourse Marking in French: C Accents and Discourse Moves

J.M Marandin[•], Claire Beyssade[°], Elisabeth Delais-Roussarie^{*} & A. Rialland[•]

[•]CNRS, UMR 7110/LLF, Université de Paris 7, France

[°]Université de Paris III, UMR 7110/LLF, France

^{*}CNRS, UMR 5610/ERSS, Université de Toulouse 2, France

[•]CNRS, UMR 7018/ILPGA, Université de Paris III, France

jean-marie.marandin@linguist.jussieu.fr ; Claire.Beyssade@univ-paris3.fr

Elisabeth.Roussarie@wanadoo.fr ; rialland@ext.jussieu.fr ;

Abstract

It is currently assumed that the prosodic realization of utterances is sensitive to the Ground/ Focus articulation. However, the discourse thematic organization also plays a crucial role : in German and English, a specific category of pitch accent does play a role in marking discourse move (see [11] and the analysis of B accents in [5]). In this paper, we investigate how discourse moves are expressed in French, in particular prosodically.

1. Introduction

Taking stock of analyses of German and English intonation, Büring proposes that intonation articulates two marking systems: F-marking and T-marking (see [4] and [5]). F-marking is correlated to the Ground-Focus articulation (henceforth GFA) and T-marking to discourse moves. Here we focus on T-marking in French. We show that T-marking obtains in French and we present a preliminary study of its prosodic realization. The study has two aims:

- to clarify the use and meaning of a type of accent which is not related to the marking of informativeness in utterances, and
- to show that GFA is not the sole factor involved in utterance intonation.

2. What is T-Marking

Büring observes two types of question-answer pairs (henceforth Q/AP). In the former, the answer directly resolves the answer (see (1)):

- (1) Q: Was hatten die Popstars an?
What did the pop stars wear?
A: Die Popstars trugen [KAftane]_F
The female pop stars wore caftans

In the latter, the question indirectly resolves the question. The question brings up a "pop singer - clothing" issue, the answer brings up a "female pop singer - clothing" issue (see (2)):¹

- (2) Q: Was hatten die Popstars an?
What did the pop stars wear?
A: Die [WEIBlichen]_T Popstars trugen [KAftane]_F
The female pop stars wore caftans

He embeds the observation in an explicit model of discourse (see [13]). Taking up an idea from the pragmatic tradition, he modelizes the discourse as a chain of questions and answers. Questions shape up discourse topics (henceforth DT); questions may remain implicit in actual discourses.

Direct answers (resolving directly a question) are instances of a simple discourse strategy; Q/AP in (1) illustrates such a

case. Indirect answers (partially resolving a question) are instances of a complex discourse strategy: they introduce an implicit question they resolve and thus change the current discourse topic. Q/AP in (2) illustrates such a strategy : the initial question (noted IQ) is partially resolved via an implicit question (a move) which is subordinated to IQ (Q + Q + A) as shown in (3):

- (3) IQ: Que portaient les chanteurs pop?
SubQ: Que portaient les chanteuses pop?
A: Les chanteuses pop portaient des caftans.

An important clue for the analysis is the fact that answer (3.A) does not close the search for information about the "pop singer-clothing" issue; it calls for a continuation (*what about male pop singer?*, etc.). We call this strategy a downwards discourse strategy: the DT bringing up a "pop singer-clothing issue" is split into sub-DTs. The reverse move (an upwards discourse strategy) obtains when a given answer may be analyzed as resolving a superordinate question as in (4) :

- (4) SupQ: Que fumaient les chanteurs pop dans les années soixante?
IQ: Que fumaient les Beatles?
A: Les chanteurs pop fumaient du haschisch

In this case, the answer brings about an enlargement of the DT (from a "Beatles-smoking material" issue to a "singers-smoking material" issue). Pragmatically, it calls for the closure of the Discourse Topic.

Relevant for our study is the observation that in (2) *weiblichen* is accented: a rising pitch accent is realized on the first syllable of the lexical item (see [4]: 53).² Moreover, it has to be accented. Thus, accentuation of the item which signals the recourse to a complex (downwards) strategy is obligatory in German and, by the same token, must be accounted for in the grammar of this language.³

Büring calls the constituents (XP) bearing the T-accent *S-topics*. In order to clarify the prosody/discourse interface and to avoid any confusion with the usual notion of topic,⁴ we make the following distinction:

- T-exponents are XPs bearing T accents, and
- thematic shifters (henceforth : ST for 'shifteur thématique') are XPs signaling a complex discourse strategy, i.e a discourse move.

3. Evidence for T-marking in French

We observe that a complex strategy is signaled in French as well. Taking up an analog of example (2), we observe that an accent is realized on '*anglais*' or on the head of the NP

'chanteurs' or on both (see § 5.1). Moreover accentuation is obligatory (see (5.a/a'/a'') vs. (5.b)):

- (5) Que fumaient les chanteurs de rock?
 a. Les chanteurs de rock ANglais fumaient des cigarettes
 a'. Les CHANteurs de rock anglais fumaient des cigarettes
 a''. Les CHANteurs ANglais fumaient des cigarettes.
 b. # Les chanteurs de rock anglais fumaient des cigarettes

As a first approximation, the accent on *anglais* or *chanteurs* is a high tone on the first syllable of the lexical item (see § 5 below). We call this accent a C accent⁵ and assign it a clear function : the marking of complex discourse strategies. Even if Rossi's AF may also be used in such a case (see [14]), it fulfils other functions (*focalisation, insistance*, etc.).

We turn now to the distribution of C accents in utterances with respect to Ground/ Focus articulation. First note that C accent is not related to focalization in (5). As (6) shows, the NP *les chanteurs anglais* contributes to the Ground while the XP *des cigarettes* contributes to the focus:⁶

- (6) GFA:
 ASSERT $\langle \lambda y \exists e \forall x ((\text{chanteur-de-rock}(x) \ \& \ \text{anglais}(x)) \rightarrow \text{Fumer}(e,x,y)) \rangle$, cigarettes>

Accepting a descriptive partition of utterances into three "fields" (pre-focus, focus, post-focus), we observe that C accents may occur in any of them. (5) above illustrates C accent in the pre-focus field, (7) does so in the post-focus field and, crucially, (8) in the focus field:

- (7) Que fume Bernard?
 What smokes Bernard ?
 Bernard fume des cigarettes le DIManche.
- (8) Qu'ont fait les étudiants cette année?
 Les (Z)Étudiants (or éTUDiant) de première année ont fait de la syntaxe GÉnérative, les (Z)Étudiants (or éTUDiants) de deuxième année ont fait de la syntaxe FONctionnelle.

Note that the analysis we have presented above applies to (5), (7) and (8). The answer in (7) changes the "Bernard-smoking material" into "Bernard- smoking material-date" issue (*Bernard fume des cigarettes le dimanche, et des gauloises le reste de la semaine*). The answer in (8) changes the "students-subject matter" into "groups of students-subject matters" issues. Moreover, (8) shows that C accents may occur on focalized XPs (*de la syntaxe générative, de la syntaxe fonctionnelle*).

Summarizing the distribution of C accents, the generalization is the following :

- (9) a) C accents occur in utterances in a complex discourse strategy.
 b) C accents may occur on XPs contributing to the Ground or to the Focus.

Question/Answers Pairs in (10) and (11) give further support to (9). They are prototypical illustrations of contexts analyzed as involving contrastive topics (10) and contrastive foci (11): C accents may occur on the so-called contrastive XPs regardless of their role in Ground/Focus Articulation:⁷

- (10) A propos de Marie-Pauline et Bernard, où sont-ils allés en vacances?
 MARie-Pauline est allée en Chine et BERnard au Japon
- (11) Qui est venu ?
 BERnard est venu (, pas Marie)

As for C accents on focalized XPs, C accent is obligatory on *Bernard* in (11) if a contrastive move is intended, whereas they are not in (10).⁸

4. Discourse rules for T-marking in French

Now, we characterize the relation between the occurrence of a C accent and the reshaping of the question (and the DT), i.e. being a C accent exponent and being a thematic shifter. As (9) suggests, not all C-exponents are thematic shifters. The two following generalizations (given in (12)) account for the distribution of C accents in French:⁹

- (12) Localization:
 a. C accents occur in the presence of a complex downwards strategy.
 b. C accents are borne by XPs instantiating some variables in the question.

We have to define the notion of instantiation in (12.b). Consider again (5) and (6) and be more precise. It is usual to analyze a question as an open proposition, ie a set of propositions in which an element is a variable. Formally, the analysis of (5), repeated in (13) may be explicated as (13b) or (13c): (13b) is given in an intensional notation (an open proposition) and (13c) in an extensional one (a set of propositions) :

- (13) a. Que fumaient les chanteurs de rock?
 b. $\lambda y \exists e \forall x (\text{chanteur-de-rock}(x) \rightarrow \text{Fumer}(e,x,y))$
 c. $\{ \exists e \forall x (\text{chanteur-de-rock}(x) \rightarrow \text{Fumer}(e,x,\text{marijuana})) , \exists e \forall x (\text{chanteur-de-rock}(x) \rightarrow \text{Fumer}(e,x,\text{gitanes})) , \exists e \forall x (\text{chanteur-de-rock}(x) \rightarrow \text{Fumer}(e,x,\text{cocaïne})) \dots \}$

In (13b) and (13c), the variable corresponds to what will be the focus in the answer, in others words here, what is smoked. In the case of a complex strategy, with a discourse move, two distinct variables are instantiated in the partial answer: a variable which reflects the partition of the DT and a variable which corresponds to the piece of information the speaker is searching for. We call the former thematic instantiation and the latter focal instantiation .

Take again the rock singer example. When the answer to (13) is (14), then there are two elements which vary : the nationality of the singers and what is smoked.

- (13) a. Que fumaient les chanteurs de rock?
 (14) Les chanteurs de rock ANglais fumaient des cigarettes

The partial answer (14) introduces the implicit question (15a), which is a sub-question of the more general question (15b).

- (15) a. Que fumaient les chanteurs de rock anglais ?
 b. Que fumaient les chanteurs de rock de chaque nationalité ?

"*Anglais*" is the instantiation of the predicate variable P in "*de nationalité P*". Questions (15a) and (15b) receive the analysis in (16a) and (16b) :

- (16) a. $\lambda y \exists e \forall x ((\text{chanteur-de-rock}(x) \ \& \ \text{anglais}(x)) \rightarrow \text{Fumer}(e,x,y))$
 b. $\lambda y \lambda P \exists e \forall x ((\text{chanteur-de-rock}(x) \ \& \ \text{nationalité}(P) \ \& \ P(x)) \rightarrow \text{Fumer}(e,x,y))$

Anglais is the instantiation of the predicate variable P in "*de nationalité P*" in (16b). Thus, in a downward complex discourse strategy, DTs are partitioned via the introduction of a variable distinct from the one involved in the semantics of the question and answers present pairs (thematic instantiations and focal instantiations). This is especially clear with a pair-list answers:

- (17) a. Que fumaient les chanteurs de rock ?
 b. Les anglais de la marijuana, et les français des gitanes.

Generalization (12.a) says that C accents may occur on focal or thematic instantiations. Now, we are in a position to characterize the realization of C accents in French (see (18)). Intuitively, a complex strategy should be signaled. In French, it must be signaled once on a thematic instantiation. Once it is, the marking of other instantiations (either thematic or focal) is a matter of choice for the speaker:¹⁰

- (18) Realization
 a. An C accent is compulsory on the first thematic instantiation, i.e. the ST.
 b. C accents are optional on other XPs that instantiate variables in the question

Generalization (18.a) captures the fact that an obligatory C accent may fall on a focal XP. This is the case in (11): "Bernard" is at the same time a focal instantiation and an ST. The answer brings up a double issue "who came and who did not come?". Generalizations (18.a) and (18.b) together capture the fact that in (7), repeated in (19), 'le dimanche' (which is the ST) must be accented and 'des cigarettes' is optionally accented ; this holds whether 'le dimanche' is in situ or preposed (see (19.b/b')):

- (19) Que fume Bernard?
 a. Bernard fume des cigarettes le DIManche.
 a'. Bernard fume des Cigarettes le DIManche.
 b. Le DIManche, Bernard fume des cigarettes (, le reste de la semaine, il fume la pipe).
 b'. Le DIManche, Bernard fume des CIGarettes (, le reste de la semaine, il fume la pipe).

Generalization (18) accounts also for the fact that in (8), 'les étudiants de première année' must bear a C accent and that other thematic instantiations ('les étudiants de deuxième année') and focal instantiations ('de la syntaxe générative', 'de la syntaxe fonctionnelle') may or may not bear an C accent. Note that C accents are generally never realized on the last elements of an alternative (see (20)).

- (20) Que sont devenus leurs enfants ?
 Les enfants de BERNadette sont à la faculté et les garçons de Jean-Bernard sont partis à l'étranger.

5. Prosodic characterization of C accents

5.1. C accents and other pitch prominences

C accents are usually realized on the first syllable of the thematic shifters or on the head of the XP in which the ST occurs (see (5) and fig.1). In some cases, they might also be realized on both elements of the XP (see fig.2) : a prosodic "arc" is realized over the whole XP (see [14]). C accents have the following acoustic features :

- a sharp rise of F0,
- a lengthening of the onset of the accented syllable;
- a rise of intensity.

As there are other melodic movements on the initial syllable of lexical words in French, it is important to distinguish them from C accents. In French, an initial rise may be realized at the beginning of an utterance or of an Intonational Phrase (see [6] and [14] among others). This rise differs from C accents as follows :

- the High target may be reached on the second syllable in case of an initial rise, while it is usually reached at the end of the nucleus for C accents.

- the initial rise is characterized by a melodic movement, but intensity and duration remain usually unchanged. By contrast, C accents are realized with a lengthening of the syllable onset and a relatively important rise in intensity.
- The initial rise is optional and can be realized on a function word, which is apparently impossible for C accents.

C accents also differ from secondary stresses realized on the initial syllable of lexical word: the melodic movement of C accents is more important than that of secondary stresses. C accents also differ from 'accents d'insistance': the lengthening of the syllable onset is usually more important in this latter case.

5.2. Realizations of C accents

It is a well established fact that prosodic events are highly sensitive to the GFA and that their prosodic realization may differ in pre-focus, focus and post-focus 'fields': in post-focus sequences, for instance, the pitch range is more compressed. Thus, we expect C accents to be realized differently according to their location in the utterance.

In the pre-focus part of the utterance, C accents are realized by an important melodic movement, as the H tone reached the top of the speaker's range. When the word bearing a C accent has two syllables and when a H% boundary tone (continuation rise) has to be realized for syntactic reasons on the second syllable, the realization of the continuation may be inverted : pitch drops or remains level (noted here H ↓%). (21) is an example of such realization that has also been mentioned by Rossi (see [14]).

- (21) Qu'est-ce que fumaient les chanteurs de rock dans les concerts des années 70 ?
 Les anglais de la marijuana et les français de la cocaïne. (see fig. 3)
 (les AN glais) H ↓%] (de la marijuana)]....
 H*

In focus constituents, C accents are also realized by an important pitch rise on the first syllable of the lexical word (or of the head) of the XP. Duration of the onset is usually lengthened and intensity is augmented.

The realization of C accents in post-focus field is different from the typical realization of accents. As pitch range is usually compressed after focus (see among others [2], [6], [10]), C accents cannot be realized with an important pitch rise. In this case, C accents are characterized by a rise of intensity or a lengthening of the onset. The presence of the rising melodic movement (H* tone) can be observed in the realization of the post-focus sequence : the post-focus sequence is not realized by a low plateau (indicating the presence of a L target just after the focus constituent), but by a continuous fall (cf. example (22) and fig. [4]).

- (22) Qu'est-ce qu'il fume ?
 Il fume des cigarettes le dimanche.
 (il fume) (des cigarettes) L%] (le DI manche) L%]
 H*

6. Conclusion

We have provided evidences for T marking in French. T marking is observed in presence of a complex strategy. It signals the enlargement, the narrowing down or the shifting of the current Discourse Topic. T marking in French abides to the same discourse trigger than German or English T marking.

even though the fine grain rules for its realization may be different across those languages. The crucial theoretical import of T marking is that accentuation may be sensitive to discourse moves and not to the informative contribution of the utterances to the context. By the same token, the analysis of intonational marking should not be restricted to GFA. We expect that T marking has an impact on word order as well; the preverbal/postverbal variation in Romance Subject placement is a case in point (see [12]).

7. References

- [1] Beyssade, C., J.M Marandin & A. Rialland, 2002, Ground/focus revisited. A perspective from French, *Proceedings of LSRL 2001*, John Benjamins.
- [2] Beyssade et. al., To appear. Prosody and Information in French. *Handbook of French semantics*, F. Corblin & H. de Swart (eds). CSLI.
- [3] Bolinger, D., 1965. *Forms of English : Accent, Morpheme, Order*. I. Abe & T. Kenekiyo (eds). Cambridge (MA). Harvard University Press.
- [4] Büring, D., 1997. *The Meaning of Topic and Focus : The 59th Street Bridge Accent*. London: Routledge.
- [5] Büring, D., 1998. *Focus and Topic in a complex model of Discourse*. Ms. Büring's website.
- [6] Di Cristo, A., 1998 Intonation in French in Hirst & Di cristo (eds), 195-218.
- [7] Jacobs, J., 1984. Funktionale Satzperspektive und illokutionssemantik. *Linguistische Berichte 91*. 25-58.
- [8] Jackendoff, R., 1972. *Semantic interpretation in Generative Grammar*. Cambridge (Ma.). MIT Press.
- [9] Hirst & Di Cristo (eds.), 1998. *Intonation Systems: a survey of twenty languages*. Cambridge University Press.
- [10] Jun, S-A. & C. Fougeron, 2000. A Phonological Model of French Intonation. *Intonation : Analysis, Modelling and Technology*, A. Botinis (ed). pp. 209-242. Dordrecht: Kluwer Academic Publishers.
- [11] Lambrecht, K., 1994. *Information structure and sentence form : Topic, focus and the mental representations of discourse referents*. Cambridge studies in Linguistics 71, Cambridge University Press.
- [12] Marandin, J. M., 2002. Inversion du sujet et structure de l'information dans les langues romanes. *Problèmes de linguistique romane*, ed. by Danièle Godard. Paris : Éditions du CNRS.
- [13] Roberts, C., 1996. Information structure in discourse : towards an integrated formal theory of pragmatics. J. H. Yvon and A. Kathol (eds). *OSU Working Papers in Linguistics 49*.
- [14] Rossi, M., 1999 *L'Intonation, le système du français : description et modélisation*. Paris. Ophrys.

¹ Büring calls (2) a case of partial topics. He considers also what he calls contrastive topics and purely implicational topics (see [4]: 56).

² In [4] and [5], the T-accent of German is identified with the B-accent of English (as recognized by [3], [8] and [13]).

³ Furthermore, if we accept the idealization that Q/APs provide a model of discourse topics in general (idealization currently made in pragmatic approaches to discourse), we are in a position to account for accentuation of utterances occurring in continuous discourses.

⁴ A topic in the current acceptation is the individual *about* which the discourse holds. As our description above makes explicit, the TD in the Q/APs we use for illustration, cannot be modeled as an individual, but as the properties of individuals or the relation holding between individuals (e.g. singers, pieces of clothing). In formal

semantics, it will be represented as a question, i.e. as a set of propositions.

⁵ Why such a label? The accent we observe in (5) bears a pragmatic resemblance to English B accents and German T accents, but we did not want to imply that their fine grained prosodic and pragmatic features are identical.

⁶ Here we have a partitioned meaning approach to GFA. The first proponent of such an approach is Jacobs ([7]). It has also been developed in [1] and [2] recently.

⁷ Note that (10) may be analyzed as involving a complex strategy (*who came ? / who does not come?*).

⁸ Here we leave aside the occurrence of C accents in questions: as our preliminary survey shows, they do appear in questions. Nothing in the analysis we adopt prevents them from doing so: they appear in explicit sub-questions (in the discourse perspective). Surprisingly, Büring reports that T accents do not occur in question in German. We do not know whether this limitation is due to a feature of German or to a limitation of Büring's analysis.

⁹ Büring proposes the following generalization for T accents in German: "[accent] T is chosen in the presence of a [complex] strategy, but it will be obligatory only if it serves to mark non-Given elements at the same time" (see [98]: 51).

¹⁰ We are not yet in the position to specify the parameters of this choice. It requires an extended observation of actual discourses.

Figure 1 : C accent on thematic shifter 'anglais'

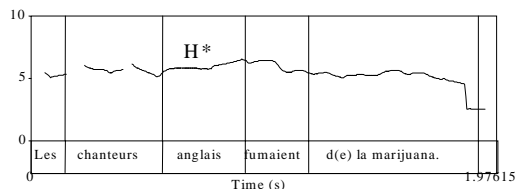


Figure 2 : C-accent realized on both ('prosodic arc')

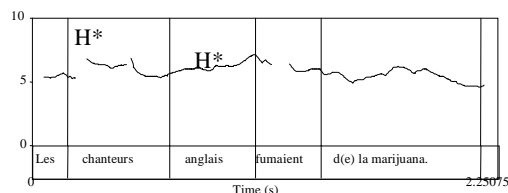


Figure 3 : Pitch drop after C accent (example (21))

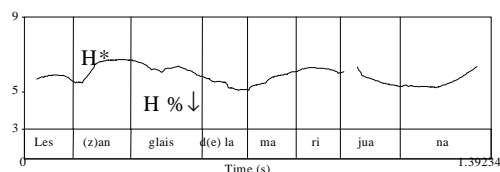


Figure 4 : C accent in postfocal 'field' (example (22))

