

## Information Focus in French

Our aim is to characterize the prosodic marking of Information Focus in French. The issue is highly controversial (see the divergent claims in Di Cristo 1999, Féry 2001, Beyssade *et al.* 2004 a. o.). Assuming as a working hypothesis that the Question/Answer pair yields a criterion to identify the information focus (IF) in utterances –the IF is that part of the content of answers that resolves the question (i.a. Kadmon 2001)–, we set up three experiments whose results yield the empirical basis for the two claims we present here. The first one is descriptive. Phrases that resolve a question may be set off by two types of intonational marks: they host the nuclear contour (NC) on their right edge and/or they are prosodically highlighted (PH). The second one is theoretical. IF marking should be distinguished from question/answer congruence marking. NC placement is sensitive to the Focus-Ground partition of utterances, while prosodic highlighting (PH) is sensitive to any type of distinguishedness: semantic or pragmatic. As such, it is a wild card that can be used to cue the role of question-resolver that phrases play in answers and that, in line with the Focus-Ground partition or independently from it.

### 1. Terminology and framework

We contrast answers to a broad question (1a) and answers to a narrow question (*wh*-questions) (1b). Under the assumption that resolving XPs are IFs, IF is contributed by the whole sentence in (1a), while it is contributed by the Object NP in (1b). (see a. o. Lambrecht 1994).

- (1)        a. What happened?        [Jean invited Marie to the party yesterday night]<sub>F</sub>  
             b. Who did Jean invite?    Jean invited [Marie]<sub>F</sub> to the party yesterday night

Our analysis is couched in the autosegmental-metrical framework (AMT). Two categories that are grounded in the descriptions and modeling of French proposed by Di Cristo 1999 or Rossi 1999, play a central role in this study.

– Nuclear contour (NC). Following Di Cristo 1999, the notion of nuclear accent is relevant for French. It is the most prominent accent in the utterance. It typically occurs as the last accent in the utterance, but may occur earlier. In the latter case, the XPs to the right are de-accented without being de-phrased (Di Cristo & Jankowski 1999). Here, we assume that the intonational correlate of Di Cristo's nuclear accent is analyzable as a pitch accent within a sequence of tones generating a nuclear contour (NC) in mainstream AMT.

– Prosodic highlighting (PH): Intonational highlighting corresponds to the intonational setting off of a phrase realized as a cluster of phenomena involving pitch contour and pitch range (Di Cristo 1999, Rossi 1999). It involves an initial accentuation, (IA) which may form an “accentual arch” with the following rising accent, or triggers a high plateau up to the following accent. The IA or the high plateau are generally implemented quite high in the pitch range. It is usually correlated with a contraction of the pitch range to its left.

### 2. Design of the experiments

**2.1. First experiment (Production):** What are the prosodic/intonational features of the phrases that resolve a question?

Participants were presented with question-answer pairs embedded in short contexts like (2). The contexts and the questions were presented visually and auditorily. The participants' task was to read aloud the answer as if they were actually participating in the dialogue. We presented two types of questions to 14 subjects: partial questions (bearing on the object) and broad questions. We analyzed 112 answers.

(2) Context (translated): Richard is a policeman. He has to treat various documents (films, leaflets, K7s) seized in a terrorist cache.

Le responsable : Qu'as-tu visionné la nuit dernière ?	<i>What did you screen last night?</i>
Richard : J'ai visionné les vidéos la nuit dernière.	<i>I screened the videos last night</i>

**2.2. Experiments II and III (Perception):** Is PH recognized as a means to cue resolving phrases? We ran two perception experiments in order to check the role of PH in answers.

We selected 20 sentences from the preceding corpus: 10 sentences with NC at the end of the sentence and no PH, that we expected to be recognized as all focus answers, 10 with marking of the Object (5 with NC and 5 with PH only) which, conversely, are predicted to be identified as narrow focus answers. The sentences were presented in two blocks. 5 hypothesized all focus sentences are randomized with 5 sentences with marked object: in block 1, the Object is highlighted (PH), in block 2 it bears the NC. The 24 participants' task was to judge to which of two visually presented questions the utterance auditorily presented had been produced as an answer.

(3) Questions:	1. Pour finir qu'est-ce que tu as élargi ?	<i>Finally, what have you let out?</i>
	2. Pour finir, tu t'en es sorti comment ?	<i>Finally, how did you get by?</i>
Answer:	J'ai élargi le gilet avec du velours noir.	<i>I let out the vest with black velvet</i>

The only difference between experiment II and III is the presence of an explicit set of alternatives related to the object NP in the latter. This was meant as a check of the claim that PH is linked to Contrast (Rossi 1999).

### 3. Results

**3.1. Experiment I.** The results are graphically presented in Fig. (1a) and (1b). They are summarized below.

(4) Pattern for the answers to a partial question:

- a. The Object hosts the NC on its right edge and it is prosodically highlighted (Fig. 4); 49%
- b. The Object hosts the NC on its right edge without being highlighted (Fig. 5); 11%
- c. The Object is highlighted, while the NC occurs at the end of the sentence (Fig. 6); 23,6%
- d. The Object is not highlighted; the NC is sentence-final (Fig. 7): 16,4%

(5) Answers to a broad question:

- a. The NC is sentence-final (Fig. 7): 69,2%
  - The Object is not highlighted in 50% of the answers, unexpectedly, it is in 19,2%
- b. The Object hosts the NC on its right edge: 30,8%
  - It may be highlighted: 13,5%, or not: 17,3%

**3.2. Experiments II and III.** The results are graphically presented in Fig. 2 and 3. Participants clearly distinguished between answers to a broad question and those to a partial question. They do so, whether the Object is highlighted or is the exponent of the NC. Accordingly, we conclude that NC placement and PH cue the phrases resolving a partial question equally well. The similarity of the results for both experiments show that the presence of alternatives in the immediate context do not bear upon on the choice of the speakers. (This result, which offers some support for refuting a putative contrastive import of PH, will be commented in the talk).

### 4. Analysis and proposal

**4.1. Analysis I.** Let us first assume the approach to IF marking proposed in Di Cristo 1999 and generalized in Beyssade *et al.* 2004. The core claim is (6).

(6) Phrases contributing the IF (Focal XPs) host the NC on their right edge.

According to Di Cristo, the NC is realized as a low tone in declarative utterances. On the basis of corpus observation, Beyssade *et al* 2004 generalize (6) as (7):

(7) Focal XPs may host any of the NCs of French (in their framework: NCs including L\*, H+L\*, HL\* or H\*).

In both approaches, IF marking is identical for narrow and broad IF. In other words, no default NC placement at the right edge of the sentence is posited to account for the intonation of all focus answers. Moreover, Beyssade *et al.* claim that question-resolving XPs can be identified with focal XPs insofar as resolving XPs contribute the update brought about by the speaker's asserting the content of the answer (which is a reinterpretation of Jacobs' 1991 notion of free focus).

Claim (6) is corroborated in 60% of the answers to a partial question and 69,2 % of the answers to a broad question. The relatively high number of nuclear rise-falls or falls from the penultimate along with plain falls offers some support for claim (7).

Nevertheless, several facts do not fit in with (6). Claim (6) is undermined in a high number of answers:

- (8) a. 40% of answers to a partial question show NC at the right edge of the Sentence;  
b. 30,8% of answers to a broad question do show NC at the right edge of the Object.

Moreover, the high frequency of PH is striking and is not accounted for at all, when one assume (6). More precisely:

- (9) a. The Object is highlighted in 72,6% of the answers to a partial question  
b. 19,2% of answers to a broad question pattern like answers to a narrow question as they show a highlighted Object and a final NC.

Recalcitrant facts (8) and (9) require (a) that we make more precise the respective import of NC placement *vs* use of PH and (b) that we plainly acknowledge the fact that answers may be non-congruent even in the environment of the lab. Non-congruent answers are over- or under-informative answers (Krifka 2001). We extend the use to refer to any mismatch between the answer and the question. For example, B's answer in (10) is non congruent as it resolves a partial question while answering to a polar question:

- (10) A.: Will you come tomorrow?  
B.: At 8.

**4.2. Claims and analysis II.** The import of NC placement and PH is defined in (11) and (12). We illustrate both claims with answers to a partial question.

- (11) NC placement cues the part of the content that makes up the update brought by the answer.

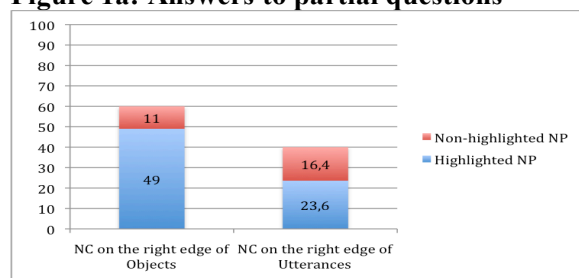
- (12) PH sets off a phrase to cue its distinguished status at the semantic or pragmatic level.

Assuming that resolving a question is a distinguished status, (12) straightforwardly explains (9a) and (9b). Pattern (4a) displayed in answers to a partial question cumulate both markings: are marked the fact that the Object contributes the update (it is "specifically asserted" in Jacobs' 1991 sense) and the fact that it resolves the question. Patterns (4b) and (4c) disjoin the two markings. Pattern (4c) (= fact (9b)) nicely illustrates the independence of both markings: the Object contributes the resolution to the question, while the whole sentence is marked as contributing the update. In other words, the answer is non-congruent, but the use of PH helps maintaining the link with the question. Pattern (4d) is the pattern of prototypical answers to a broad question (which is confirmed by the perception experiment): those answers are plainly non-congruent, which certainly explains their low number in the production data (16,4% ).

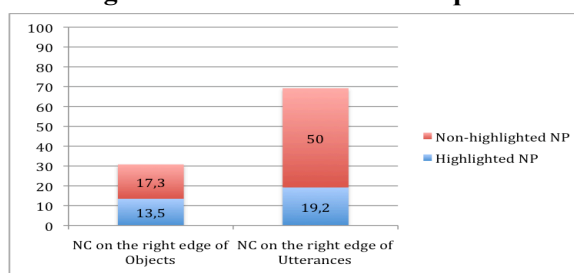
## 5. Conclusion

It has been recognized in the literature (e. g. Féry 2001) that the prosodic/intonational phenomenology of IF marking is quite varied in French. The proposal presented here accounts for such a diversity without downgrading the general principles it abides by.

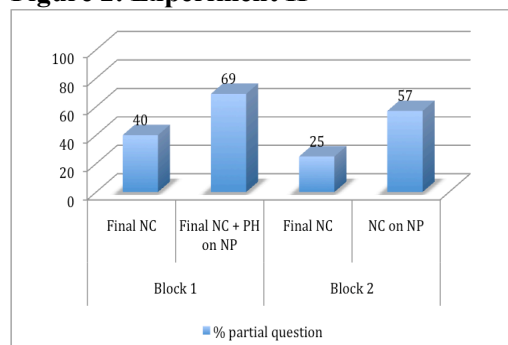
**Figure 1a: Answers to partial questions**



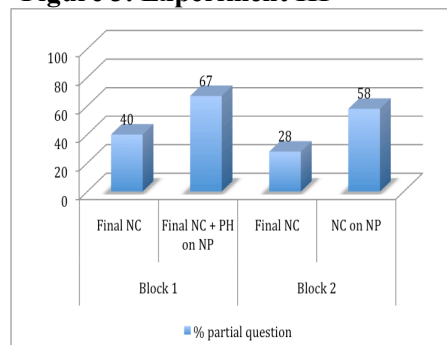
**Figure 1b: Answers to broad questions**



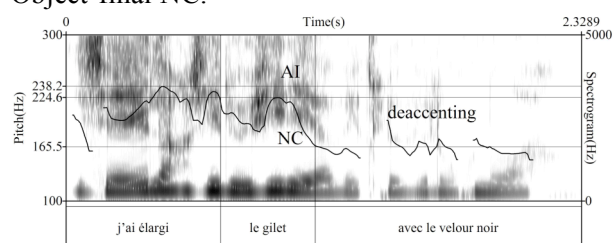
**Figure 2. Experiment II**



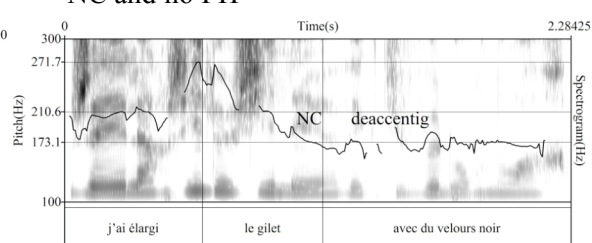
**Figure 3. Experiment III**



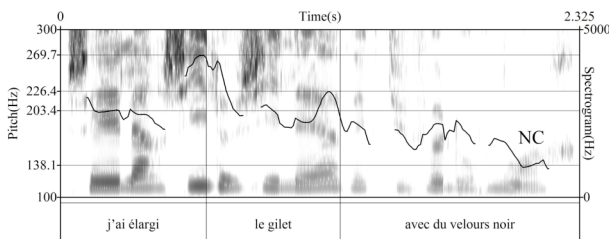
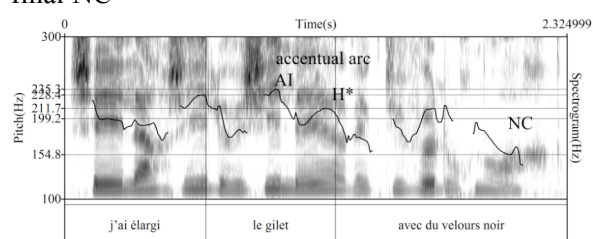
**Figure 4. Answers with PH Object and Object-final NC.**



**Figure 5. Answers with Object-final NC and no PH**



**Figure 6. Answers with PH Object and Sentence-final NC** **Figure 7. Answers with Sentence-final NC**



### Selected references.

**Beyssade C.** et al. 2004. Prosody and Information in French, in F. Corblin & al. (eds), *Handbook of French Semantics*, CSLI. **Di Cristo A.** 1999. Le cadre accentuel du français contemporain. *Langues* 3(2): 184-205, *Langues* 4(2): 258-267. **Di Cristo, A & Jankowski L.** 1999. *Prosodic organization and phrasing after focus in French*,. Proceedings of XIVth International Congress of Phonetics. **Féry C.** 2001. The Phonology of Focus in French, in C. Féry & W. Sternefeld (eds.), *Audiatur Vox Sapientiae, A Festschrift for Arnim von Stechow*, Berlin Akademie-Verlag. 153-181. **Jacobs J.** 1984. "Funktionale Satzperspektive und Illokutionsemantik" *Linguistische Berichte*, 91 : 25-58. **Kadmon N.** 2001. Formal pragmatics. Malden: Blackwell. **Krifka M.** (2001). For a structured meaning account of questions and answers, in C. Féry & W. Sternefeld (eds.), *Audiatur Vox Sapientiae, A Festschrift for Arnim von Stechow*, Berlin Akademie-Verlag. 287-319. **Lambrecht K.** 1994. *Information structure and sentence form : Topic, focus and the mental representations of discourse referents*, Cambridge University Press. **Post B.** 2000. *Tonal and phrasal structures in French intonation*, Holland Academic Graphics. **Rossi M.** 1999. *L'intonation: le système du français*, Ophrys, Paris.