The existence of an intermediate level of phrasing (ip) has been shown for several Germanic as well as Romance languages, such as English (Beckman & Pierrehumbert, 1986), Italian (D’Imperio, 2002), Catalan (Feldhausen, 2008), as well as in non-Indoeuropean languages such as Cairene Arabic (Hellmuth, 2007).

Within the autosegmental-metrical framework of intonation (Pierrehumbert, 1980; Ladd, 1996), Jun & Fougeron have proposed a model of French intonation based on two units: the Intonation phrase (IP) and the Accentual Phrase (AP; Jun & Fougeron 1995, 2000). Within this model, the existence of an ip, a prosodic unit whose rank in the prosodic hierarchy is lower than the IP and higher than the AP, has also been proposed, though its status and effects on prosodic structure are still controversial. According to Jun and Fougeron (2000) this constituent is marked by a L- or a H-edge (depending on the illocutionary value of the utterance) tone, though its distribution seems to be mainly restricted to the intonation contour of early focus utterances. Further evidence for an ip in French has been found in tag-questions, dislocated theme/structure themes and wh-questions. (Jun & Fougeron, 2000). New empirical data collected on French seems to support the existence of the ip in French. (Di Cristo, to appear; D’Imperio et al., 2007; Portes et al., 2008).

In the last decade, a large body of evidence has shown that the placement of intonational boundaries in various languages is not exclusively dependent on syntactic constraints, since factors such as information structure, constituent weight and speech rate play a major role in phrasing decisions (Nespòr & Vogel 1986, Ghini 1993, Selkirk 2000). Within Romance languages, the role of prosodic branchingness has been underlined (D’Imperio et al., 2005). Finally, the role of alignment constraints on the placement of prosodic boundaries has been underlined (Selkirk, 1995, Truckenbrodt, 1999).

Our assumption is that the emergence of an intermediate prosodic level (ip) in French is not simply linked to a specific focus or marked syntactic structure. Our hypothesis is that an ip boundary might appear within a broad focus utterance when the syntactic structure allows it. We specifically predict that both ALIGN-X.P.R and WRAP-XP conspire to place an ip boundary in correspondence with a major syntactic phrase boundary (Fig. 1). In other words, the boundary between NP and VP might be signaled by prosodic cues that are stronger than the ones associated to an AP boundary which is not associated with a major syntactic break (Fig. 2). This alignment between syntactic and prosodic structure could involve the emergence of an ip boundary marked by mainly by a H-edge tone as well as preboundary lengthening.

We predicted that the higher the unit in the prosodic hierarchy, the stronger the prosodic cues at its boundary. 40 experimental sentences were presented 4 times to 10 French listeners in a reading task (40*4*2*10=3200 utterances). The sentences were read in both normal and fast speech rates, for a total of 3200 utterances. We measured several target syllables in 4 contexts: (1) within a prosodic word, (2) at an AP (ip-internal) boundary, (3) at a potential ip boundary and (4) at an IP boundary.

In line with our predictions, the results show that preboundary syllable length increases with prosodic boundary strength at normal speech rate. Specifically, the length of a final AP syllable increases when the AP boundary is also ip-final (and associated with a major syntactic boundary) (Fig 3). Our results suggest that prosodic cues are reinforced when there is an alignment between prosodic and syntactic boundaries and support the existence of an intermediate prosodic level in French. This intermediate level does not seem to be restricted to specific prosodic structures but might appear even within all focus utterances when the syntactic structure allows it.

Figures

**Fig 1:** Noun phrase “Gregory” made up of one AP whose right edge is associated major syntactic phrase boundary.

**Fig 2:** Noun phrase “Le mari d’Amanda” (Amanda’s husband) made up of 2 APs. The 1st AP boundary is not associated with a major syntactic phrase boundary whereas the 2nd AP boundary is.

**Fig 3:** Syllable duration (s) for each boundary type (AP-internal, AP, ip and IP) for all speakers in normal and fast speech rates.

References


The Hague: Mouton de Gruyter.


INTRODUCTION

The existence of an intermediate level of phrasing, the intermediate phrase (ip), has been previously proposed to account for specific constructions such as tag-questions, preposed or postposed thematic constituent. According to Jun & Fougeron (2000), this constituent would be marked by either a L- or a H- edge tone (depending on the illocutionary value of the utterance), though its distribution seems to be mainly restricted to early focus question and statement utterances.

Arguments for the existence of an ip in French have been previously proposed to account for specific constructions such as tag-questions, preposed or postposed thematic constituent. According to Jun & Fougeron (2000), this constituent would be marked by either a L- or a H- edge tone (depending on the illocutionary value of the utterance), though its distribution seems to be mainly restricted to early focus question and statement utterances.

1. The emergence of an intermediate prosodic level (ip) in French is not simply linked to a marked construction

2. An ip boundary might appear within all focus utterances when the syntactic structure allows it: an alignment constraint (ALIGN-XP,R, Selkirk 1986) conspires to place an ip boundary to the right of a maximal syntactic projection.

3. The ip boundary (1) might be signaled by prosodic cues that are stronger than the ones associated to ip-internal AP boundaries (2).

HYPOTHESIS

1. The emergence of an intermediate prosodic level (ip) in French is not simply linked to a marked construction

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3. The ip boundary (1) might be signaled by prosodic cues that are stronger than the ones associated to ip-internal AP boundaries (2).

METHOD

Stimuli

40 experimental sentences with several target syllables in 4 contexts:

1. within a prosodic word
   - Le corridor de cette maison nécessite un grand ménage
   - “The house corridor requires a spring cleaning”

2. before an AP boundary which is not associated with the edge of a maximal projection for a higher level syntactic constituent: ip-internal AP boundary
   - Le mari d’Amanda réclamait sa bicyclette
   - “Amanda’s husband asked for his bicycle”

3. before an AP boundary associated with the edge of a maximal projection for a higher level syntactic constituent: ip boundary
   - Gregor demandait la musique
   - “Gregory asked for the musician”

4. before an IP boundary.
   - Ton mari, après ce qu’on m’a dit, était marin
   - “My neighbor, as I was told, your husband was a sailor”

Participants and Procedure

10 native speakers of French took part in the experiment.

- Reading task (with 4 repetitions)
  - The sentences were read in both normal and fast speech rates (for a total of 3200 utterances)
  - In the 4 contexts we measured the duration of:
    - the target vowels: /i/, /a/
    - the target syllables: /ii/, /aa/, /ii/, /aa/

RESULTS

Vowel lengthening for each boundary type for all speakers in normal and fast speech rates

There is an interaction between boundary type and vowel lengthening in normal speech rate.

Vowel length is significantly longer before an ip boundary than before an AP boundary (size effect: 15 ms) in normal speech rate.

We find a similar effect for syllable lengthening.

CONCLUSIONS

Our results show that preboundary syllable length increases with prosodic boundary strength at normal speech rate. Specifically, the length of a final AP syllable increases when the AP boundary is also ip-final (and associated with a major syntactic phrase boundary). These results support the existence of an intermediate prosodic level in French. This intermediate level does not seem to be restricted to specific prosodic structures but might appear even within all focus utterances when the syntactic structure allows it.

References