



# Accentual **P**hrase **B**oundaries and **L**exical **A**ccess in **F**rench

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## Plan

- 1- Background
- 2-Method
- 3-Results
- 4-Discussion

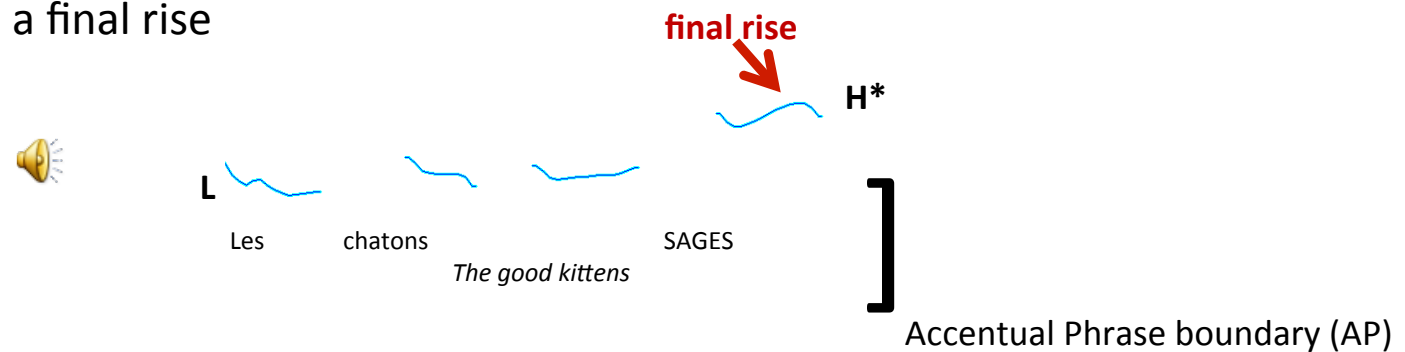


## Basics of French Prosody

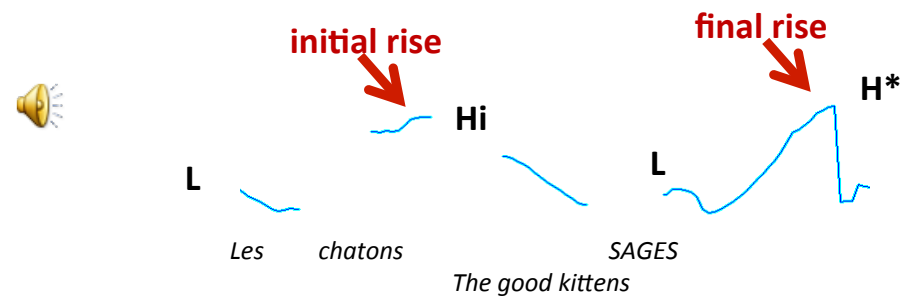
### In French:

- Stress belongs to a phrasal domain smaller than the Intonation Phrase: the Accentual Phrase (Jun & Fougeron 2000, Welby 2003)
- Models of French intonation include:

- a final rise



- an optional initial rise





## Theoretical framework

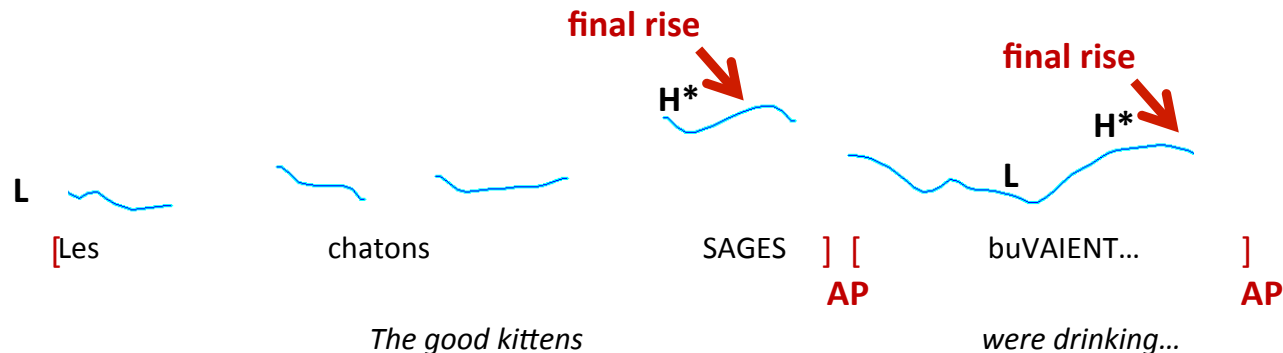
### 1- The syntax-based approach of Prosodic Phonology (Nespor & Vogel 1986, Selkirk 1984)

Definition: syntactically defined  
Prosodic unit: Phonological Phrase (PP)

Les chatons sages buvaient...  
[ [ [ PP ] ] ]  
*The good kittens were drinking...*

### 2- The tonal approach (Jun & Fougeron 1995, 2000, 2002)

Definition: tonally defined  
Prosodic Unit: Accentual Phrase (AP)





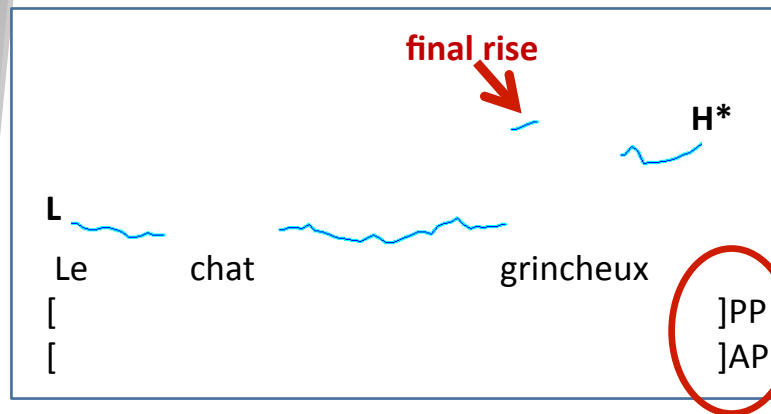
## Theoretical framework

### PP and AP boundaries do not always overlap

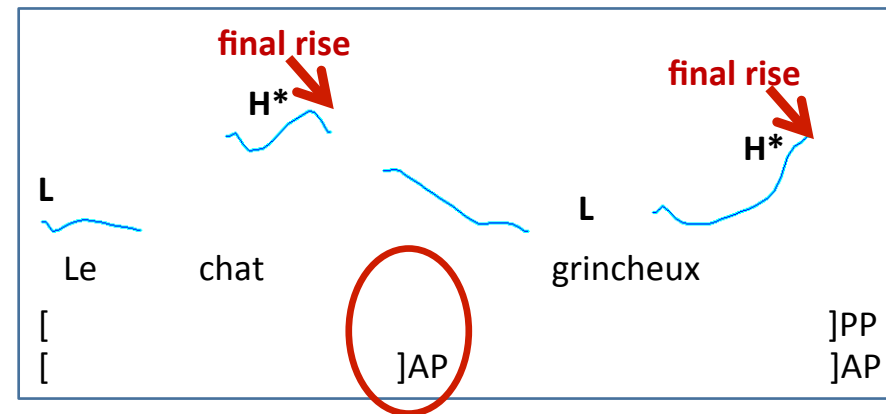
- PP: syntactically defined
- AP: tonally defined

[Le chat grincheux]PP

*The fussy cat*



PP and AP boundaries overlap



PP and AP boundaries do not overlap



## PP boundaries and lexical access in French

(Christophe & al. 2004)

### 1- Delayed lexical access: a lexical ambiguity occurred within a PP

**Temporary lexical ambiguity between:**  
*/ʃa/* « chat » (cat) and */ʃagʁɛ̃/* « chagrin » (sadness)

« Le livre racontait l'histoire d'un chat grincheux... »

[ ]PP

*The book dealt with the story of a fussy cat...*

**No lexical ambiguity**  
**No word begins with */\*ʃafa/***

« Le livre racontait l'histoire d'un chat fabuleux... »

[ ]PP

*The book dealt with the story of a fabulous cat...*



## PP boundaries and lexical access in French

(Christophe & al. 2004)

### 2- PP boundary removes lexical ambiguities

No ambiguity between /ʃa/ «chat» (cat) and /ʃagʁɛ̃/ «chagrin» (sadness)

« D'après ma sœur le gros chat grimpaît aux arbres. »  
PP PP

*According to my sister the big cat was climbing trees*

**BIAS:**

**Prosodic units are only defined in syntactic terms**

Christophe et al. observed the effect of a syntactic boundary and not the effect of a prosodic boundary



# Accentual Phrase Boundaries and Lexical Access in French

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Background

Method

Results

Discussion

## Issue

**Do AP boundaries induce the same effect as PP boundaries in removing temporary lexical ambiguity?**





## Method

### Stimuli

#### Replication of Christophe and al.'s experiment (2004)

| Experiment 1         | Within a PP  | At a PP boundary  |
|----------------------|--|---|
| <b>Ambiguous</b>     | ... sur [ce <u>chat grincheux</u> ]PP...<br>... about this fussy cat...    | ...[son beau <u>chat</u> ]PP <u>grimpe</u> ]PP...<br>...his beautiful cat was climbing up...  |
| <b>Non Ambiguous</b> | ... sur [ce <u>chat fa*</u> buleux]PP...<br>... about this fabulous cat... | ... [son beau <u>chat</u> ]PP <u>cou*</u> rrait]PP...<br>... his beautiful cat was running... |

#### Ambiguity at an AP boundary (tonally defined)

| Experiment 2         | Within a AP                                       | At an AP boundary within a PP                                |
|----------------------|---|--|
| <b>Ambiguous</b>     | ... sur [ce <u>chat grincheux</u> ]AP...<br>[ ]PP | ... sur [ce <u>chat</u> ]AP <u>grincheux</u> ]AP...<br>[ ]PP |
| <b>Non Ambiguous</b> | ... sur [ce <u>chat fa*</u> buleux]AP...<br>[ ]PP | ... sur [ce <u>chat</u> ]AP <u>fa*</u> buleux]AP...<br>[ ]PP |

### Participants and Procedure

- 40 native speakers of French in each experiment
- Word-monitoring task

### Measures

Reaction times data relative to target word offset



# Accentual Phrase Boundaries and Lexical Access in French

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**You will see a word on the screen and then hear a sentence on your headphones.**

**You have to click on the button as soon as you hear the word in the sentence.**

**CHAT**

**Give your response as soon as possible**

**Are you ready?**



## Hypotheses

**1- Delayed lexical access** when the lexical ambiguity occurs **within a PP/AP**

**2- No delayed lexical access** when the lexical ambiguity occurs **at a PP/AP boundary**



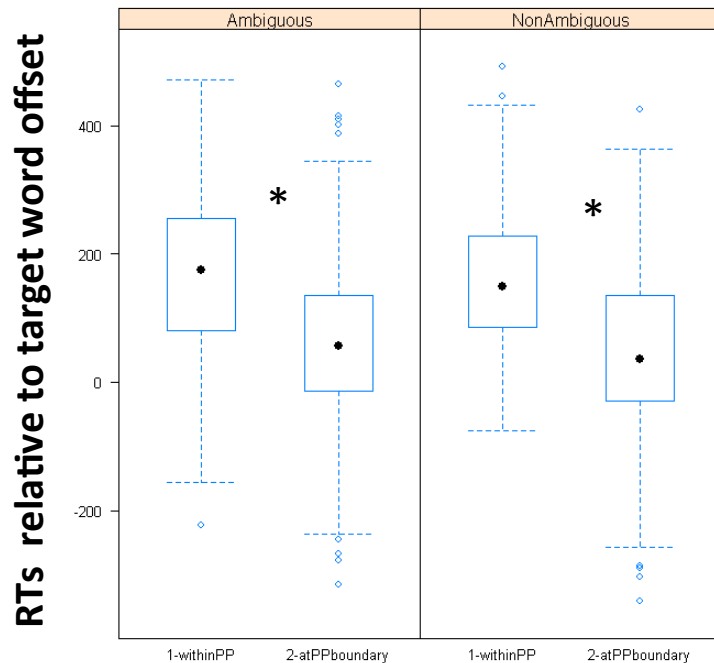
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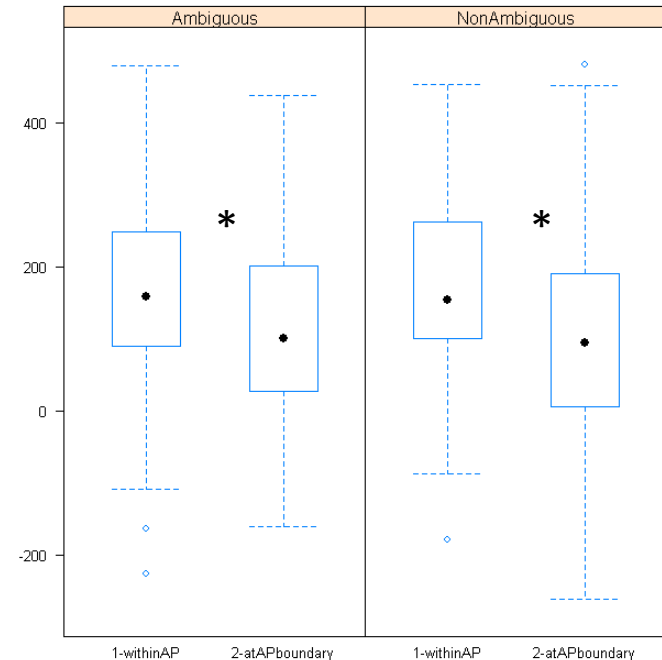
## Results

### Experiment 1



No significant effect of Ambiguity  
Significant effect of PP boundary

### Experiment 2



No significant effect of Ambiguity  
Significant effect of AP boundary

**AP boundaries induce the same effect as PP boundaries  
in speeding up lexical decision task**



## Discussion

**Contrary to Christophe & al. study's, no effect of lexical ambiguity in our data**

**This could be explained by the absence of competitors in our fillers**

**target word: CHAT**

/ʃa/  
*cat*

**competitor: CHApeau**

/ʃapo/  
*hat*

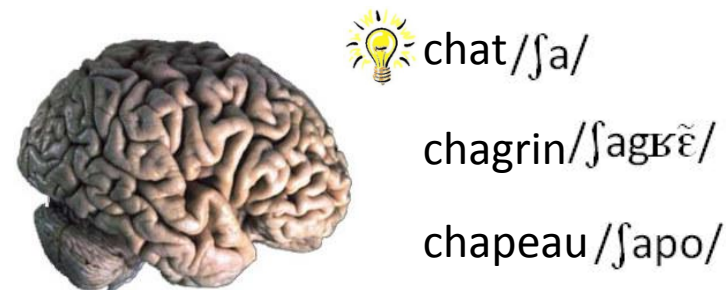
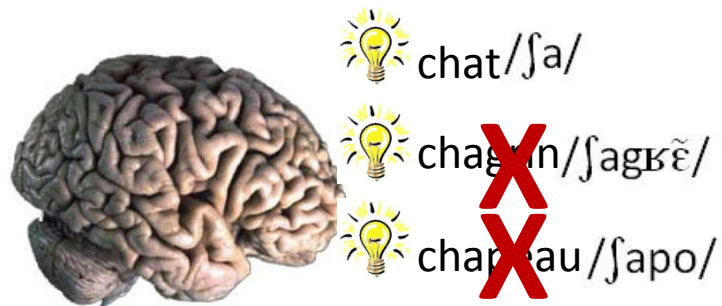
**Participants may answer at the end of the syllable and not at the end of the word**



## Implications of the results

1- There is a need to take into account prosodic (tonal and duration) cues in lexical access models

2- We need to understand when prosodic information is computed





## Conclusions

- **AP boundaries** induce the same effect as PP boundaries in **speeding up lexical decision** task
- **Acoustic and tonal cues** need to be controlled separately from syntactic structure in lexical access studies

## Perspectives

- To replicate the experiment **in inducing an explicit ambiguity effect**
- To test the AP boundary effect in **a priming experiment**



# Thank you for your attention!

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