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# Ambiguity advantage in word recognition

## Introduction

Several studies have shown that ambiguous words are recognized faster than unambiguous ones when presented in isolation (e.g., Borowsky & Masson, 1996). Many accounts of this so-called ambiguity effect hypothesize an activation feedback from the different meanings to the lexical entry representing the ambiguous word. However, recent results challenged this account showing a disadvantage or no advantage for ambiguous words having unrelated meanings (homonyms), and an advantage for polysemic words, having related senses (Klepousniotou & Baum, 2007; Rodd et al., 2002). Three experiments were designed to test the hypothesis of the ambiguity advantage in visual and auditory lexical decision task, for French homonyms showing high-polarity (dominant meaning frequency clearly higher than subordinate meaning one) or low-polarity.

## Method

### Material: words (Exp. 1, 2 & 3)

Ambiguity	Polarity	
	low-polarity	high-polarity
<b>ambiguous word *</b>	bise bat <sup>†</sup>	parquet belt <sup>†</sup>
<b>matched ** unambiguous word</b>	noce cat <sup>†</sup>	prairie barn <sup>†</sup>
Dominant meaning frequency	from .51 to .80	from .87 to .99

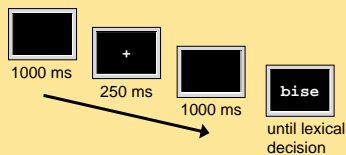
\* Homonyms and not polysemic words according normative studies.  
\*\* on familiarity, frequency, letters, phonemes & syllables numbers, bigram frequency, O & P unicity points, O & P neighborhood sizes and frequencies.  
† adaptation in English

### Material: nonwords (foils)

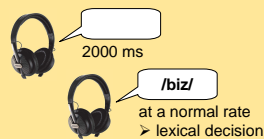
- **Exp. 1:** Illegal nonwords (e.g., *tnpea*) versus pseudohomophones (e.g., *pante*)
- **Exp. 2 & 3:** Pronounceable nonwords (e.g., *famone*)

### Procedure

#### Exps. 1 & 3: visual

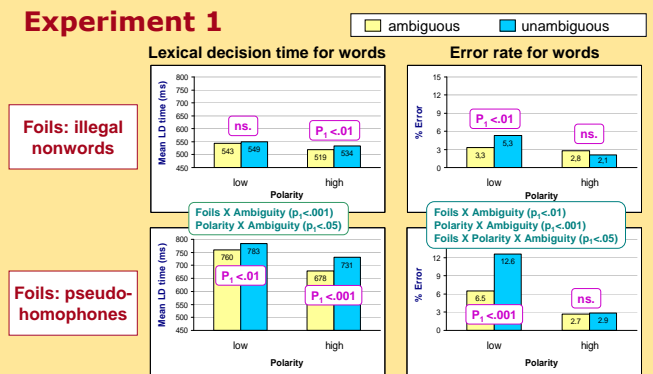


#### Exp. 2: auditory

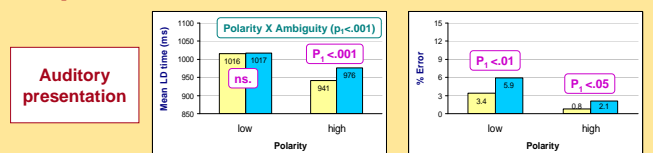


## Results

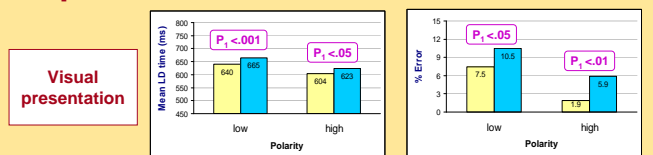
### Experiment 1



### Experiment 2



### Experiment 3



## Discussion

- Ambiguity advantage for almost all comparisons and no ambiguity disadvantage.
  - Ambiguity advantage occurs also for homonymy in visual and auditory word recognition and not restricted to polysemic words.
  - Activation feedback from the different meanings to the lexical entry representing the ambiguous word and no competition between meanings at the semantic level (see also Hino et al., 2006).
- Ambiguity advantage greater when foils are pseudohomophones than when they are illegal nonwords.
  - Activation feedback from meanings greater when longer responses and deeper word processing.
- Trend to a larger ambiguity advantage for high-polarized homonyms than for low-polarized homonyms.
  - To be discussed

### References

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- Hino, Y., Pexman, P. M., & Lupker, S. J. (2006). Ambiguity and relatedness effects in semantic tasks: Are they due to semantic coding? *Journal of Memory and Language*, 55, 247-273.
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- Rodd, J., Gaskell, G., & Marslen-Wilson, W. (2002). Making Sense of Semantic Ambiguity: Semantic Competition in Lexical Access. *Journal of Memory and Language*, 46, 245-266.