Ambiguity advantage in word recognition

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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 that subordinate meaning one) or low-polarity.

Method

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

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

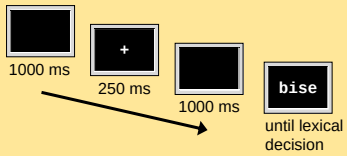
* Homonyms and not polysemic words according normative studies.
** on familiarity, frequency, letters, phonemes & syllables numbers, bigram frequency, O & P unicity points, O & P neighborhood sizes and frequencies.
† adaptation in English

Material: nonwords (foils)

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

Procedure

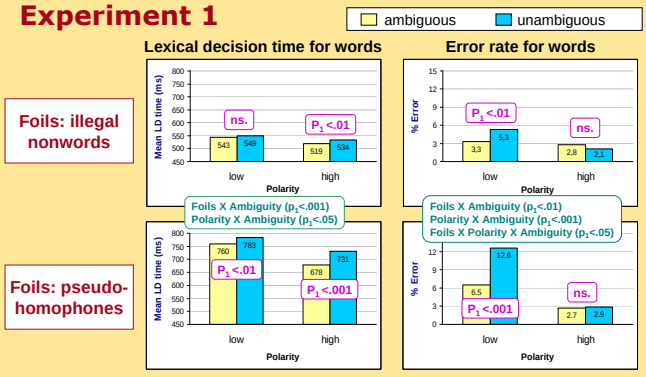
Exps. 1 & 3: visual



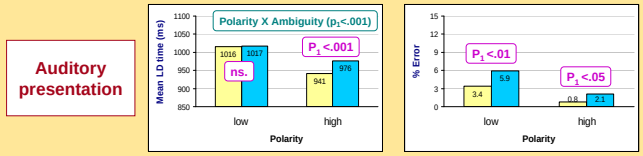
Exp. 2: auditory

Results

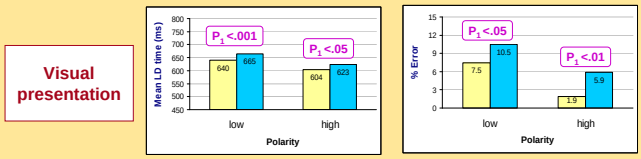
Experiment 1



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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