



**HAL**  
open science

## Ambiguity advantage in word recognition

Pierre Thérrouanne, Maude Las Dit Peisson, Jessica Roth

► **To cite this version:**

Pierre Thérrouanne, Maude Las Dit Peisson, Jessica Roth. Ambiguity advantage in word recognition. XVth Meeting of the European Society for Cognitive Psychology (ESCoP), Aug 2007, Marseille, France. 2007. hal-01740010

**HAL Id: hal-01740010**

**<https://hal.univ-cotedazur.fr/hal-01740010>**

Submitted on 21 Mar 2018

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

**P. Théroutane,  
M. Las Dit Peisson & J. Roth**

Université de Nice - Sophia Antipolis  
Laboratoire de Psychologie Expérimentale et Quantitative  
[therouan@unice.fr](mailto:therouan@unice.fr)

# 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

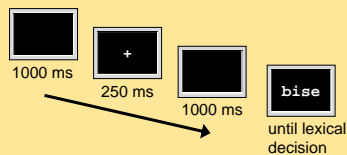
\* Homonyms and not polysemic words according normative studies.  
\*\* on familiarity, frequency, letters, phonemes & syllables numbers, bigram frequency, O & P unicity points, O & P neighborhood sizes and frequencies.  
† adaptation in English

### Material: nonwords (foils)

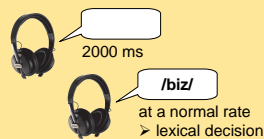
- **Exp. 1:** Illegal nonwords (e.g., *tnpea*) versus pseudohomophones (e.g., *pante*)
- **Exp. 2 & 3:** Pronounceable nonwords (e.g., *famone*)

### Procedure

#### Exps. 1 & 3: visual

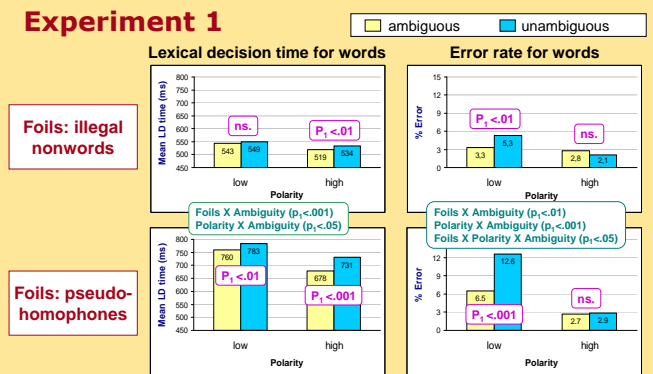


#### Exp. 2: auditory

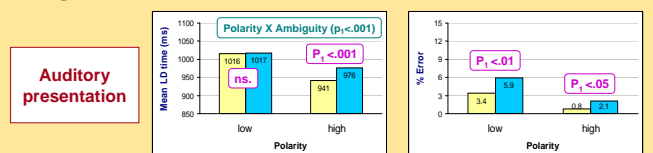


## Results

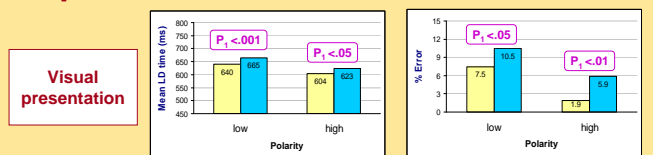
### Experiment 1



### 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

- Borowsky, R., & Masson, M. E. J. (1996). Semantic ambiguity effects in word identification. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 22, 63-85.
- 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.
- Klepousniotou, E., & Baum, S. R. (2007). Disambiguating the ambiguity advantage effect in word recognition. *Journal of Neurolinguistics*, 20(1), 1-24.
- 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.