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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
ambiguous word *	bise bat [†]	parquet belt [†]
matched ** unambiguous word	noce cat [†]	prairie barn [†]
Dominant meaning frequency	from .51 to .80	from .87 to .99

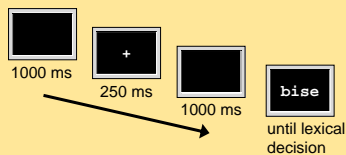
* Homonyms and not polysemic words according normative studies.
** on familiarity, frequency, letters, phonemes & syllables numbers, bigram frequency, O & P unicity points, O & P neighborhood sizes and frequencies.
† adaptation in English

Material: nonwords (foils)

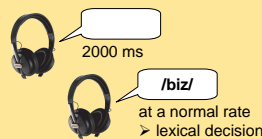
- **Exp. 1:** Illegal nonwords (e.g., *tnpea*) versus pseudohomophones (e.g., *pante*)
- **Exp. 2 & 3:** Pronounceable nonwords (e.g., *famone*)

Procedure

Exps. 1 & 3: visual

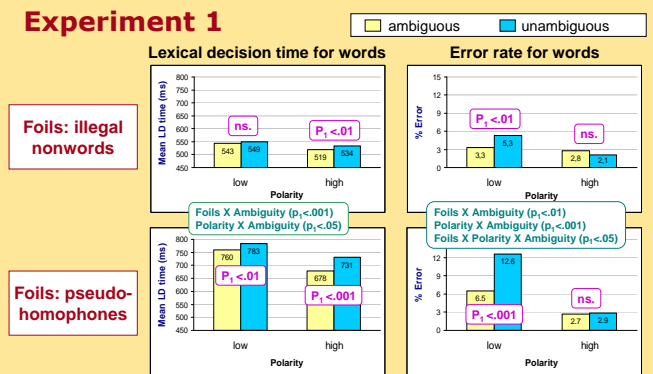


Exp. 2: auditory

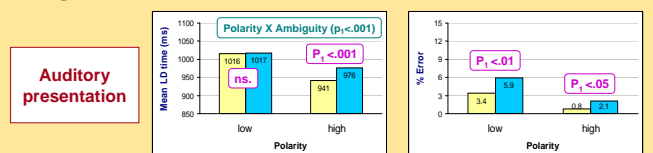


Results

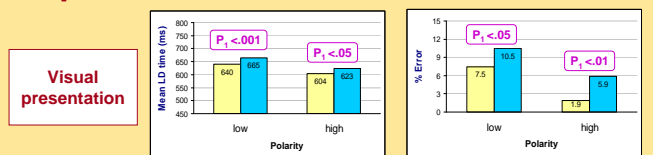
Experiment 1



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

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