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 than subordinate meaning one) or low-polarity.

Method

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

<table>
<thead>
<tr>
<th>Polarity</th>
<th>low-polarity</th>
<th>high-polarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ambiguous word *</td>
<td>bise</td>
<td>parquet</td>
</tr>
<tr>
<td>matched **</td>
<td>bac’</td>
<td>belt’</td>
</tr>
<tr>
<td>unambiguous word</td>
<td>noce</td>
<td>prairie</td>
</tr>
</tbody>
</table>

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.

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

Procedure

Exp. 1 & 3: visual

Exp. 2: auditory

1000 ms until lexical decision

1000 ms at a normal rate

Results

Experiment 1

Lexical decision time for words

Error rate for words

Experiment 2

Auditory presentation

Experiment 3

Visual presentation

Discussion

- Ambiguity advantage for almost all comparisons and no ambiguity disadvantage.
  - Ambiguity advantage occurs also for homonym 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


