A contrastive look at the processing of metaphor and hyperbole

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She was always getting lost because the university was enormous; it was a forest.

The back yard definitely needed pruning; it was a forest.

We went to a national park at the weekend; it was a forest.

Introduction

• Processing of metaphor and hyperbole compared in a reading-time study.
  • A difference in reading times could suggest processing differences between the two tropes.
  • This is not predicted by either a traditional Gricean account of figurative language, or a psychologically detailed unified concept construction account.

Background

• Based on a Gricean account of meaning, metaphorical and hyperbolic interpretations have been considered to be derived from the literal interpretation of a sentence, which must be arrived at first. (Grice 1989, Gentner and Wolff 1997)

However empirical evidence indicates that:

• People do not take any longer to read metaphoric statements than they do to read literal statements. (Ortony, Schallert, Reynolds and Antos 1978, kindth, Lima and Carol 1994)
• Metaphoric interpretations appear to be available right from the beginning of processing. (Glucksberg, Glibo and Bookin 1982)

• Relevance theorists (Carston 2002 and Wilson and Carston 2007) and Recanati (2004) propose that metaphors, hyperboles, and approximations are all the outcomes of the same interpretive process of ad hoc concept construction.

• Some content constitutive feature(s) of the lexical concept gets dropped, and is no longer a logical property of the ad hoc concept.

Gernsbacher et al. 2001 and Rubio-Fernandez 2007 found evidence of active suppression taking place in metaphor comprehension, which they argue, provides support for the concept construction accounts of metaphor comprehension, as the ‘dropping’ could be the result of suppression.

Focal Findings

• Heavier dependence on memory
  • Reading times after metaphor contexts were slower than both after hyperbolic (p = .002) and literal contexts (p < .001).

• Generally more processing effort
  • Longer reading times after long contexts than after short contexts (p<.001).
  • No reading time difference between hyperbolic and literal biasing contexts.
  • Reading times after metaphor contexts were slower than both after hyperbolic (p = .002) and literal contexts (p < .001).

Method

60 English speakers read 21 target sentences in 3 priming conditions:

- 7 x metaphorical priming contexts
- 7 x hyperbolic contexts
- 7 x literal contexts

30 participants saw short contexts (5-13 words)
30 participants saw longer contexts (55-86 words)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Target Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short</td>
<td>The interview had been really hard; Her brother pushed past her to get more cake;</td>
</tr>
<tr>
<td>Target sentence:</td>
<td>It had been an assault.</td>
</tr>
<tr>
<td>Long</td>
<td>I knew that getting such a good job was going to be really tough. I just thought it was worth applying anyway and seeing how it goes. My dad prepared me for the interview by asking me loads of questions. I wore my best suit and I think I looked smart. Nothing could have prepared me though. That interview was really hard;</td>
</tr>
<tr>
<td>Target sentence:</td>
<td>It had been an assault.</td>
</tr>
</tbody>
</table>

Results

• Longer reading times after long contexts than after short contexts (p<.001).
• No reading time difference between hyperbolic and literal biasing contexts.
• Reading times after metaphor contexts were slower than both after hyperbolic (p = .002) and literal contexts (p < .001).

Discussion

• Longer reading times of target sentences in the long context condition
  • Heavier dependence on memory
  • Generally more processing effort

• Longer reading times in the metaphorical context than in the literal condition.
  • The role of suppression in metaphor processing (Rubio-Fernandez 2007)
  • Here we used completely novel materials

• Metaphors and literal conditions are similar. Metaphors take longer than both.
  • This suggests processing differences between metaphor and hyperbole.

Tentative Conclusions

• The data indicate that there are processing differences between metaphor and hyperbole which are not predicted by any account which treats metaphor and hyperbole the same, including Gricean inspired accounts.
• The findings are not inconsistent with the broad outline of either unified account, as both metaphor and hyperbole could still be the result of on-line, ad hoc concept construction.
• The findings are inconsistent with a more detailed unified account in which the ‘dropping’ of inconsistent features, as is argued to take place in the processing of both metaphor and hyperbole, is the result of active suppression, as was found to be the case with metaphor. (Rubio-Fernandez 2007)

Experimental Context

- Short: S	n=11
- Long: S+n=19

Estimated Marginal Means of MEASURE 1

- Metaphor
- Hyperbole
- Literal

Data Sources

