The Influence of Semantics on Figure Assignment: Unmasked Primes

Rachel M. Skocypec & Mary A. Peterson

**BACKGROUND**
Past Experience Influences Figure Assignment

![Image](https://example.com/image1)

Semantics are activated during fig assignment

**QUESTION**
Can semantic activation from a word prime increase \( P(\text{Fam} = \text{Fig}) \)?

If so, greater \( P(\text{Fam} = \text{Fig}) \) when preceded by basic-level prime

**EXPERIMENTS 1 & 2 (90-ms Test Displays)**

![Image](https://example.com/image2)

**RESULTS EXPS. 1 & 2**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Prime Type</th>
<th>Exp. 1 (N = 32)</th>
<th>Exp. 2 (N = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up</td>
<td>BL Unr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inv</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

90 ms:
- Hypothesis generated by test display effective (Up > Inv)
- Hypothesis generated by word prime effective (BL > Unr)
- Hypotheses not integrated

→ Word primes generate superordinate category feature predictions?
Priming effect not configuration based; not orientation dependent

**EXPERIMENT 3 & 4 (100-ms Test Displays)**

![Image](https://example.com/image3)

**RESULTS CONT’D EXPS. 3 & 4**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Prime Type</th>
<th>Exp. 3 (N = 32)</th>
<th>Exp. 4 (N = 32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up</td>
<td>BL Unr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inv</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

100 ms:
- \( P(\text{Fam} = \text{Fig}) \): Up (BL - Unr) > Inv (BL - Unr)
Configuration based; orientation dependent

Basic-Level: Object hypothesis generated by test display integrates with hypothesis generated by word prime

→ Configuration based re-entrant predictions confirmed

Unrelated: Object hypothesis generated by test display competes with hypothesis generated by word prime

→ Only superordinate category feature predictions confirmed (predictions from word prime)

**CONCLUSIONS**
Predictions generated by a word prime can affect figure assignment

90-ms test display exposures: prime-based predictions operate at a coarse category level (not integrated with orientation specific hypotheses from display)

100-ms test display exposures: prime-based predictions & orientation-specific test display-based predictions interact (diff results for congruent/incongruent)

References