Reading Instructions: When Word Ordering Matters

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Question
Does the language of the instruction affect the understanding (and the execution) process?

Dixon (1987)

Description-first
This will be the picture of a wagon
Draw a long rectangle and two circles underneath

Description-last
Draw a long rectangle and two circles underneath
This will be the picture of a wagon

Results

<table>
<thead>
<tr>
<th></th>
<th>Comp Sent</th>
<th>Descr Sent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description-first</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Description-last</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>
Text-Editing Experiment

Study:
List 1: Downcase = r character = c
List 2: Delete = c line = r

Description first
To downcase the character at position 38, press keys ‘c’ and ‘r’

Description last
Press keys ‘c’ and ‘r’ to downcase the character at position 38

Results Split by Block

Results

Interpretation-Based Processing (INP)

Syntactic + semantic processing (goes from words to an interpretation)

If the interpretation is part of a script, that script may help further comprehension
The Interpretation

Interpretation = a known fact that overlaps most with the current sentence

<table>
<thead>
<tr>
<th></th>
<th>Sentence</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;old&quot; information</td>
<td>At the restaurant the man paid the waiter</td>
<td>The customer paid the waiter</td>
</tr>
<tr>
<td>&quot;new&quot; information</td>
<td>Tom Tykwer directed &quot;The princess and the warrior&quot;</td>
<td>The person directed a play</td>
</tr>
</tbody>
</table>

Locality of Interpretation

Simulation of Dixon (1987)

Description first
- This will be the picture of a wagon
- Draw a rectangle and two circles underneath
- A wagon is drawn by animals
- A wagon has a rectangular body and four wheels

Description last
- Draw a rectangle and two circles underneath
- A house has a rectangular body
- Lollipops are circular
- ???

Simulation Script

Restaurant Script
- The man paid the waiter
- The hostess seated the customers
- The customer paid the waiter
- The waiter brought the food

Doctor Script
- "..."

Concert Script
- "..."
Model's Results

![Bar chart showing Model's Results]

Conclusions

The exact language of the instruction may or affect the comprehension

If comprehension is to be effective, always start with the most known fact

Comprehension will not be affected by order if all facts mentioned in the instructions are equally salient

Simulation of the Text-Editing Experiment

Description first
To downcase the character at position 38, press keys 'c' and 'r'

Description last
Press keys 'c' and 'r' to downcase the character at position 38

Press 'y' and 'c' to downcase a character
Press 'y' and 's' to downcase a character
Press 'l' and 's' to delete a line
Background knowledge