

# Reading Instructions: When Word Ordering Matters

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## Question

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

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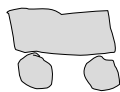
## Dixon (1987)

Description-first

*This will be the picture of a wagon  
Draw a long rectangle and two circles underneath*

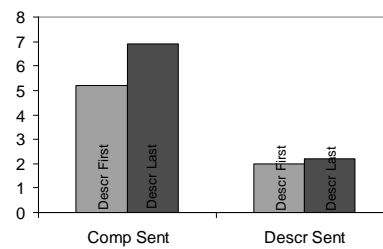
Description-last

*Draw a long rectangle and two circles underneath  
This will be the picture of a wagon*



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## Results



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## Text-Editing Experiment

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

Description first

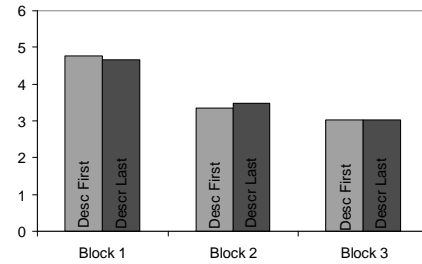
*To downcase the character at position 38, press keys 'c' and 'r'*

Description last

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

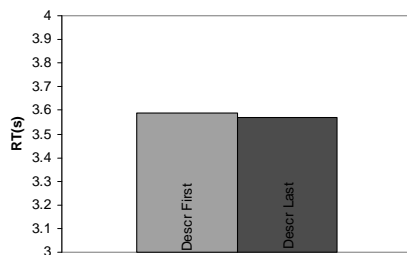
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## Results Split by Block



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## Results



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## 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

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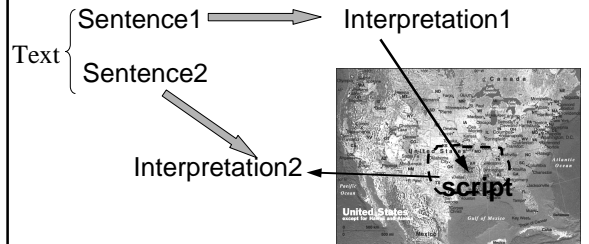
## The Interpretation

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

	Sentence	Interpretation
"old" information	<i>At the restaurant the man paid the waiter</i>	<i>The customer paid the waiter</i>
"new" information	<i>Tom Tykwer directed "The princess and the warrior"</i>	<i>The person directed a play</i>

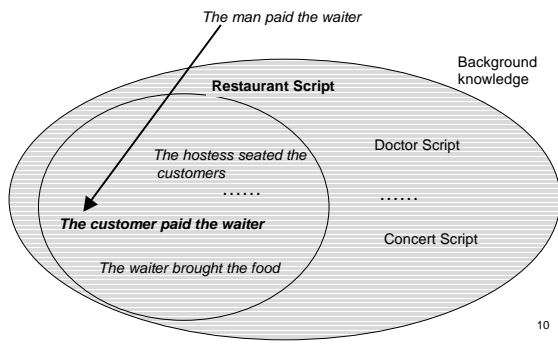
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## Locality of Interpretation



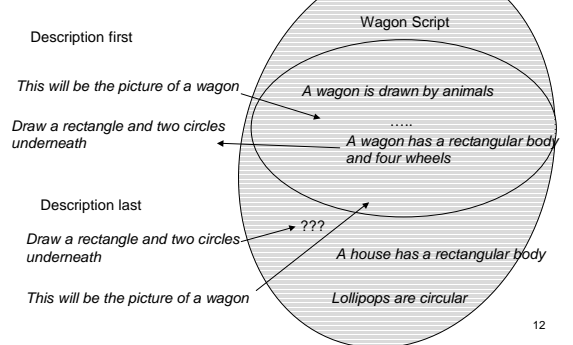
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## Interpretations & Scripts



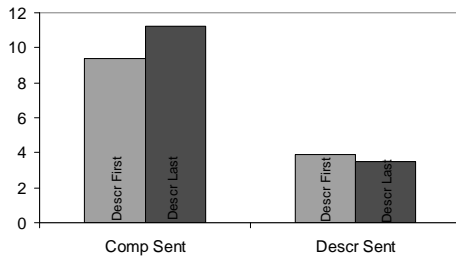
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## Simulation of Dixon (1987)



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## Model's Results



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## 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

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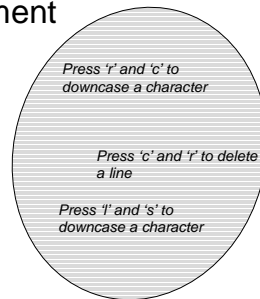
## Simulation of the Text-Editing Experiment

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



Background knowledge

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