

## Storage and Computation in Syntax: Evidence from relative clause priming

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July 21, 2011

## Research question

- **What is the nature of syntactic representations?**
  - **What is stored vs. what is computed on-the-fly?**
  - Syntactic priming: A way to investigate this question
- Experiment: Two web-based studies (replicating previous findings from lab studies)

## The lexicon

Definition of *lexicon*: "the vocabulary of a language, an individual speaker or group of speakers, or a subject"

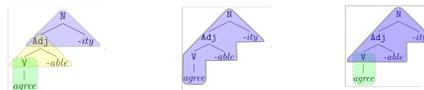
Words



## The lexicon

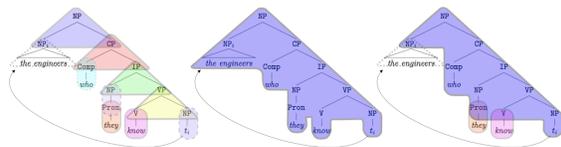
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Morphology



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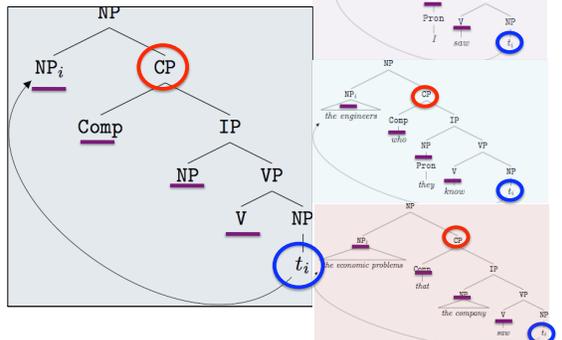


Syntax?

## Research Question

- Which syntactic representations can be stored in long-term memory?
- Test case: object-extracted relative clauses (ORCs)

## ORCs

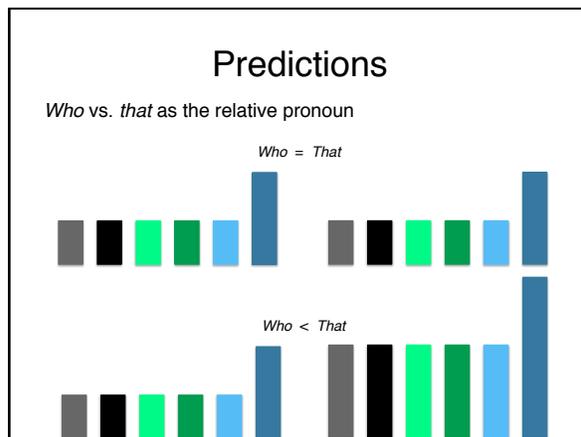
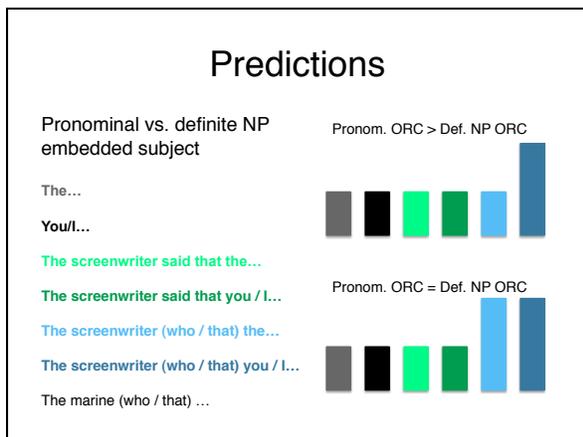


## Object relative clauses

Exhibit large production frequency differences dependent upon

- The type of noun in the embedded subject position  
Embedded pronouns > embedded definite NPs (Roland et al., 2007)
- The type of relative pronoun (e.g. *that* vs. *who*)  
*That* > *who*





### Method

#### Sentence completion task

The cat didn't like.....

The entrance to the lab was.....

The nurse assisted the child because.....

The supplier knew that.....

The screenwriter who the.....

The marine who.....

The coach talked to the player because.....

The spy thought that.....

The shopper enraged the saleswoman because.....

The mosquito.....

The bread in the supermarket.....

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## Sample completions

**Def. NP Baseline:** The... donor saved the dying child's life.

**Target:** The manicurist who... did my nails was talkative.

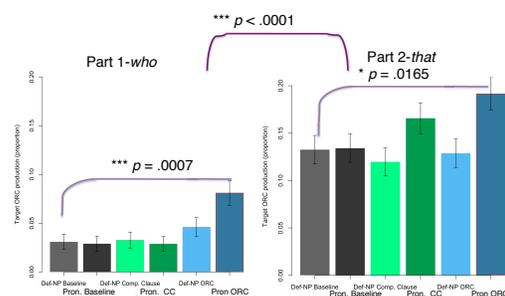
**Pronom. ORC:** The valet who you... gave your car to was very helpful.

**Target:** The servant who... cleaned the house was very nice.

**Def. NP ORC:** The guru who the... actress relied on was a fraud.

**Target:** The hostage who... had been released went home to his family.

## Results



## Results: Summary

Do we see priming of ORCs?	✓
Do we see more priming for pronominal ORCs than definite-NP ORCs?	✓
Do we see more priming for that vs. who as the relative pronoun?	✓
Do we see increased production of ORCs to other complicated structures w/ pronouns?	✗

## Summary

- First evidence for priming of object relative clauses, which are complex and abstract syntactic structures
- The priming is sensitive to type of NP in embedded subject position and the relative pronoun used
- **First evidence that *specific lexical items* (e.g. *that* or *you*) are stored together with abstract structure**

