Capturing scope ambiguity with Tier-Local Syntax

Lei Liu

Stony Brook University lei.liu.1@stonybrook.edu

CompPhon workshop Dec 12, 2016

Outline

- 1 Puzzle: C-Command vs. TSL syntax
 - C-Command
 - TSL Syntax
- 2 Proposal: TSL with proper C-Command domain
- 3 Prediction: wh-in-situ and QP-domain correlation

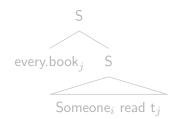
Example

(1) Someone read every book

$$E \prec \forall, \forall \prec E$$

▶ The scope of $\alpha =$ the C-Command domain of α . (May 1985)

$$\begin{array}{c|c} \exists \succ \forall & \forall \succ \exists \\ \\ \mathsf{Someone}_i & \mathsf{every.book}_j \\ \mathbb{C} & \mathbb{C} \\ \\ \mathsf{every.book}_i & \mathsf{Someone}_i \end{array}$$



C-Command
$$\sqrt{\frac{\text{Syntax}}{-\sqrt{(9)}}}$$

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$$S$$
every.book $_j$ S

Someone $_i$ read t_i

$$\begin{array}{c|c} & \mathsf{Syntax} & \mathsf{TSL} \\ \mathsf{C\text{-}Command} & \checkmark & \lnot \diagdown () _/ \lnot \end{array}$$

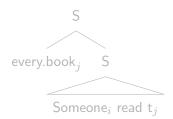
Example

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$$\exists \succ \forall$$
, $\forall \succ \exists$

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$\forall \prec E$	$\forall \succ \exists$
$Someone_i$	every.book $_i$
\mathbb{C}	\mathbb{C}
every.book $_i$	$Someone_i$



C-Command
$$\sqrt{\frac{\text{Syntax}}{-(9)}}$$

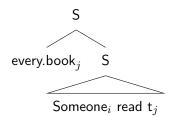
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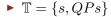
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$Someone_i$	every.book $_{i}$
\mathbb{C}	\mathbb{C}
every. $book_i$	$Someone_i$

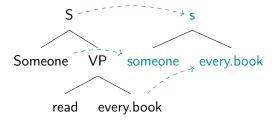


Puzzle Proposal Prediction References

TSL syntax

▶ Dependencies of syntax captured by Tier-based Strictly Local (TSL) grammars over trees (Graf 2016)





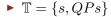
On the tier...

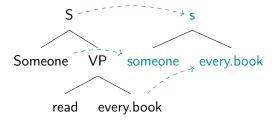
- ► C-Command gone
- ► Locality gained

Can TSL handle scope interpretation without C-Command? Yes!

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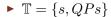
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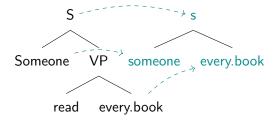
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On the tier...

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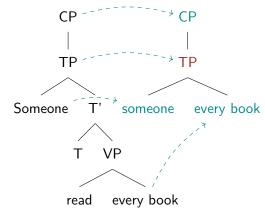
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Proposal

For a quantificational phrase:

- ► Higher on tier, higher in scope
- ► Ambiguous when mutual C-Command found in...
 - declarative sentences, within a TP
 - ▶ wh-questions, within a vP

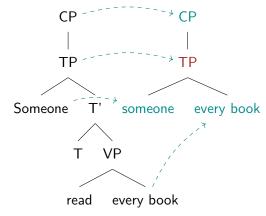
Declarative sentence



Ambiguous!

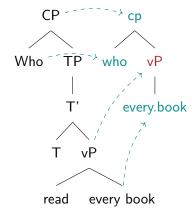
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Declarative sentence



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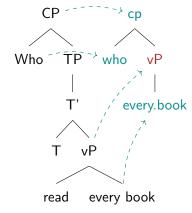
Wh-questions



(2) Who read every book?

who ≻ every.book!

Wh-questions



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- ▶ subject wh-questions are ambiguous in wh-in-situ languages
 - (3) Shenme.she yao.LE mei.wei xiangdao? what.snake bite.LE every.CL guide "What snake bit every guide?" $\exists \succ \forall, \ \forall \succ \exists$
- more "complex" the QPs, smaller the domain relevant for C-Command evaluation.
 - ▶ QP TP
 - ▶ wh, QP vF
 - ▶ double objects smaller than vF

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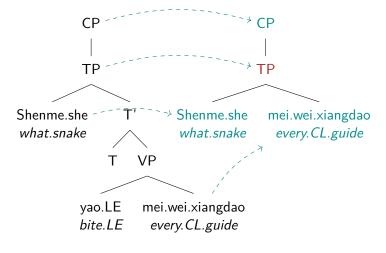
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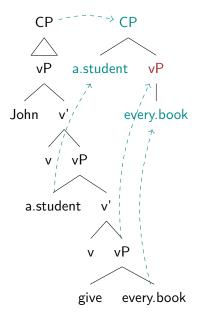
Puzzle Proposal **Prediction** References

Chinese subject wh-question



Ambiguous!

Double Object Construction



(4) John gave a student every book.

a.student ≻ every.book!

Reference

Graf, T. (2016). Computational parallels across language modules. Invited talk, September 12, Department of Linguistics, Yale University, New Haven, CT.

May, R. (1985). Logical Form: Its structure and derivation, volume 12. MIT press.