Semantics 1

June 14, 2012

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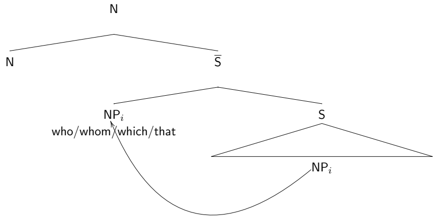
Relative clauses

Syntax: (simplified)

- category: $\overline{\mathsf{S}}$
- adjoined to N
- daughters of $\overline{\mathsf{S}}$ are
  - a relative pronoun (category NP), indexed with some index i
  - an S which contains an NP trace also indexed with i



Relative clauses

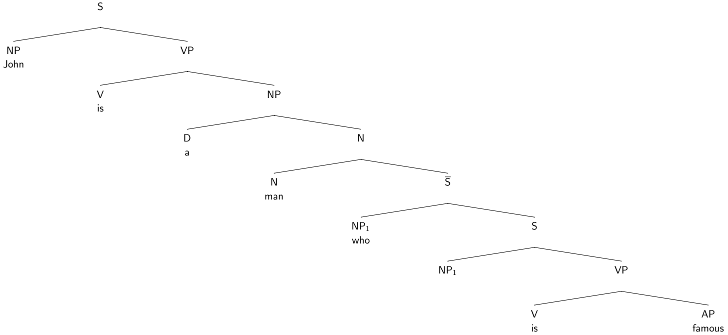
Semantics:

- lexicon: $\|that\| = \lambda P \lambda Q \lambda x \lambda s.Q(s,x) \wedge P(s,x)$ (and likewise for the other relative pronouns)
- trace:
  - If NP_i is a *wh*-trace:
    $$\|NP_i\| = x_i$$
- rule:
  - In a configuration $[_{\overline{S}} NP_i \quad S]$:
    $$\|\overline{S}\| = \|NP_i\|(\lambda x_i.\|S\|)$$

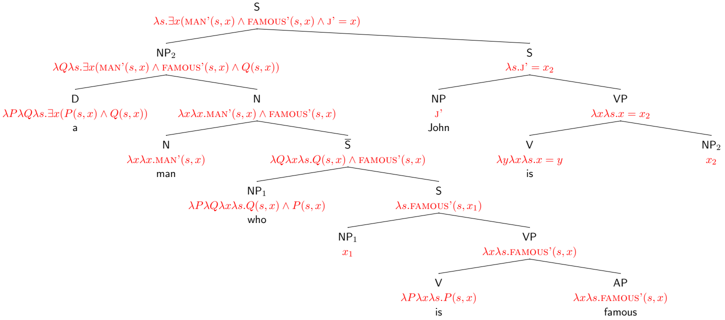
Relative clauses

(1) John is a man who is famous.

S-Structure:



LF:



This is equivalent to

$$\lambda s.\text{MAN'}(s, \text{J'}) \wedge \text{FAMOUS'}(s, \text{J'})$$

which is the interpretation of

(2) John is a man and John is famous.

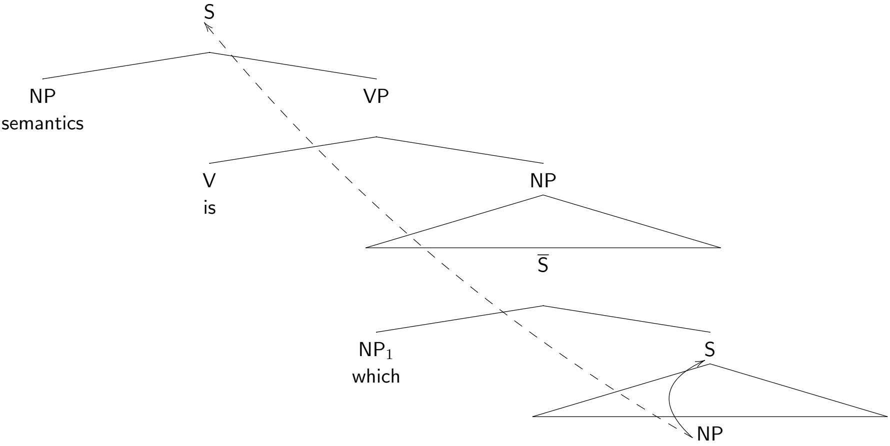
Relative clauses and quantification

(3) Semantics is no subject which a student likes.

- object NP is a quantifier that
  - contains a relative clause that
    - containts a quantifier

Relative clauses and quantification

(3) Semantics is no subject which a student likes.

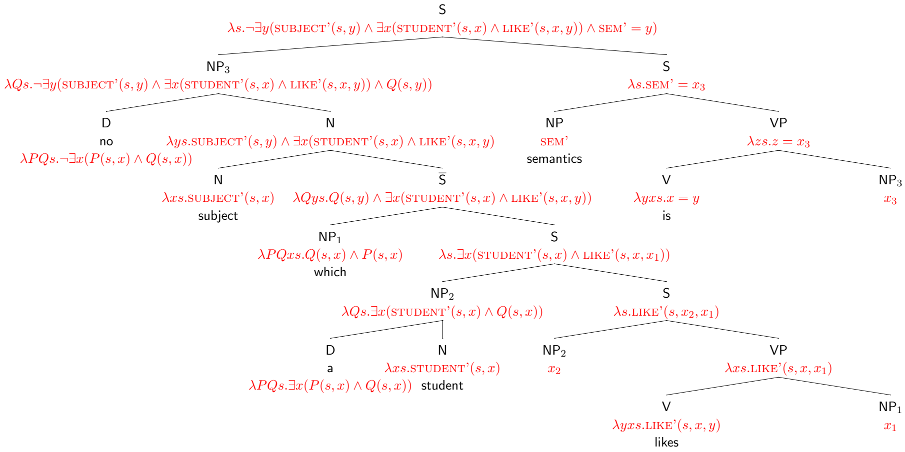


Relative clauses and quantification

(3) Semantics is no subject which a student likes.

- long QR: corresponds to *specific* reading:
  There is a particular student who doesn't like semantics.
- short QR:
  No student likes semantics

Relative clauses and quantification



Syntactic constraints on quantifier scope

- Quantifiers that are embedded inside a subordinate clause often cannot take scope at the level of the matrix clause.
- In derivational terms: QR across an $\overline{S}$-node is restricted.
- However, appropriate choice of context and lexical material frequently renders QR across $\overline{S}$ possible.

(1) Some men from every city showed up.

a. $\lambda s.\exists x(\text{MAN'}(s,x) \wedge \forall y(\text{CITY'}(s,y) \rightarrow \text{FROM'}(s,x,y)) \wedge \text{SHOW\_UP'}(s,x)$

b. $\lambda s.\forall y(\text{CITY'}(s,y) \rightarrow$
$\exists x(\text{MAN'}(s,x) \wedge \text{FROM'}(s,x,y) \wedge \text{SHOW\_UP'}(s,x)))$

(2) Some men [$_{\overline{S}}$ who lives in every city] showed up.

a. $\lambda s.\exists x(\text{MAN'}(s,x) \wedge \forall y(\text{CITY'}(s,y) \rightarrow$
$\text{LIVE\_IN'}(s,x,y)) \wedge \text{SHOW\_UP'}(s,x)$

b. *$\lambda s.\forall y(\text{CITY'}(s,y) \rightarrow$
$\exists x(\text{MAN'}(s,x) \wedge \text{LIVE\_IN'}(s,x,y) \wedge \text{SHOW\_UP'}(s,x)))$

(3) **But:** The man [$_{\overline{S}}$ who builds every television set] also repairs it.

a. the $>$ every: okay

b. every $>$ the: for many speakers also okay

Syntactic constraints on quantifier scope

(1) You will inherit a fortune [$_{\overline{S}}$ if every man dies].

  a. if $>$ every: okay
  b. every $>$ if: not possible

(2) John hissed[1] [$_{\overline{S}}$ that Smith liked every painting] .

  a. hiss $>$ every: okay
  b. every $>$ hiss: not possible

(3) **But:** John said [$_{\overline{S}}$ that Smith liked every painting]

  a. say $>$ every: okay
  b. every $>$ hiss: for many speakers also okay

[1] zischeln

Syntactic constraints on quantifier scope

- Indefinites (such as *a man*, *some woman*) and cardinal quantifiers (such as *three clouds*) can take arbitrarily wide scope.
- Wide scope readings of these NPs are called **specific** readings.
- Specific readings can be facilitated by modifiers such as *certain*, *particular*, or *specific*

(1) Most men $[_{\overline{S}}$ who read a particular book $]$ showed up.
   a. $\exists >$ most: okay
   b. most $> \exists$: also possible in appropriate contexts (e.g. if you continue *namely their dissertation.*)

(2) You will inherit a fortune if three of your relatives die.
   a. a fortune $>$ three of your relatives: okay (pragmatically odd in this context though)
   b. three of your relatives $>$ a fortune: okay

(3) John hissed that Smith abused a friend of mine.
   a. hiss $>$ a friend of mine: okay
   b. a friend of mine $>$ hiss: okay