

# **Tutorial “Quantification and binding” and “Intensionality”**

Session 8

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# Our agenda today

- Indexicality and *de se*
- Assignment 3
- Any questions?

# Indexicals

An utterance doesn't exist in a vacuum. A speech event takes place at a particular Time, World and Location, which involves a Speaker and Addressee(s).

Utterance-context: a tuple that consists of these parameters  
<Speaker, Addressee, Time, World, Location>

An indexical is a pronoun which targets these contextual coordinates:  
i.e. 'I' (targets Speaker ), 'you' (targets Addressee), 'here' (targets Location) and 'now' (targets Time).

# Indexicals are purely context-sensitive

Indexicals derive their meaning purely from a speech or thought context, i.e. their reference is rigidly fixed to the utterance-context.

(1) Jill to Susan at 5 pm on May 9 in the Irish pub:

Mary told me at 6 pm today in SUB that I looked tired.

[[I]]= Jill; [[I]]≠ Mary

Utterance-context: <Speaker<sub>Jill</sub>, Addressee<sub>Susan</sub>, Time<sub>5pm on May 9</sub>, World<sub>actual</sub>,  
Location<sub>Irish pub</sub>>

Intensional context: <Speaker<sub>Mary</sub>, Addressee<sub>Jill</sub>, Time<sub>6pm on May 9</sub>, World<sub>intensional</sub>,  
Location<sub>SUB</sub>>

# Indexical-shift

In some languages (e.g. Zazaki), the indexicals can denote the Author, Addressee, Time, World or Location of an intensional context.

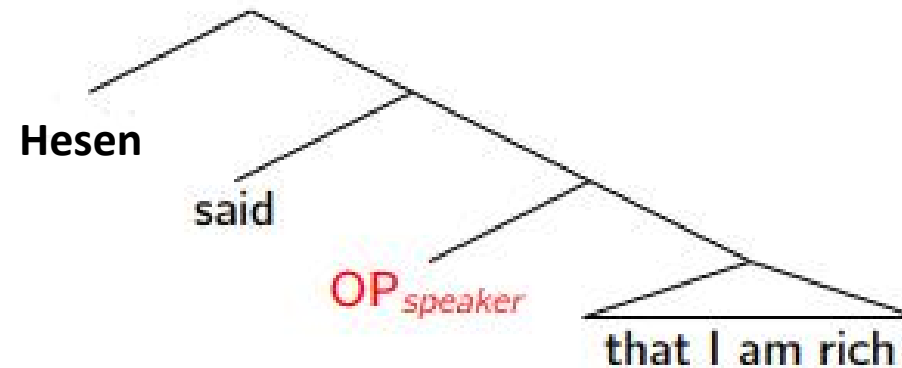
- (2) Heseni va ke ez dewletia.  
Hesen said that I rich.be
- a. 'Hesen said that **the speaker of the utterance context** is rich.'
  - b. 'Hesen said that **Hesen** is rich.'

Assume there were an operator embedded under the attitude predicate shifting the speaker parameter relative to which the embedded sentence is evaluated.

$$[\text{OP}_{\text{speaker}}]^{c,i,g} = \lambda p \in D_{\langle s, \langle s, t \rangle \rangle} \cdot p(c^{s_i/s_c})(i)$$

# Monstrous function application (MFA)

A new rule is needed to combine  $OP_{speaker}$  and the embedded clause.  
The argument must be a character.



$$\begin{aligned} & \llbracket OP_{speaker} \llbracket \text{that I am rich} \rrbracket \rrbracket^{c,i,g} \\ & \llbracket OP_{speaker} \rrbracket^{c,i,g}([\lambda c' . [\lambda i' . \llbracket \text{that I am rich} \rrbracket^{c',i',g}]] \\ & = \llbracket OP_{speaker} \rrbracket^{c,i,g}([\lambda c' . [\lambda i' . s_{c'} \text{ is rich at } i']]) \end{aligned} \quad (\text{MFA})$$

## ***De se vs. De Re***

(3) Ralph believes that he is a spy.

a. Ralph believes that himself is a spy. (*de se*)

$[[3]] = 1$  iff' for all indices  $i'$  compatible with what Ralph believes at  $i$ , **the individual Ralph identifies as his counterpart at  $i$**  is a spy at  $i'$ .

b. Ralph believes that the man he saw on TV is a spy. Unbeknownst to him, this man is him. (*de re*)

$[[3]] = 1$  iff' there is an individual concept  $g$  suitable for Ralph with respect to Ralph such that for all indices  $i'$  compatible with what Ralph believes at  $i$ ,  $g(i')$  is a spy at  $i'$ .

# Our agenda today

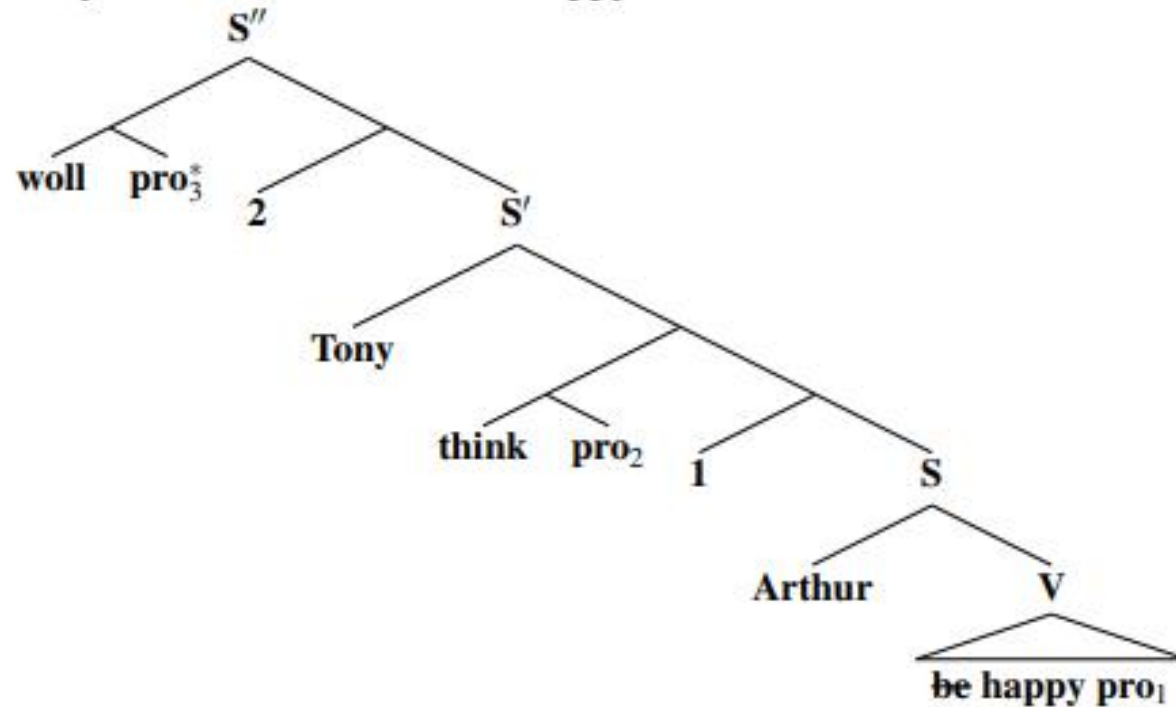
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# Exercise 1

**Exercise 1** Consider the tree in (1c). For which of (1a) and (1b) can (1c) be the underlying LF? Does our system predict a sequence of tense interpretation for (1a)?

- (1) a. **Tony will think that Arthur will be happy.**  
b. **Tony will think that Arthur is happy.**  
c.



# Embedded tense under attitude

(1) a. Tony will think that Arthur will be happy.

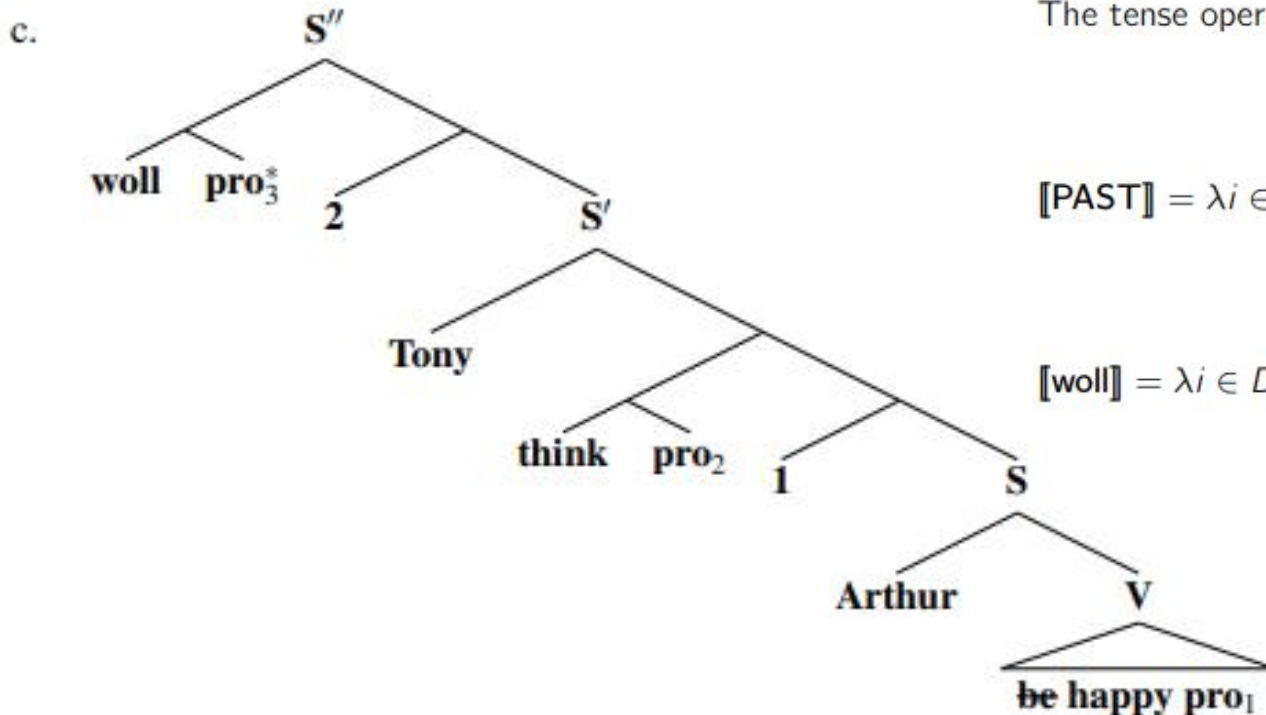
- Tony thinking:  $t > t_i$  Arthur being happy:  $t > t_i$  **simultaneous**
- Tony thinking:  $t > t_i$  Arthur being happy:  $t' > t > t_i$  **duble-shifted**

b. Tony will think that Arthur is happy.

- Tony thinking:  $t > t_i$  Arthur being happy:  $t > t_i$
- # Tony thinking:  $t > t_i$  Arthur being happy:  $t_i$

Tenses below an attitude predicate reflect the attitude holder's temporal perspective and not the speaker's.

# Sequence of tense: The extensional approach



The tense operators denote now functions from  $D_{\langle s, \langle \langle s, t \rangle, t \rangle \rangle}$ .

$[[\text{PAST}]] = \lambda i \in D_s . [\lambda p \in D_{\langle s, t \rangle} . \exists t[t < t_i \wedge p(\langle w_i, t \rangle) = 1]]$

$[[\text{woll}]] = \lambda i \in D_s . [\lambda p \in D_{\langle s, t \rangle} . \exists t[t_i < t \wedge p(\langle w_i, t \rangle) = 1]]$

There is only one woll-operator given the LF in (1c). Which kind of reading does it denote? Compute the truth-conditions.

# Exercise 2

**Exercise 2** Just like (2), (3) cannot have an indexical shift analysis. I.e., (3) cannot have reading (3b) but only the one in (2a). What would an indexical shift analysis for (3) have to look like if (3b) were a possible reading?

(2) **Ann said that I am rich.**

- a. 'Ann said that the speaker in the utterance context is rich.'
- b. #'Ann said that Ann is rich.'

(3) **Ann told Beth that you are rich.**

- a. 'Ann told Beth that the addressee in the utterance context is rich.'
- b. #'Ann told Beth that Beth is rich.'

# Which shifty operator?

(3) Ann told Beth that you are rich.

a. 'Ann told Beth that the addressee in the utterance context ( $=A_c$ ) is rich.'

b. # 'Ann told Beth that Beth ( $=A_i$ , the addressee in the intensional context) is rich.'

$$[[OP_{\text{addressee}}]]^{c,i,g} = \lambda p \in D_{\langle s, \langle s, t \rangle \rangle} \cdot p(\textcolor{red}{c}^{A_i} / A_c)(i)$$

Provide an LF and compute the truth-conditions.

# The attitude predicate “tell”

$$\llbracket \text{say} \rrbracket^{c,i,g} = \lambda p \in D_{\langle s,t \rangle} . [\lambda x \in D_e . \forall i' [i' \in \text{Acc}_{x,i} \rightarrow p(i') = 1]]$$

What would the lexical entry for  $\llbracket \text{tell} \rrbracket$  look like?

Hint: In (3),  $\llbracket \text{tell} \rrbracket$  has the use of ditransitive verbs.

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Thanks and see you next week!