

CS 233

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S DRT

10/1/20

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1) Linguistic Structure SDRT

2) Intentional Structure GS

3) Informational Structure SDRT

4) Focus / Attentional Structure GS  
QUD

DRT + Inf. ST

Dynamic Semantics

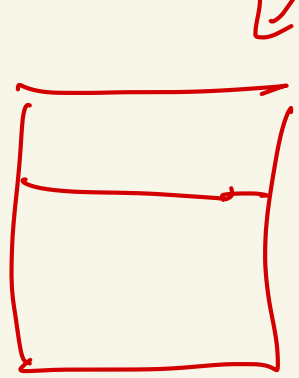
Kamp / Reyle  $\approx$  Heim

Semantics · Pragmatics interface

Set of Models = possible worlds  
That it satisfies

1.  $\llbracket \text{The man worked in.} \rrbracket$

2.  $\llbracket \text{He ordered a beer.} \rrbracket$



$P, P(S)$

$\lambda y \lambda x (\text{order}(x, y))?$

~~for~~  $\rightarrow$

$(\lambda x) (\text{man}(x) \wedge \text{work}(x) \wedge \text{order}(x, b))$

Sentence. by sentence

Comp. Semantics,

$\llbracket S_1 \rrbracket$ ,  $\llbracket S_2 \rrbracket$  ... - -

? How to make the

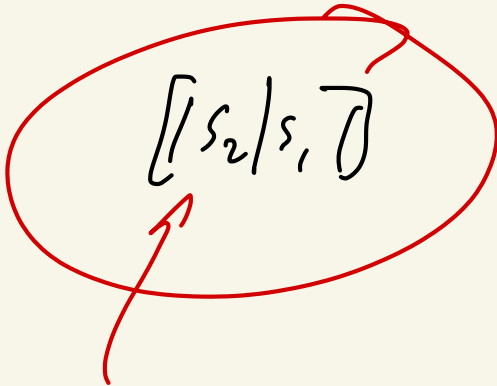
Content of subsequent Discourse

sensitive to prior discourse.

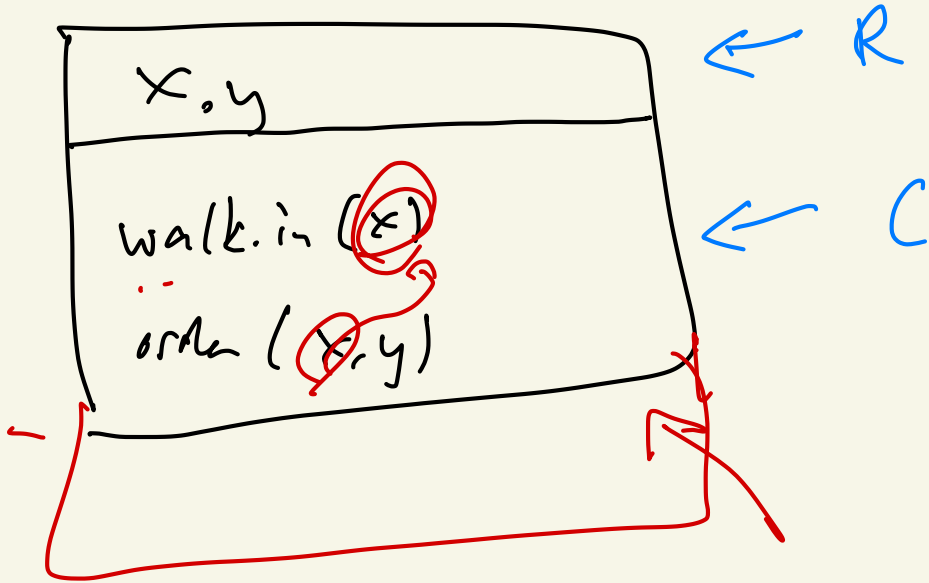
$$P(S_2 | S_1)$$

$$P(S_n | S_1 S_2 S_3 \dots S_{n-1})$$

$$[ \cdot ]$$


$$[s_2 | s_1, 0]$$

$$[s_2] \quad | \quad [s_1, 0]$$



DRS =  $\langle R, C \rangle$   $s_1 \oplus s_2$

?

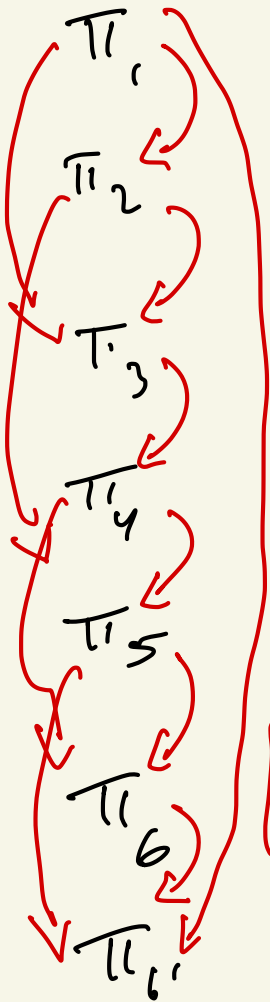
$\lceil$  he  $\rceil$  = context set,  
Right = context (cut)

$\lfloor$ He $\rfloor$  ordered a beer.

# Rhetorical Relations $R_i$

$R_i \rightarrow$  interpretation

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J had a great evening.

He had a great week.

He ate salmon.

He devoured lots of chairs.

He was a dancing king.

It was a beautiful part.

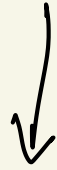
It was difficult.

Rigid  
Frontier  
Constraint

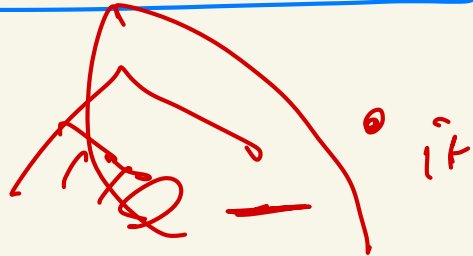
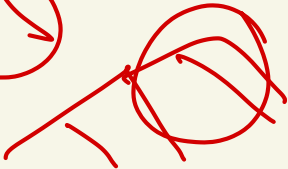
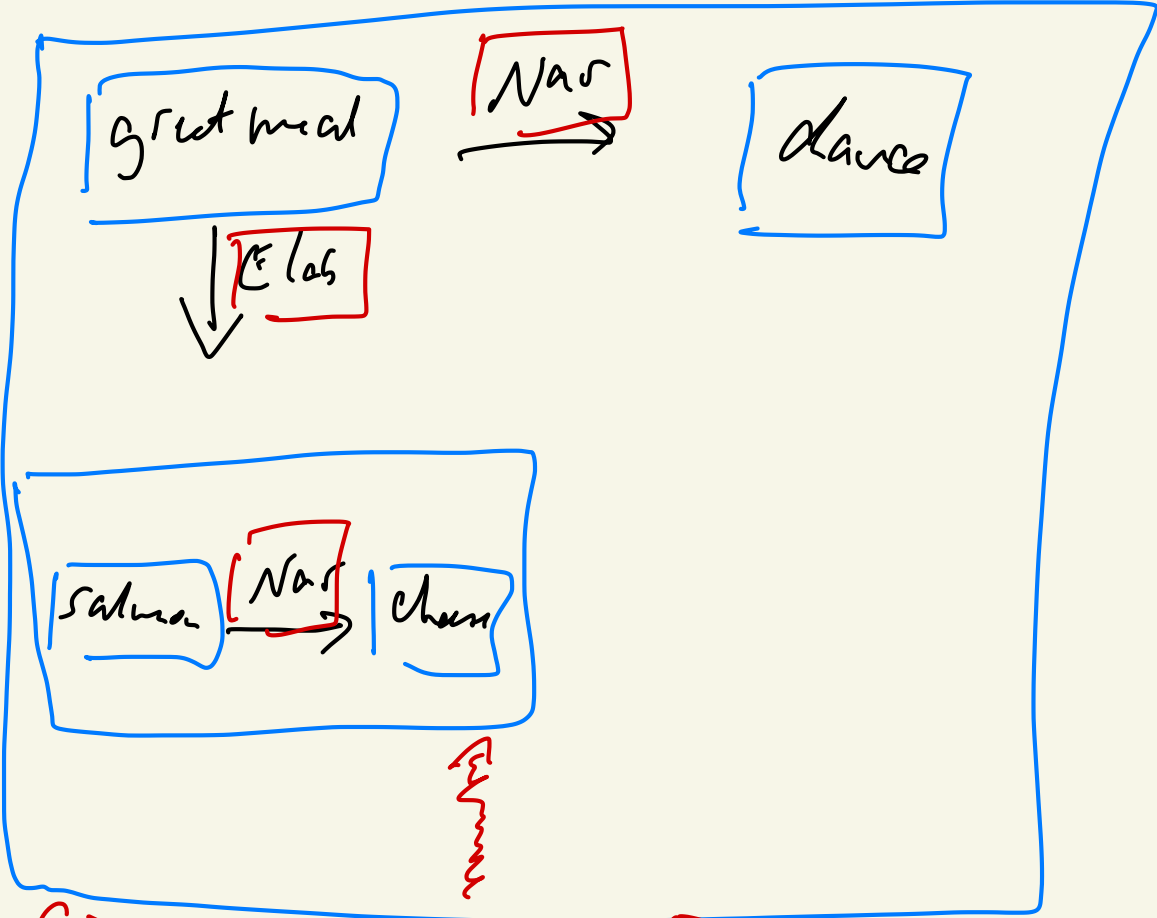
RFC

lovely evening

17  
9



Elaborative





EDU - Pop. context

~~ATTENTIONAL~~

↳ 1032

~~INTENTIONAL~~

SDRS

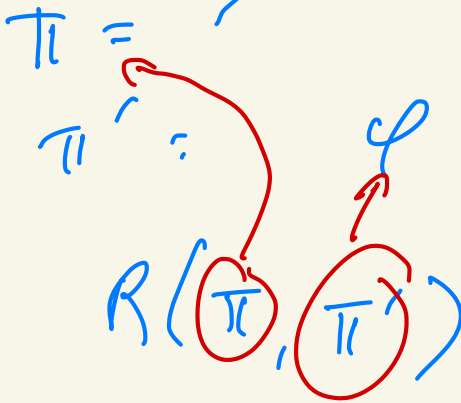
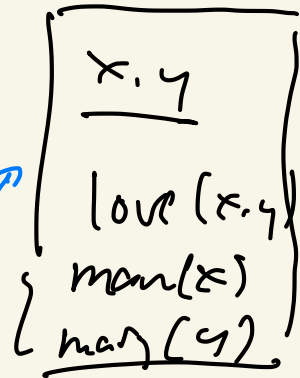
$\langle A, F, LAST \rangle$

- A - set of labels - S.A.  
discourse referents
- F - maps labels to SDRS-  
formulas
- LAST is a label of  
last utterance

# SDRS - formula

- DRS

-  $R(\pi, \pi')$   
     $\uparrow$        $\uparrow$        $\uparrow$   
    RRR      labels



- Boolean combinations of DRS.  
 $R(\pi, \pi') \wedge \dots$

Constraint on  $A$  :

Let  $\text{Succ}(\pi, \pi')$  mean that

$R(\pi'', \pi')$  or  $R(\pi', \pi')$   
is a literal in  $F(\pi)$ .

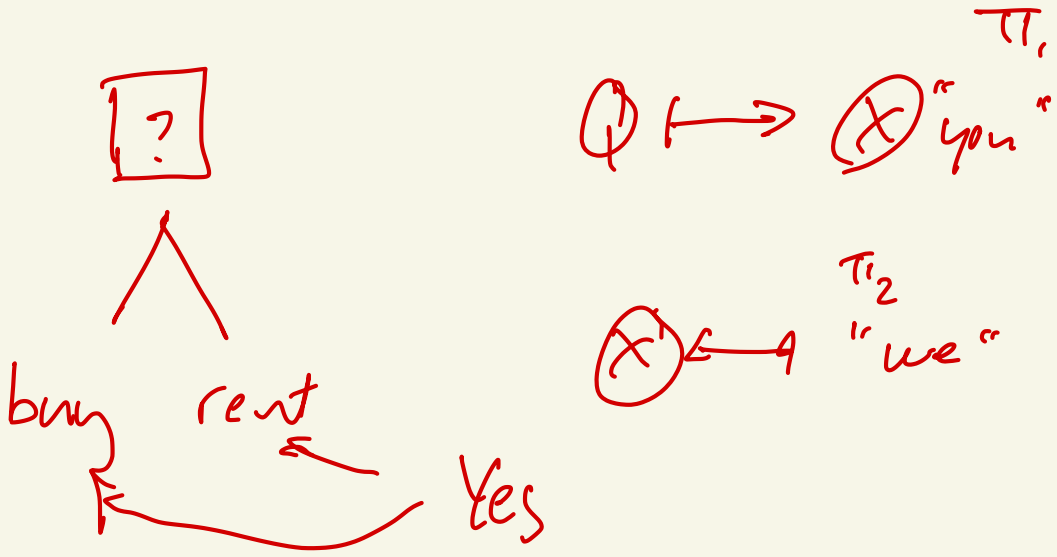
Then  $A$  forms a partial  
order under  $\text{Succ}$  with  
a unique root.

$\pi_1$  Did you buy the apartment?

$\pi_2$  Yes, but we rented it.

Contrast ( $\pi_1, \pi_2$ )

Narration ( $\pi_1, \pi_2$ )



Hobbs

1980's

Interpretation via Abduction

Prob. Abduction Reasoning

$$A = \{ \pi_0, \dots, \pi_7 \}$$

Elaboration  $(\pi_1, \pi_6)$

Narration  $(\pi_2, \pi_5) \wedge$

Elaboration  $(\pi_1, \pi_7)$

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Availability : the right factor