Introduction to dynamic semantics

Session 4: Anaphora

Wenkai Tay

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taywenkai.com

Outline

Recap: Anaphora in DRT

(1) Evelyn marries Waymond. She owns a laundromat.

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u_1 u_2
Evelyn(u_1) Waymond(u_2) Marry(u_1,u_2)

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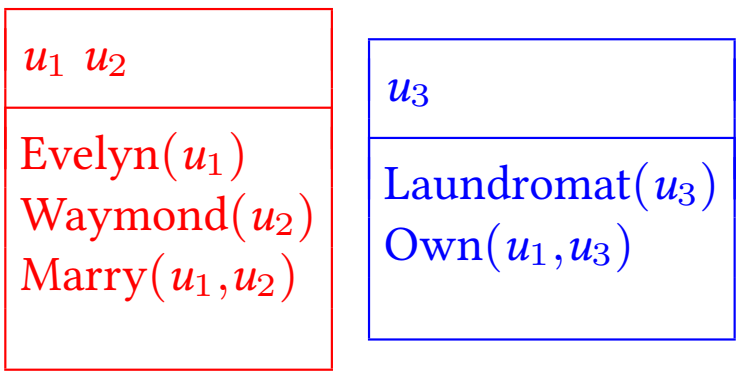

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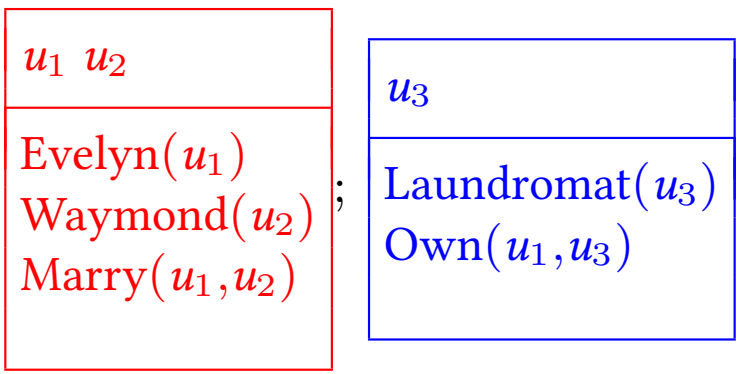

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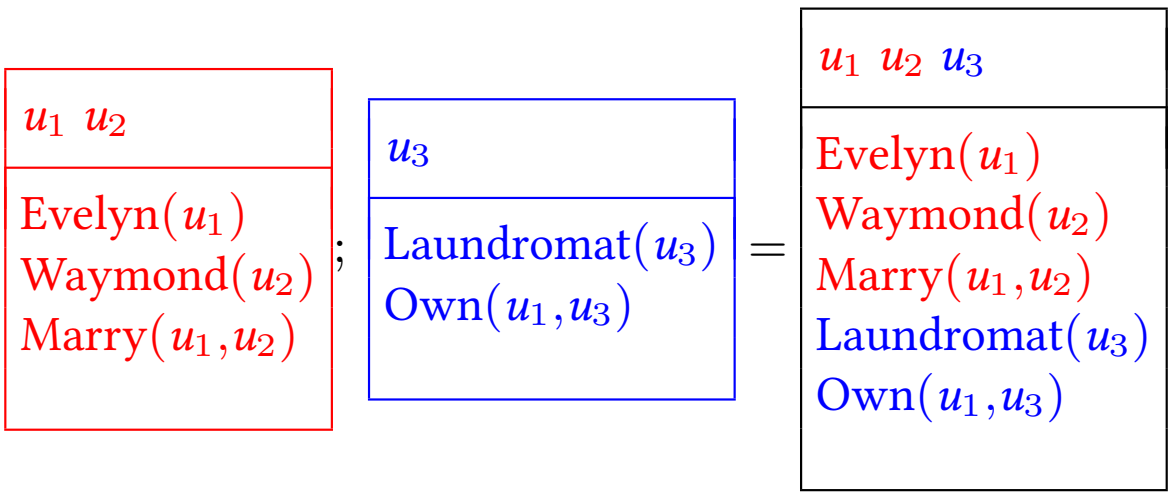

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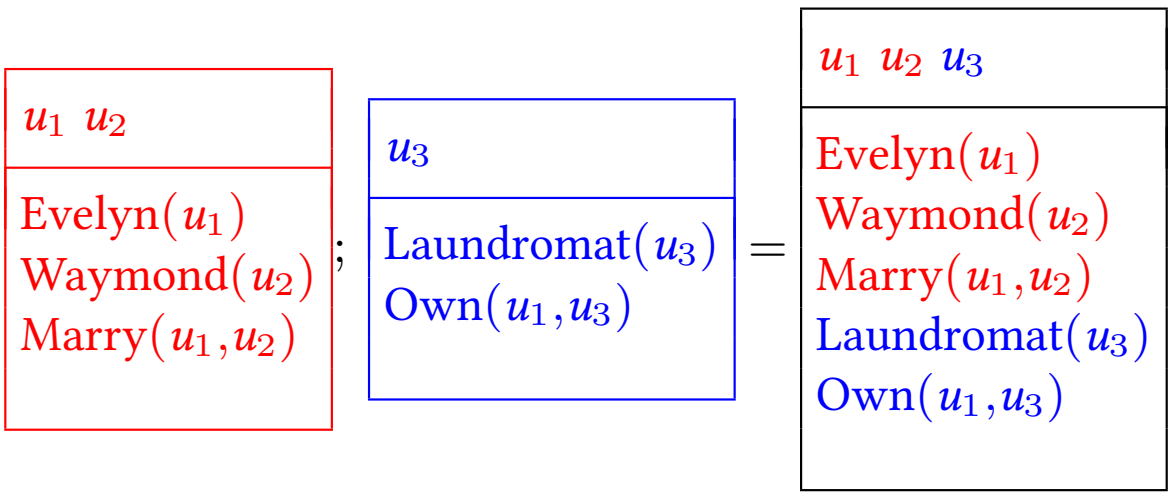
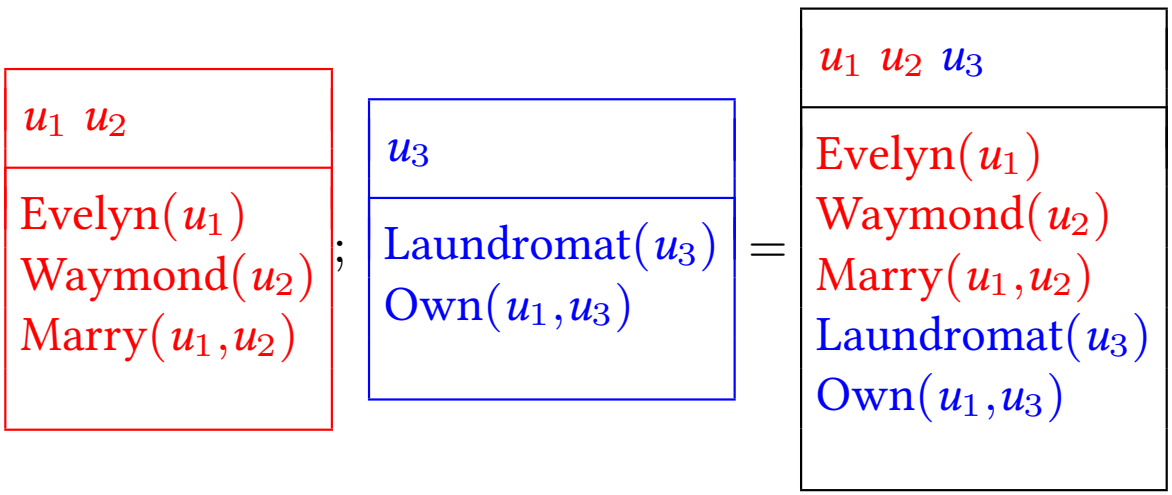


Q: Does She in the second sentence introduce its own dref?

Recap: Anaphora in DRT

(1) Evelyn[1] marries Waymond. She$_1$ owns a laundromat.



Q: Does She in the second sentence introduce its own dref?

Anaphora in DRT

Problem:

(2) It mooed.

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What is the DRS for this sentence?

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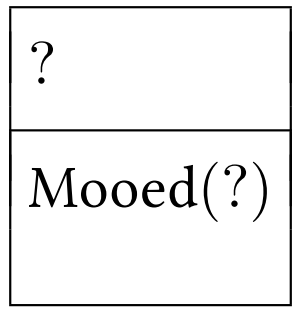

Anaphora in DRT

Problem:

(3) Pedro[1] is in a[2] bar.

Anaphora in DRT

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(3) Pedro[1] is in a[2] bar.

(4) Every[3] woman who ever dated a[4] man despises him[5].

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(Haug 2014)

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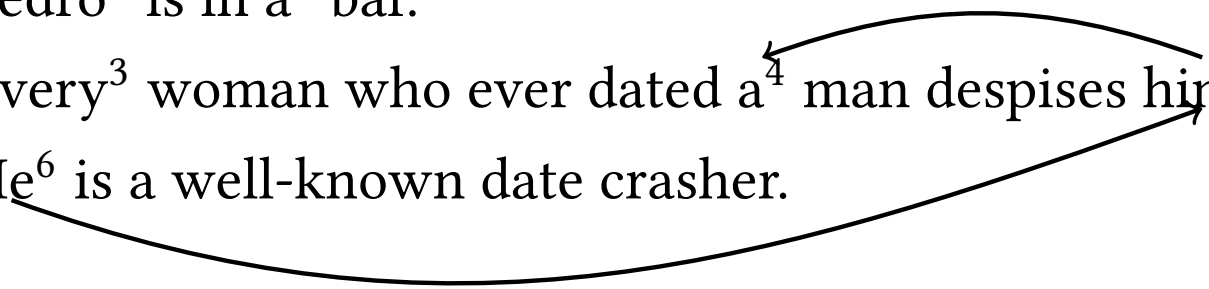

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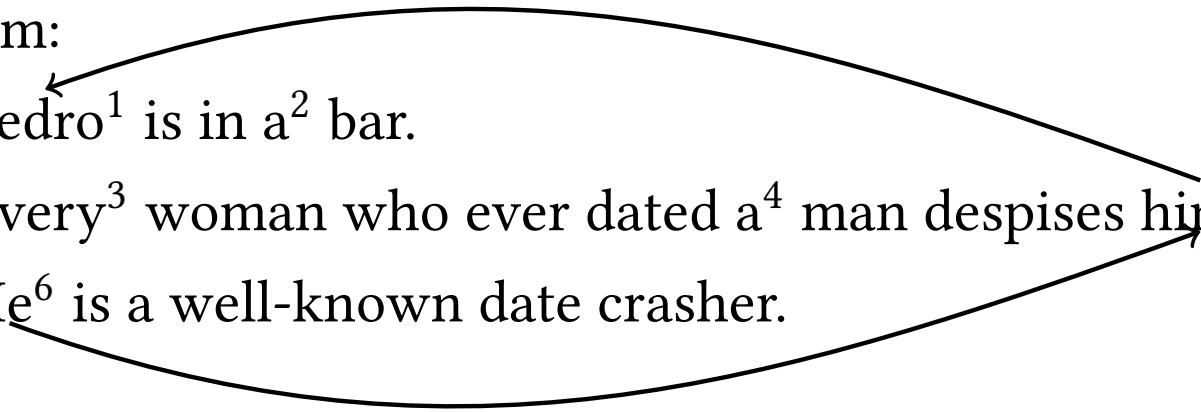

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Alternative:

(6) Evelyn marries Waymond. She owns a laundromat.

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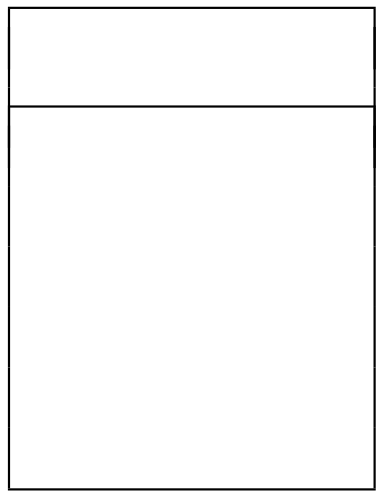

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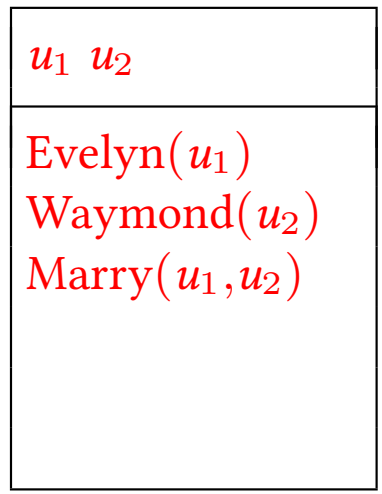

Anaphora in DRT

Alternative:

(6) Evelyn marries Waymond. She owns a laundromat.

u_1 u_2 u_3 u_4
Evelyn(u_1) Waymond(u_2) Marry(u_1,u_2) Laundromat(u_4) Own(u_3,u_4)

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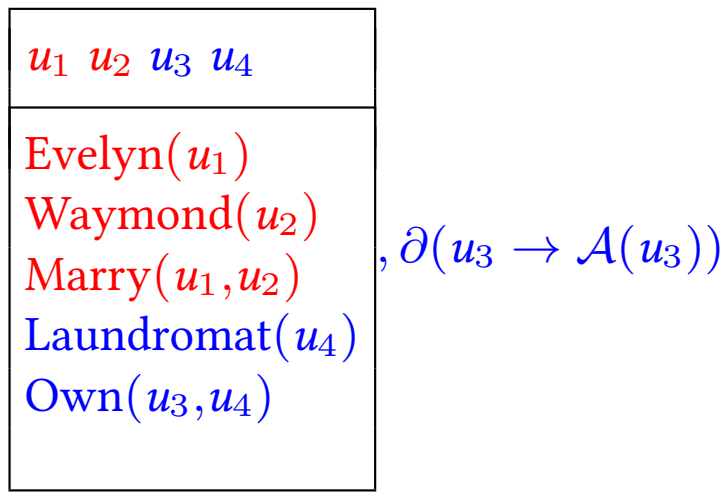

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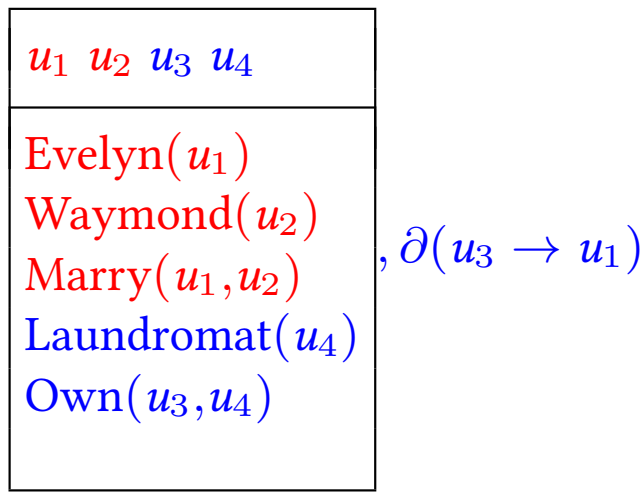
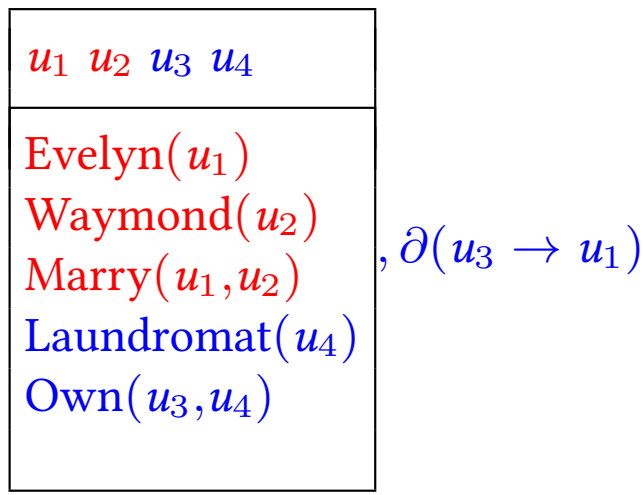


Anaphora in DRT

Alternative:

(6) Evelyn^{1} marries Waymond. She$^{3}_{1}$ owns a laundromat.



Anaphora in DRT

Abbreviations:

(7) Evelyn^{1} marries Waymond. She$^{3}_{1}$ owns a laundromat.

u_1 u_2 u_3 u_4
$\text{Evelyn}(u_1)$
$\text{Waymond}(u_2)$
$\text{Marry}(u_1, u_2)$
$\partial(u_3 \rightarrow \mathcal{A}(u_3))$
$\text{Laundromat}(u_4)$
$\text{Own}(u_3, u_4)$

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Evelyn(u_1)
Waymond(u_2)
Marry(u_1, u_2)
$u_3 = u_1$
Laundromat(u_4)
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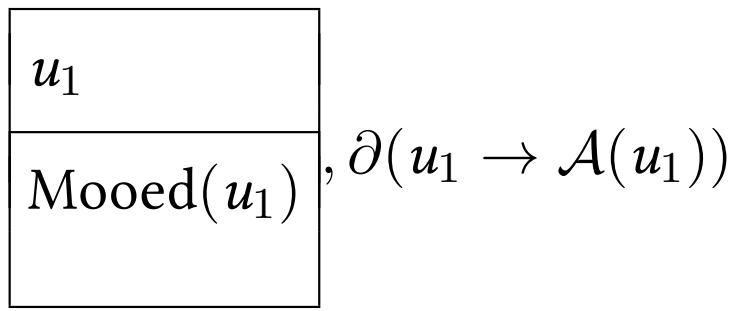

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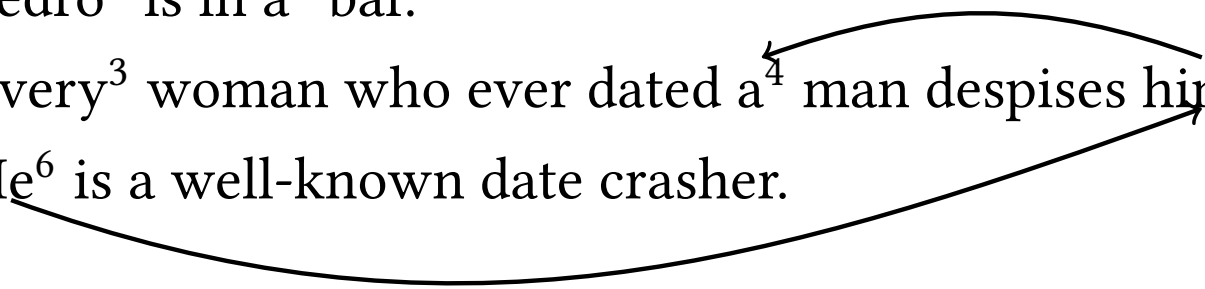

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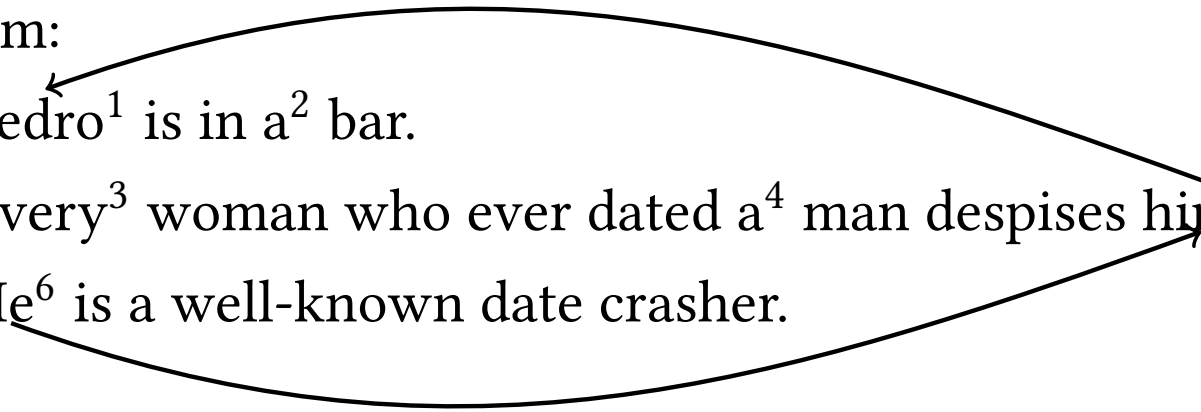

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Anaphora in DRT

What about reflexives?

(12) Evelyn surprised herself.

Anaphora in DRT

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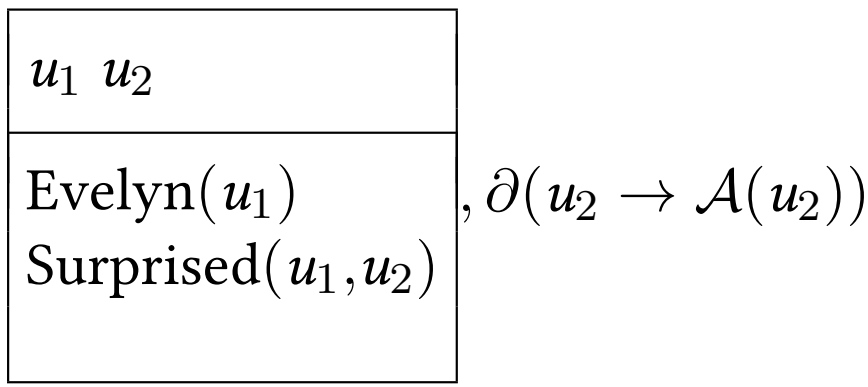

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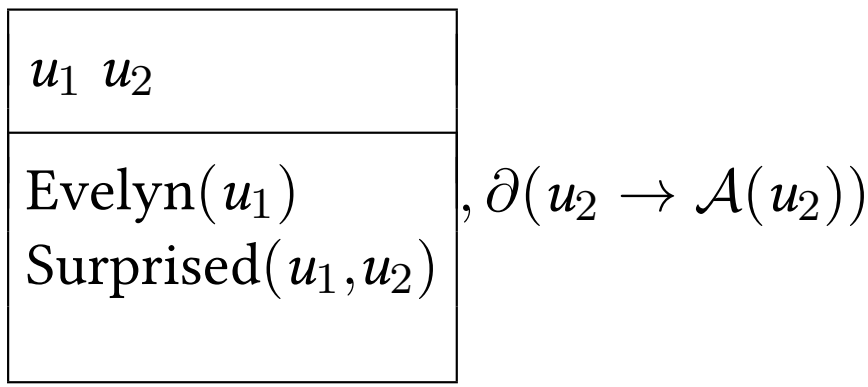

Refer to Dalrymple et al. (2018) for an implementation in LFG.

Outline

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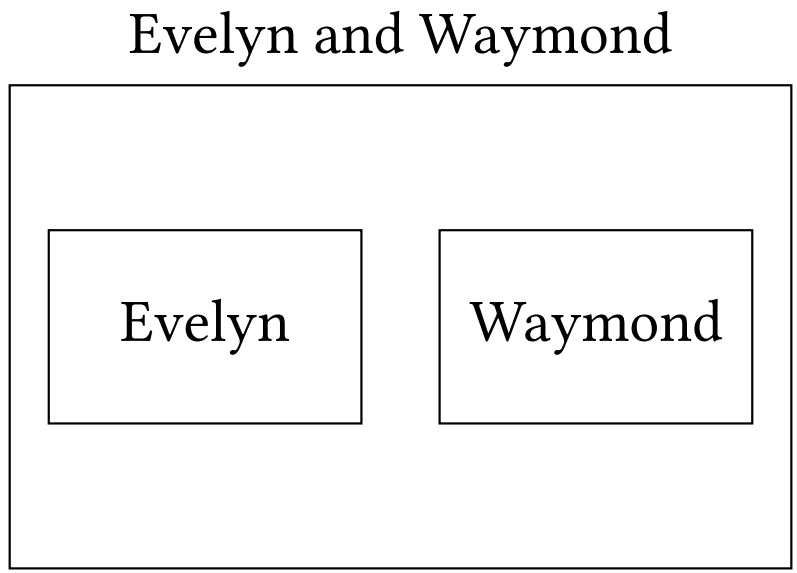

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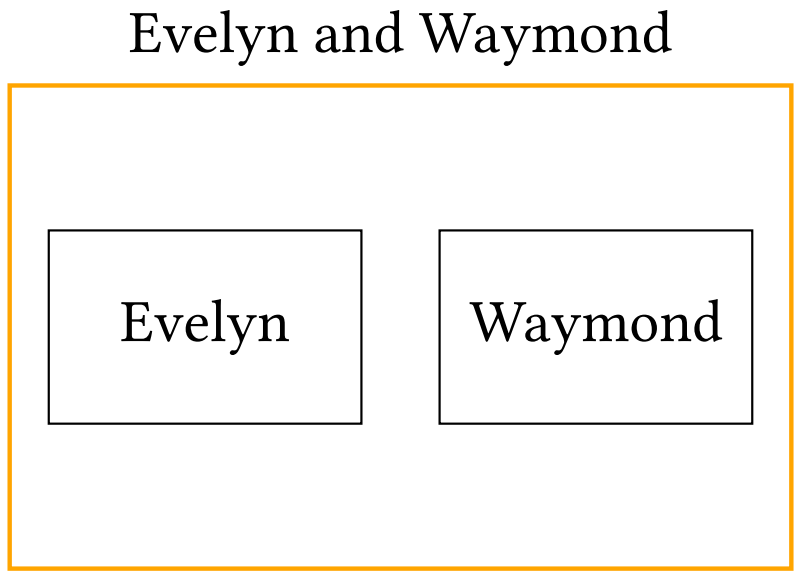

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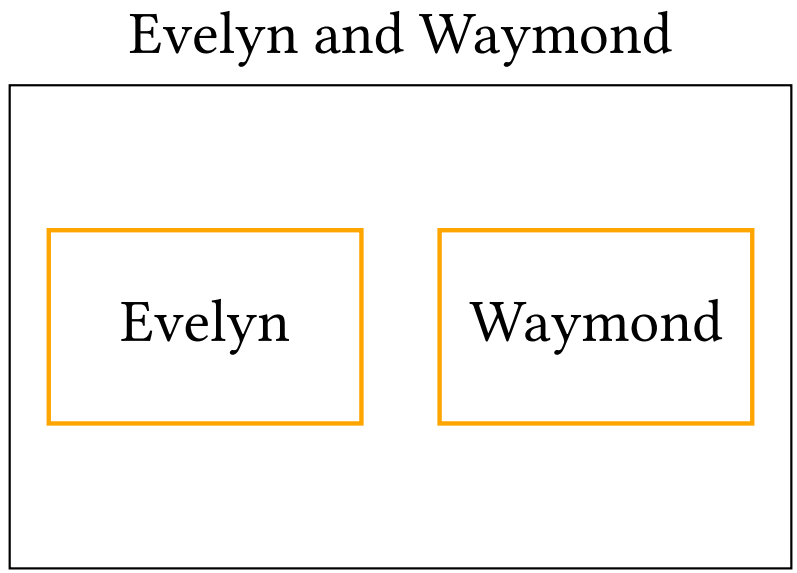

Plural anaphora in DRT

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(13) Evelyn and Waymond thought they had won.

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1. Evelyn and Waymond each thought: "I won." (bound reading)
2. Evelyn and Waymond each thought: "We won." (group identity reading)

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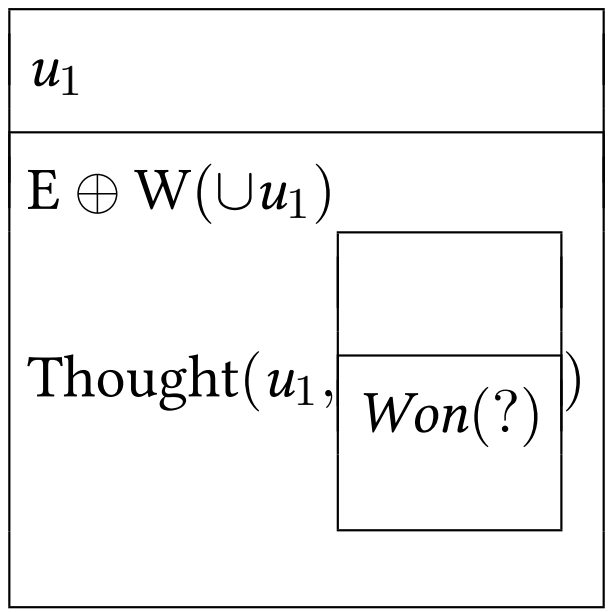

Plural anaphora in DRT

(15) Evelyn and Waymond thought **they** had won.
Reading: Evelyn and Waymond each thought: "I won."

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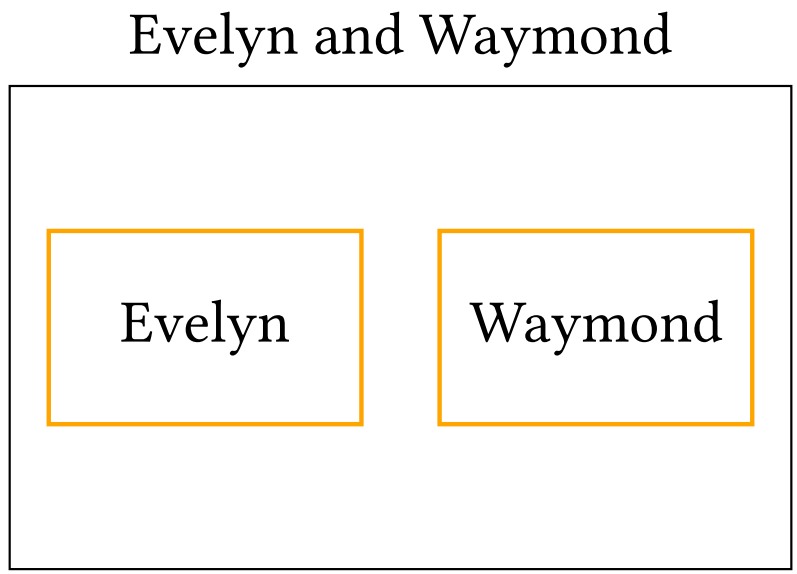

Plural anaphora in DRT

(16) Evelyn and Waymond thought **they** had won.
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Plural anaphora in DRT

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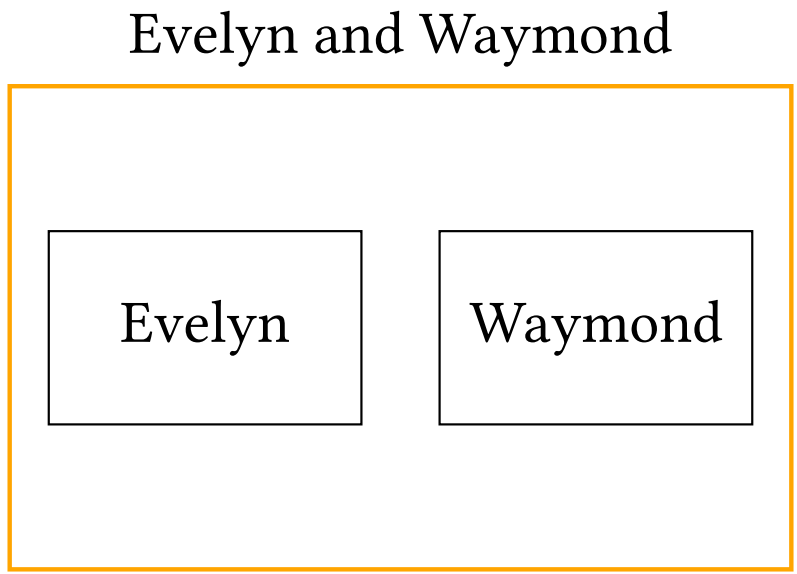

Plural anaphora in DRT

(17) Evelyn and Waymond thought they had won.
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Plural anaphora in DRT

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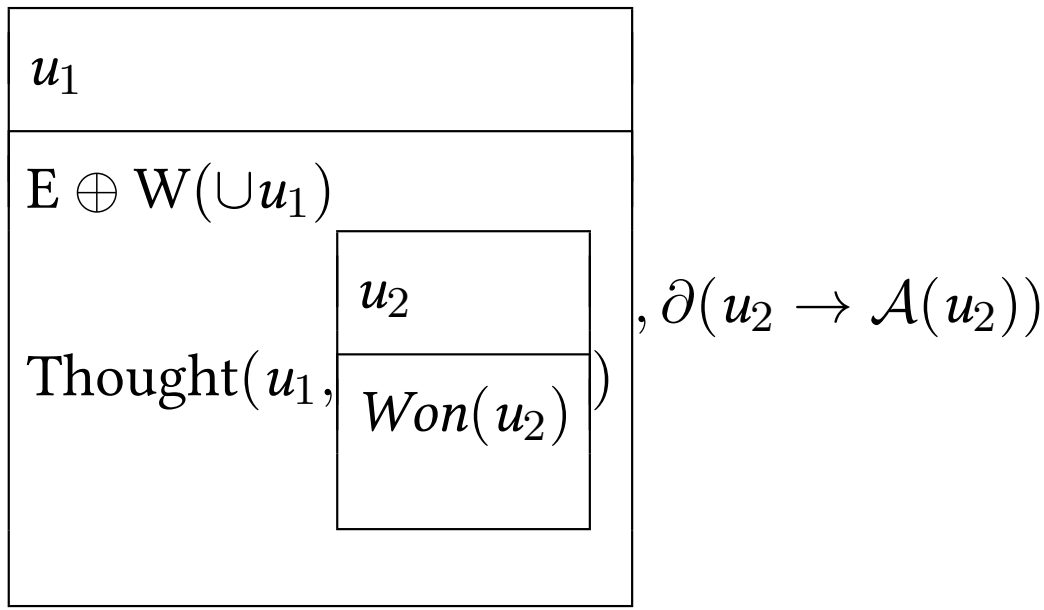

Plural anaphora in DRT

(18) Evelyn and Waymond thought they had won.
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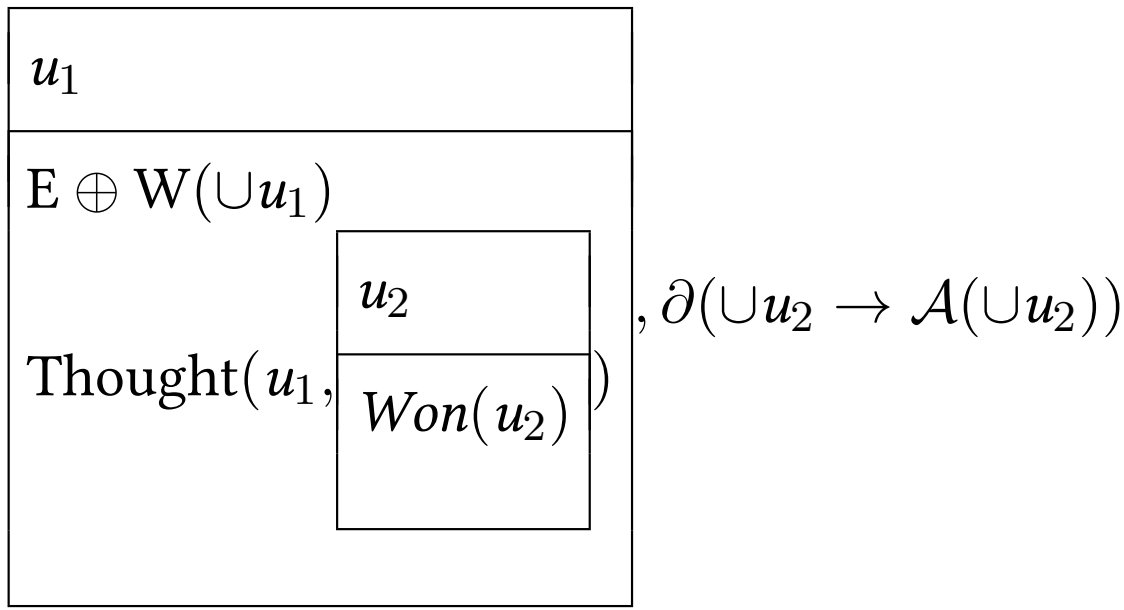

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Reciprocals in DRT

Reciprocals have a cumulative coreference constraint and a case-wise non-coreference constraint.

(19) Romeo and Juliet like each other.

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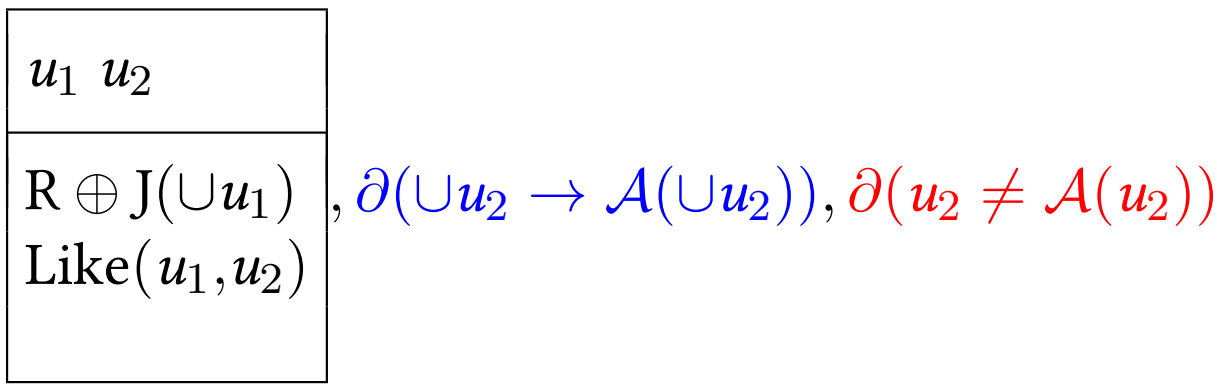

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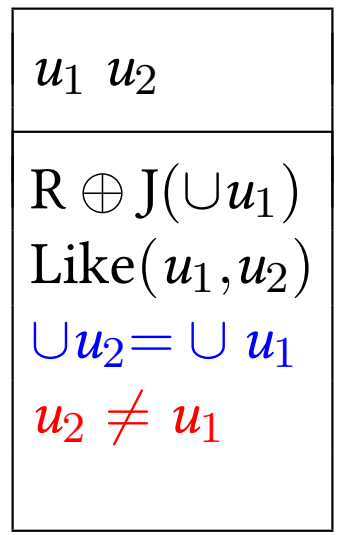

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u_1 u_2
$\mathrm{R} \oplus \mathrm{J}(\cup u_1)$ $\mathrm{Like}(u_1, u_2)$ $\cup u_2 = \cup u_1$ $u_2 \neq u_1$

	u_1	u_2
s_1	R	J
s_2	J	R

Summary

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- Reflexives behave like pronouns, subject to additional syntactic constraints.
- Plural anaphors have bound readings and group identity readings.
- Reciprocals have a cumulative coreference constraint and a case-wise non-coreference constraint.

Further reading

1. Haug (2014) on partial CDRT
2. Haug and Dalrymple (2020) on reciprocals

References I

Dalrymple, Mary, Dag Haug, and John Lowe. 2018. Integrating LFG's binding theory with PCDRT. *Journal of Language Modelling* 6:87–129.

Haug, Dag T. T. 2014. Partial dynamic semantics for anaphora: Compositionality without syntactic coindexation. *Journal of Semantics* 31:457–511.

Haug, Dag Trygve Truslew, and Mary Dalrymple. 2020. Reciprocity: Anaphora, scope, and quantification. *Semantics and Pragmatics* 13:1–62.