Comments on Jakub Dotlačil's presentation, 'Dynamic properties of question words'

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Making ICDRT

Inquisitive semantics for questions

Who is walking?

Making ICDRT

Inquisitive semantics
for questions

Who is walking?

+

CDRT
for anaphora

Someone^1 *is walking. He*$_1$ *is singing.*

Making ICDRT

Inquisitive semantics
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Someone^1 *is walking. He*$_1$ *is singing.*

=

ICDRT
for anaphora to wh-words

Who^1 *is walking? Is he*$_1$ *singing?*

‘Someone is walking’

standard static
a proposition
$\lambda w^s.\exists x^e.\mathbf{walk}(x, w)$

inquisitive
a set of propositions
$\lambda p^{s\to t}.\exists x^e.p \subseteq (\lambda w^s.\mathbf{walk}(x, w))$

CDRT
a state–state relation
$\lambda i^c.\lambda o^c.i[x_1]o \wedge \mathbf{walk}(x_1(o))$

ICDRT
a proposition–state–state relation
$\lambda p^{s\to t}.\lambda i^c.\lambda o^c.i[x_1]o \wedge p \subseteq (\lambda w^s.\mathbf{walk}(x_1(o), w))$

Anaphora to wh-words

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$$\llbracket \textit{Someone}^1 \textit{ is walking. You know him}_1. \rrbracket$$
$$= \llbracket \textit{Who}^1 \textit{ is walking? You know him}_1. \rrbracket$$
$$= \lambda p^{s \to t}.\lambda i^c.\lambda o^c.i[x_1]o \wedge p \subseteq (\lambda w^s.\mathbf{walk}(x_1(o)))$$
$$\wedge\, p \subseteq (\lambda w^s.\mathbf{know}(\mathbf{you}, x_1(o), w))$$

*To be qualified.

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I.e., treat constituent questions just like existential statements

- It's a distinctive feature of inquisitive semantics that statements and quesitons have the same semantic type.
- To adapt a non-inquisitive system to treat indefinites and wh-words the same, you would have to either
  - raise statements to the type of questions ... in which case you would have an inquisitive system, or
  - lower questions to the type of statements ... in which case you the treatment of questions would be inadequate.
- Inquisitive semantics gives you the notion of answers to the question (**resolutions** to the **issue**).
  - $p^{s\to t}$ **resolves** $\phi^{(s\to t)\to t} \Leftrightarrow \phi(p)$
  - E.g. $(\lambda w^s.\mathbf{walk}(\mathbf{john}, w))$ **resolves** $(\lambda p^{s\to t}.\exists x^e.p \subseteq (\lambda w^s.\mathbf{walk}(x, w)))$

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  Q Who is walking?
  A # Someone.

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- Proposal (from ms. Jakub sent me): unlike *Someone is walking.*, *Who is walking?* **presupposes** that someone is walking.

  Q Who is walking?

  A # Someone.
- As far as I know, this proposal hasn't been formalized.

A suggestion

'Someone is walking'

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a proposition

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a set of propositions

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CDRT

a state–state relation

$\lambda i^{c}.\lambda o^{c}.i[x_1]o \wedge \mathbf{walk}(x_1(o))$

var-ICDRT

a proposition–proposition–state–state relation

$\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^{c}.\lambda o^{c}.i[x_1]o \wedge q \subseteq p \cap (\lambda w^{s}.\mathbf{walk}(x_1(o), w))$

The constrast

in a trivalent semantics

Someone[1] *is walking.*

$$\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^{c}.\lambda o^{c}.i[x_1]o \wedge q \subseteq \big(p \cap \lambda w^{s}.\mathbf{walk}(x_1(o), w)\big)$$

Who[1] *is walking?*

$$\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^{c}.\lambda o^{c}.i[x_1]o \wedge q \subseteq \big(p \cap \lambda w^{s}.\mathbf{walk}(x_1(o), w)\big) \wedge \partial\big(p \subseteq \lambda w^{s}.\exists x^{e}.\mathbf{walk}(x, w)\big)$$

Definitions

These haven't been properly checked yet…

$p^{s\to t}$ **supports** $\Phi^{(s\to t)\to(s\to t)\to c\to c\to t} \Leftrightarrow \forall i^c.\exists o^c.\Phi(\lambda w^s.\top)(p)(i)(o)$

walks

$$\lambda d^{c\to e}.\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^c.\lambda o^c.i = o \wedge q \subseteq \big(p \cap \lambda w^s.\mathbf{walk}(d(o), w)\big)$$

someone^n

$$\lambda P.\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^c.\lambda o^c.\exists k^c.i[x_n]k \wedge P(x_n)(p)(q)(k)(o)$$

who^n

$$\lambda P.\lambda p^{s\to t}.\lambda q^{s\to t}.\lambda i^c.\lambda o^c.\exists k^c.i[x_n]k \wedge P(x_n)(p)(q)(k)(o) \wedge \partial\big(p\ \textbf{supports}\ \lambda r^{s\to t}.\lambda s^{s\to t}.\lambda j^c.\lambda l^c.\exists x^e.P(\lambda m^c.x)(r)(s)(j)(l)\big)$$

Where $P :: (c\to e)\to(s\to t)\to(s\to t)\to c\to c\to t$