Interpreting Topics in Quantificational Structures

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Quantificational Adverbs and Topicality
(Hinterwimmer 2005)

- Adverbial quantifiers choose their semantic arguments on the basis of information structure.
- Focal material is interpreted in the nuclear scope, topical material in the restrictor.

Quantificational Determiners and Topicality
(Eber/Enderiss, 2004, Endriss, in progress)

- How does topicality influence scopal interaction?

Semantic Effects of Topicality
(Endriss/Hinterwimmer, to appear)

- Observation 1
  Topical material tends to be interpreted in the restrictor of an adverbial quantifier
  (see e.g. Partee, 1991)

- Observation 2
  Topical material tends to take wide scope
  (see e.g. Cresti, 1995)

Consider the Surface Structure: $DP_1 \quad \ldots \quad DP_2\ldots$.

(Im)possible Interpretations:

- $Q_2 [Q_1 \ldots Q_2 \ldots]$ because $D$-quantifiers choose their arguments syntactically $\not\in$ material that does not belong to the syntactic complement cannot end up in the restrictor.
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Exceptional wide (island-insensitive) scopal results from topical interpretation

- Choice function mechanisms can only account for functional wide scope readings, not for genuine (non-functional) wide scope readings (Schwarz, 2001).

- We can account for quantificational functional topics by extending the aboutness concept to functional items, without the need to postulate a separate mechanism such as existential closure of choice/Skolem functions.

Underfiring Generalization:
- Quantification is a higher order predication process (cf. Krifka, 1984).
- $\text{Restrictor} \cong \text{Predicational part}$

- Principle possibly underlying the Top Occurrence Principle:
  Topical material needs preservative environment

- Adverbial quantifiers choose their arguments on basis of information structure.

- Topical material escapes interpretation in the nuclear scope of the respective A-quantifier and is interpreted in the restrictor (see Observation 1).

Interpretation of adverbially quantified sentences is not a purely pragmatic process.
- Syntax (c-command relations) plays an important role.
- But pragmatic information like focus marking can alter c-command relations at LF.

Is there a direct or indirect relationship between the pragmatic and the semantic component of the language faculty?
- Is there a mapping algorithm that has direct access to information like focus-marking (Rooth, 1995; Krifka, 1995) and/or topic-marking (Chierchia 1995)?
- Or only an indirect interaction in the form of a free context variable (von Fintel, 1994; Beaver and Clark, 2003)?

In contrast to singular indefinites, universally quantified DPs only receive co-variant interpretations when they are c-commanded by the respective Q-adverb.

1. a. I love teaching classes on formal semantics at this university.
   b. Usually, every student is SMART.
   c. Every student is usually SMART.

- In contrast to singular indefinites, universally quantified DPs only receive co-variant interpretations when they are c-commanded by the respective Q-adverb.
- Binding only possible under $c$-command.
- In case of singular indefinites, co-variation possible without an NP-internal situation variable being bound by the Q-adverb.
- Hence, only material that is c-commanded by the Q-adverb at LF is interpreted in the nuclear scope, material that $c$-commands at LF can either be interpreted in the restrictor or with scope over the Q-adverb.
- Only focal DPs can be reconstructed into their base positions at LF.

2. a. Someone from New York is likely to win the LOTtery.
   b. Someone from New YORK is likely to win the lottery.

- Hence, co-variation possible in (3b):

3. a. Death-metal concerts are spooky.
   b. Death-metal concerts are spooky.

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How does topicality influence scopal interaction?
- Aboutness topicality (Reinhart, 1981): topic is the address or link, where remaining information is stored.
- Indefinites and quantifiers in general introduce new discourse referents $\not\in$ they cannot be familiar.
- If indefinites used as topics, there is no address where to store the information $\not\in$ a representative is created, which serves as address; good representatives are minimal witness sets of the GQ.
- Creation process results in a wide scope taking existential quantifier.

4. $\text{Assert(Topic, Comment)}(\text{Stone}) = c + \exists (\text{Val} \subseteq \text{MinWit(Topic)}).$

(Here, $c$ is common ground; $\text{MinWit(Topic)}$ are the minimal witness sets of the quantificational topic)

- If (three relatives of mine) die, I will inherit a fortune

5. $\text{Minimal Witness set of GQ three relatives of mine} \to \text{a set of three relatives of mine.}$

- Topical quantifier takes wide scope over all operators.
- Only certain quantifiers can be properly represented by minimal sets $\not\in$ those that can receive exceptional wide scope.

For instance: singular indefinites (e.g. some relative of mine) and bare numeral quantifiers (e.g. three relatives of mine).

- Intermediate scope readings: Embedded topic-comment-structures. Topical indefinite takes widest scope only with respect to its own topic-comment-structure, but narrower scope than the structure-embedding operator.

6. $\text{MinWit(Topic)}(\text{there is common ground; } \text{MinWit(Topic)} \text{ are the minimal witness sets of the quantificational topic})$

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