MM3 Syntax-Semantic Interface
Malte Zimmermann
Universität Potsdam, WS07

Cross-linguistic differences in the interpretation of sentences with more than one QP: German (Frey 1993) and Hungarian (É Kiss 1991)

1. Quantifier Scope in English (May 1977, 1985)

- *Predictions of May's system:*

  i. *Language-internal prediction:*
  The conception of QR as a covert application of 'move α' at LF predicts that any English clause with two (or more) scope-taking expressions (QP, Neg, modal auxiliaries…) should display scope ambiguities.

(1) a. *Some man* loves *every woman*. ∃∀, ∀∃

b. *An American flag* was waving on *every building*. (pragmatically odd) ∀∃, ∃∀

ii. *Cross-linguistic prediction:*
There is no a priori reason that a language with overt A-bar movement should not allow for covert instantiations of this movement type.
→ Language with overt A-bar movement should allow for scope ambiguities as in (1ab)

Question: How about German and Hungarian?

2. Quantifier Scope in German (Frey 1993, Pafel 2006): Overt Movement

- *Central Observations (Frey 1993):*

  i. Sentences with two QPs and canonical word order (main clause: SVO/XVSO, embedded clause SOV), do not display scope ambiguities, cf. (2a):

  ii. Sentences with two QPs are scopally ambiguous iff one QP has A-bar moved overtly across the other QP, e.g. by way of topicalization or scrambling, cf. (2b):

(2) a. DASS *fast jeder Student* ***mindestens einen Roman*** gelesen hat

→ only surface scope: ∀>>|>1|, *|>1|>>∀

b. DASS ***mindestens einen Roman*$_1$** *fast jeder Student* $\mathbf{t_1}$ gelesen hat.

→ surface and inverse scope: ∀>>|>1|, |>1|>>∀

→ The same holds for the interaction of QPs with other scope-taking elements (wh-expressions, operator verbs):

(3) a. ***Was*$_1$** hat *jeder Gast* $\mathbf{t_1}$ gekauft? *overt movement of wh across QP*

A1: Eine Flasche Chardonnay von Aldi.
A2: Peter Garnelen, Oliver Hummerschwänze und Carola Grüne Soße.

→ normal reading (∃∀) and pair-list reading (∀∃)

b. ***Wer*$_1$** hat $\mathbf{t_1}$ *jedes Geschenk* gekauft?

A1: Peters reicher Onkel
*A2: Peter die Garnelen, Oliver die Hummerschwänze, und Carola Gr. Soße.

→ only normal reading ∃∀ = surface reading

(4) a. Es *scheint* ***ein Student*** in der Kneipe zu sein.

→ only surface reading: seems >> ∃student

b. ***Ein Student$_1$*** *scheint* $\mathbf{t_1}$ in der Kneipe zu sein.

→ surface reading: ∃student >> seems
→ inverse reading: seems >> ∃student

- *Analysis:*

The observed ambiguities (2b), (3a), and (4b) are the direct result of overt movement: Not only the moved QP itself, but also its traceposition are relevant for the determining relative scope.

→ Structural parallel to licensing of overtly moved reflexive pronouns, which must be locally bound by a c-commanding antecedent:

(5) [Which picture of himself]$_1$ did John think t_1, that Bill liked t_1?

→ *himself* is interpreted as semantically bound by *John* or *Bill*, depending on which trace we consider

(6) *Frey's scope principle (simplified):*

Let K = <k_n, ..., k_i> a chain with head k_n.

Let β a quantified expression, β = k_n or k_n dominates β. Then

A quantified phrase α can take scope over β, if the head of the chain of α c-commands k_1 (= the base position of β)

→ If traces are genuine syntactic objects, then the surface structure of a clause in which a QP has *overtly* moved across another provides sufficient information for the semantic interpretation of the clause as ambiguous.

→ This is even more transparent under the copy theory of movement (cf. Chomsky 1993, 1995):

(2) b'. DASS ***mindestens einen Roman*** *fast jeder Student* ~~**mindestens einen Roman**~~ gelesen hat.

→ Frey's scope principle is in line with the scope principle in Reinhart (1983, p.188):

(7) "A logical structure in which a quantifier binding a variable x has wide scope over a quantifier binding a (distinct) variable y is a possible interpretation for a given sentence S only if in the surface structure of S the quantified expression (QE) corresponding to y is in the domain of the QE corresponding to x."

- *Conclusion:*

i. In German, it is enough to look at surface structures plus their derivational history in order to determine the scopal relationship between two QPs

ii. It is possible to maintain a strict 1.1 relation between syntax and semantics if we assume that the moved QP is optionally reconstructed to ist base position (at LF).

- *Open Problems:*

  How to account for the scope ambiguities in (8abc) in the absence of overt movement?

(8) a. [Mindestens ein Apfel in jedem Korb] ist faul.

b. Eine Flagge weht auf jedem Dach.

c. ... weil Peter *eine Norwegerin* heiraten *will*. (scrambling)

3. Overt QR in Hungarian (É. Kiss 1991)

- *Central Observation (Frey 1993):*

  In Hungarian, all scopal relationships are determined at surface structure = no inverse readings

- *Assumptions:*

  i. In Hungarian, an operator c-commands its scope at surface structure

  → surface structure and LF do not differ regarding the position of QPs

  ii. Quantified phrases move from their base position and adjoin to VP

  → overt quantifier adjunction to VP is the overt counterpart to May's QR, which applies at LF

(9) *The sentence structure of Hungarian:*

[S' Comp [S Topic [VP Focus [V' V [XP*]]]]]

Topic = the topic denotes that entity that the sentence is about, cf. (10a)

Focus = the focus denotes an entity which is salient or important compared to a set of alternatives of the same type.

→ In German and English, these distinctions are typically marked in the prosody:

(10) a. MaRIa hat den Johann eingeladen und nicht CLAra.
b. Maria hat den JOhann eingeladen (und nicht den PEter)

→ Hungarian encodes this distinction syntactically. The counterparts of (10ab) differ in syntactic structure with:

→ topic position occupied by *Johann* in (10a) and by *Maria* in (10b).
→ focus position occupied by *Maria* in (10a) and by *Johann* in (10b).

- The expression of quantifier scope in Hungarian

(11)a. [$_S$ János$_i$ [$_{VP}$ ***´többször is*** $_j$ [$_{VP}$ *´mindent* $_k$ [$_{VP}$ ´világosan $_l$ [$_{VP}$ el[$_V$, magyarázott t_i t_j t_k t_l t_m]]]]
John-nom several-times everything-acc clearly explain
‚As for John, **on several occasions**, he explained everything clearly.'

b. [$_S$ János$_i$ [$_{VP}$ ***´mindent*** $_k$ [$_{VP}$ *´többször is*$_j$ [$_{VP}$ ´világosan $_l$ [$_{VP}$ el[$_V$, magyarázott t_i t_j t_k t_l t_m]]]]
John-nom everything-acc several-times clearly explain
'As for John, **everything** was several times explained by him clearly.'

c. [$_S$ [$_{VP}$ **´többször is**$_j$ [$_{VP}$ *´mindent* $_k$ [$_{VP}$ Janós$_i$ [$_V$, magyarázott el ´világosan $_l$ t_i t_j t_k t_m]]]]
several-times everything-acc John-nom explain clearly
'On **several occasions**, it was true of everything that it was John who explained it clearly.'

→ Only if a QP is supposed to take scope below the focus, can it remain in VP-internal position, for adjunction of QP to VP (below FOC) would vioate the adjacency condition FOC V:

(12) [S [VP ´János$_i$ [V' látott **mindent** e$_i$]]]
John-nom saw everything-acc
'It was John who saw everything.'

- Conclusions:
  i. As a discourse-configurational language, Hungarian is flexible enough to indicate different scope relations between two QPs in overt syntax. No recourse to LF and QR is needed, and inverse scope readings are not attested.
  ii. no reconstruction: surface structures are unambiguous

4. German/Hungarian vs. English: Overte vs. Coverte Movement(Saeboe 1995)

- English and German/Hungarian differ wrt the applicability of QR:

(13) *German:*

a. Wir wissen, dass fast jedesmal mindestens einer meckert.
→ unambiguous → no QR!

b. Wir wissen, dass [mindestens einer]1 fast jedes Mal t1 meckert.
→ ambiguous due to scrambling

(14) *English:*

a. We know that almost every time at least one person complains. (and that is John)
→ ambiguous → QR applies!

b. *We know that at least one person almost every time complains.
→ no scrambling in overt syntax !

(15) "On the other hand, Quantifier Raising (QR) is apparently ruled out in German, blocking a second reading of [13a]. Since QR does seem to play a role in a language like English, it is desirable not to leave this fact about German unexplained, postulating a distinctive set of interpretive rules, but to trace it back to some structural property of this language." (Saeboe 1995:350):→ General strategy adopted by Aoun & Li (1993)

Q: What is the relevant structural difference between German (Hungarian) and English?

→ German and Hungarian freely allow for reordering of constituents in overt syntax x (flexible word order), English only to a limited degree (fixed word order).

(16) *Principle of Overt Scope Marking:*

An NP which can undergo a movement overtly but does not, cannot undergo that or a similar movement covertly.

(17) "Covert NP adjunction [=QR, MZ] is irrelevant because it is possible to perform the same task overtly. If that opportunity is not taken, then for the reason that it should not be taken, overtly or covertly; if it is taken, then QR is superfluous […] So, the apparent lack of QR in German can be traced back to overt structures in that language." (Saeboe 1995:359)

5. Summary: Syntax-based approaches

- Both LF-based and surface-based approaches assign the prominent role in the resolution of scopeal ambiguities to syntactic structure (overt or covert)
- Surface-based accounts (e.g. Frey 1993) are faced with the problem of *undergeneration*, i.e. they cannot account for the existence of scope ambiguities in the absence of overt movement, cf. (8ab).
- Semantic interpretation takes different LFs (with or without long QR, with or without reconstruction) as input and yields the corresponding readings.

  → Autonomy of syntax maintained !
- Cross-linguistic differences in the availability of scope ambiguities (e.g. English vs. German) are reducible to general syntactic differences between these languages (fixed vs. flexible word order)

→ *A new problem:*

LF-based accounts that assume an unrestricted application of QR are faced with the problem of *overgeneration*:They predict the existence of too many inverse scope readings

→ SEE NEXT SESSION !