Relative readings of superlatives: scope or focus?

We provide an empirical argument that focus is necessary for relative readings of superlatives, even though an analysis based on scope alone can account for all the available readings. We also argue that with DP-external focus, syntactic economy considerations preclude DP-external scope of -est. The operator is thus more constrained at LF than previously argued, yet the range of superlative readings available cross-linguistically is still accounted for.

The Puzzle. By allowing the superlative morpheme, a quantifier over degrees with the semantics in (1), to take different scope within the clause, all of the readings of the superlative sentence in (2) are derived: the absolute (2a) and the relative (2b-c) readings, (Szabolcsi’86, Heim’99).

\[
\begin{align*}
(1)[{-\text{est}}] = & \lambda C(e,0) . \lambda D(d,e) . \lambda x e. \exists d[D(d)(x) \land \forall y \in C \left[y \neq x \rightarrow -(D(d)(y))\right]] \quad \text{(Heim, 1999)}
\end{align*}
\]

Presuppositions: \(x \in C\), \(\forall y \in C \rightarrow \exists d [D(d)(y)]\)

(2) John got the longest book from Mary.

\begin{enumerate}
  \item “John got from Mary the book that was longer than all (relevant) books.” \textit{ABSOLUTE} (2a)
  \item “John got a longer book from Mary than anyone else got from her.” \textit{RELATIVE} (2b)
  \item “John got a longer book from Mary than he got from anyone else.” \textit{RELATIVE} (2c)
\end{enumerate}

The scope analysis does not require that the effect of focus (disambiguating between the different relative readings, (3)) be represented at LF for the computation of the contents of the comparison set \(C\). For Szabolcsi’86 and Heim’99 this is an advantage, because for the derivation of the relative reading (2b) of (4) they can avoid positing focus on a prosodically unmarked element: \textit{who} or its trace. The Polish counterpart of (4), however, presents a puzzle – with neutral intonation, (5a), the presupposition that the comparison involves those individuals who got books of some length from Mary, (2b), is missing. For this reading, focus on the superlative expression is required, (5b).

(3a). [JOHN] got the longest book from Mary. \(\Rightarrow\)Readings: (2a), (2b), but not (2c)

(4) We should congratulate the boy who got the longest book from Mary.

(5a). Powinniśmy pogratulować chłopcu, który dostali najdłuższą książkę od Marii.

\begin{itemize}
  \item a. Powiniemy pogratulować chłopcu, który dostali najdłuższą książkę od Marii.
  \item b. Powinniśmy pogratulować chłopcu, który dostali [najDŁUższą]$_F$ książkę od Marii.
\end{itemize}

The Solution. We argue that the data in (5) provides evidence that \textit{who}/trace is necessarily interpreted as focused at LF. Question answer congruence is a standard way of identifying foci, and we observe that in the answer to the multiple \textit{why}-question in (6a), the superlative longest either has to be part of the topicalized DP, (6b), or be the prosodic focus, (6b). In answers to multiple \textit{wh}-questions, one of the F-marked constituents is the so-called \textit{contrastive topic} (encoding the sortal strategy for the pair-list answer, Jackendoff’72, Wagner’12), \textit{Jan} in (6c). In both (6c) and (5b), \textit{Jan} and \textit{who}/trace are not accented, but are interpreted as focused.

(6a). Kto jaką książkę dostał od Marii?

\begin{itemize}
  \item Who got which book from Mary?
  \item a. Kto jaką książkę dostał od Marii?
  \item b. Najdłuższą książkę$_{1,F/CT}$ t$_2$ dostali$_{1,[JAN]_{2,F}}$.
\end{itemize}

Jan got longest book. We also argue that the relative readings (2b-c) are not derived via scope, but via association with focus with -est staying DP-internally. Pancheva & Tomaszewicz’12 propose that the derivations in (2b-c) are only available when the superlative DP lacks the definite determiner, otherwise the unavailability of the reading derived in (7b) for the English sentence in (7a) is unexplained.

(7)a. John got [DP the longest book by [Mary]x].

Unavaiable: ‘John got a longer book by Mary than by any other author.’ RELATIVE (7b)

On the account in P&T’12, -est remains inside definite DPs and can associate with DP-external focus, but not DP-internal focus for relative readings. Polish lacks the definite article and accordingly (7b) is available. We argue, however, that DP-external relative readings are derived with DP-internal -est both with definite and indefinite DPs, i.e. both in English and Polish. When -est takes DP-external scope, it is required that a constituent of the right type to saturate its argument has QRed to the edge of the clause. This movement is not driven by a type-mismatch, hence it is not obligatory. This is an instance of optional QR, a QR operation that applies only when it is necessary to derive an interpretation that a sentence would otherwise not have. QR operations that do not result in a truth-conditional difference are excluded by principles of economy (Fox’00, Reinhart’06). In the case of (2b-c), this first intermediate step on its own does not result in a new interpretation, the QR of John in (8a) has no semantic effect, C is the same as on the absolute reading. In (9), however, the trace is interpreted as a variable that is free within the DP. The denotation of the NP is assignment dependent, so that C contains books by some author whose choice depends on the assignment g. The QR in (9) is not semantically vacuous.

(8)a. 1st Step in the derivation of DP-external relative readings:

\[ \text{John}_1 [\text{TP}_1 \text{got} [\text{DP} [\text{the} [\text{-est }C2 [\text{NP}_2 \text{long book by Mary}]])] \quad C \subseteq \{x \exists d [x \text{ is a d-long book by } x]\} \]

b. 2nd Step:

\[ \text{John} [\text{-est }C2 [\text{TP}_1 \text{got} [\text{DP} [\text{the} [\text{t}_2 [\text{NP}_2 \text{long book by M}]])] \quad C \subseteq \{x \exists d [x \text{ got a d-long book by } M]\} \]

(9) 1st Step in the derivation of DP-internal relative readings:

\[ \text{Mary}_1 [\text{TP}_1 \text{John got} [\text{DP} [\text{-est }C2 [\text{NP}_2 \text{long book by t}_1]])] \quad C \subseteq \{x \exists d [x \text{ is a d-long book by g(1)}]\} \]

Therefore, we propose that the derivation of DP-external relative readings by scoping -est DP-externally is excluded by economy principles since the QR of a DP-external constituent has no effect on the semantics until -est has QRed as well. We derive DP-external relative readings by keeping -est DP-internally (Sharvit & Stateva’02, Coppock & Beaver’14) and imposing a further restriction on C by the focus association mechanism (von Fintel’94, Heim’99) as in P&T’12.

(10) a. [DP (the) [[-est C] [\text{t}_0 K_0]] 2[\text{NP}_2 \text{long book}]] [\text{TP}_1 [\text{-est K}_0 1[\text{TP}_2 \text{[John] got } \text{t}_1 \text{ from M}]]]

b. \[K \subseteq \{\text{[TP}_2]\} \subseteq \{p \exists y [p = \lambda x [y \text{ got } x \text{ from } M]\} \quad C \subseteq \text{[TP}_2]\} \quad \text{(focus association)}\]

c. \[\text{[[-est C]'}] \subseteq \text{[[-est C]'}] \quad \text{(licensing of } \text{\text{-est }C'} \text{ by context such as (6a))}\]

d. \[\text{[[-est C]'}] \subseteq \text{[[-est C]'}] \quad \text{(licensing of } \text{\text{-est }C'} \text{ by context such as (6a))}\]

e. \[\text{[DP]} = \forall x \exists d [x \text{ is a d-long book } \forall y \exists x [y \text{ got } x \text{ from } M \rightarrow \neg y \text{ is a d-long book}]]\]

Conclusion. -Est scopes DP-externally only for DP-internal relative readings (available in the absence of the definite determiner, P&T’12). It stays DP-internally and associates with focus for DP-external relative readings. Focus is not necessarily realized prosodically as primary focus, but the focus structure of the sentence needs to allow F-marking on the relevant constituent.