Focus association into copies and the scope of even

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Explaining backwards association with even: Jackendoff (1972) famously observed that even can associate “backwards” with a subject as in (1). I argue instead that even is generally able to associate with material which has moved out of its scope, cf (2). (1) is therefore subsumed under this more general description, given the vP-internal subject hypothesis.

(1) A [professor]$_F$ will even come to the party. (based on Jackendoff, 1972)

(2) [John]$_F$, they even consider ___ intelligent. (Kayne, 1998, fn. 75)

When even associates with a constituent outside of its surface scope, it is actually associating with a lower copy of the focused constituent, within the scope of even.

The contrast in (3) provides support for this view that even requires its associate to originate within its surface scope. The subject originates lower in raising (seem) but not in control (want):

(3) A [professor]$_F$ \{✓ seems / *wants\} to even be at the party.

See Erlewine (2014, ch. 4) for additional arguments that backwards association requires a lower copy in the scope of even, as well as arguments against a forced reconstruction approach.

Proposal: I adopt the Copy Theory of movement (Chomsky, 1993, a.o.), with F-marking subject to copying. At LF (4b), the lower copy will be interpreted as a definite description bound variable following Trace Conversion (Rullmann and Beck, 1998; Fox, 2002).

(4) A [professor]$_F$ will even come to the party. (=1)

a. Narrow syntax: $[A \ [\text{professor}]_F] \ \text{FUTURE} \ \text{EVEN} \ [a \ [\text{professor}]_F] \ \text{come to the party}$

b. LF: $[A \ [\text{professor}]_F] \ \lambda x \ \text{FUTURE} \ \text{EVEN} \ ([\text{THE} \ [\text{professor}]_F \ x] \ \text{come to the party})$

c. $\text{EVEN} \ \rightsquigarrow \ \text{GENERIC}(x)((\text{the professor } x \ \text{comes}) <_{\text{likely}} \ (\text{the student } x \ \text{comes}))$

d. $\Rightarrow_{\text{LA}} \ \text{for generic } x, \ (x \ \text{professor and comes}) <_{\text{likely}} \ (x \ \text{student and comes})$

Notice that the scope of even at LF contains a variable. The scalar presupposition of even projects generically over individuals in the domain (4c)—see Erlewine (2014, ch. 3) for independent motivation with rich contexts. Local Accommodation (LA) is applied to the lower copy definite descriptions to yield the desired inference (4d). This derives the correct inference of even in cases of backwards association, and correctly predicts a dependence on a lower copy of movement.

Background: even in DE contexts: The scalar inference of even is reversed in downward-entailing (DE) contexts. Broadly two approaches to this problem have been developed:


b. Lexical ambiguity theory: There are PPI and NPI even which introduce reverse scalar inferences (Rooth, 1985), and are different words in some languages.

Backwards association is not a result of the Scope Theory: The Scope Theory potentially offers an explanation for backwards association, but it overgenerates. Under the Scope Theory, to produce the correct scalar inference in (6), even must scope over no one, out of the control embedding. Given this analysis of (6), the Scope Theory fails to explain the contrast in (7), based on (3)—the F-marked student should be able to be interpreted within the scope of even at LF in both cases.
No one \{seems / wants\} to even read [Aspects]$_F$.  \(\leadsto\) Aspects is most likely to be read

Predicted Scope Theory LF: EVEN [no student \{seems / wants\} to read [Aspects]$_F$]

No [student]$_F$ \{ok seems / *wants\} to even be at the party.  \(\text{(cf 3)}\)

Predicted Scope Theory LF: EVEN [no [student]$_F$ \{seems / wants\} to be at the party]

Revisiting Nakanishi’s (2012) ACD data: Nakanishi (2012) presents an argument for the Scope Theory from Antecedent-Contained Deletion (ACD). The ACD in baseline (8) has two possible resolutions, each requiring QR of the box DP to different heights (Sag, 1976). Specifically, Fox (2002) argues that the relative clause must be late-merged high to derive the correct antecedent.

(8) Bill [$\text{VP}_1$ failed to [$\text{VP}_2$ lift [$\text{DP}$ the box that Mary did $\triangle$]]].
   a. $\triangle = \text{“lift”}$: Bill failed to [[antecedent lift \[\triangle \text{ the box that Mary did } \triangle\]]]
   b. $\triangle = \text{“fail to lift”}$: Bill PAST [[antecedent fail to lift \[\triangle \text{ the box that Mary did } \triangle\]]]

One of Nakanishi’s crucial examples is (9); the supporting context is on the poster.

(9) ok Bill has failed to even lift [the box that [Mary]$_F$ has $\triangle$]. \(\triangle = \text{“failed to (even) lift”}\)  \(\leadsto\) the box is the most likely to be lifted (vs piano, desk)

Nakanishi claims that such examples necessitate the Scope Theory: the perfect auxiliary has enforces a corresponding antecedent ($\triangle = \text{“fail to lift”}$), necessitating movement of the DP (containing F-marking) above the higher VP fail to, as in (8b), but this leaves the F-marked box outside the scope of even. Under the Scope Theory, even takes wider scope to derive the correct inference and this problem does not arise. However, my proposal allows for even to associate with a lower copy of box while simultaneously allowing the DP to QR out of the scope of even for ACD resolution.

Moreover, a simple modification to Nakanishi’s example shows that her Scope Theory approach overgenerates. Consider (11) and (12) in context (10):

(10) Context: At the box-lifting competition, Sue first lifted the 25kg box and then failed to lift the 30kg box. John lifted the 20kg box but failed to lift the 25kg box. Mary was disqualified immediately, failing to lift the 15kg box. And now it’s Bill’s turn. He normally does quite well, but somehow he did terribly. Today...

(11) * He has failed to even lift [the box that [Mary]$_F$ has $\triangle$]. Int.: $\triangle = \text{“failed to (even) lift”}$

(12) ok He has even failed to lift [the box that [Mary]$_F$ has $\triangle$]. \(\triangle = \text{“(even) failed to lift”}\)  \(\leadsto\) the box that Mary failed to lift (15kg) is the {most likely to be lifted, least likely for someone to fail to lift}, as compared to the boxes that others failed to lift (30kg + 25kg).

The Scope Theory predicts even in (11) to be interpreted above the DE fail to at LF, just as in (9) and (12). The contrast in (11–12) is then unexplained by Nakanishi’s Scope Theory approach.

This contrast is explained by my account. The intended ellipsis resolution in (11–12) requires the box DP to move above fail to, with the relative clause “that Mary has $\triangle$” then late-merged high. Therefore, in (11), but not in (12), there is never an instance of Mary inside even’s surface scope. In contrast, in example (9) above, ACD was possible while maintaining focus association with box because a copy of the focused box exists in the surface scope of even.