Focus Structure and NPI-licensing

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Driving Questions

Only licenses NPI *any* in the unfocused c-commanding part.

(1)   a.   John only gave any funding to MARY$_F$.
       b.   *John only read ANY$_F$ paper.
       c.   *John only read [any PAPER]$_F$, (he didn't read every book).
       d.   *John only read any PAPER$_F$, (he didn't read any book).

Wagner (2006): Focus Movement

- *Only* is Strawson-DE in its scope but not in its syntactic restrictor.
- Focus association involves covert movement of the focused constituent to the complement/restrictor of VP-*only*.
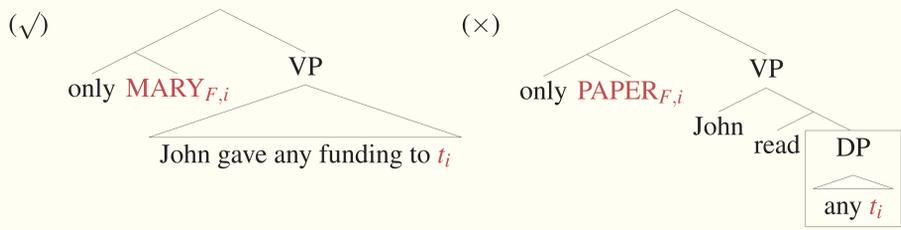
▶ Prob 1: SDE is neither necessary nor sufficient

Crnič (2011) and Gajewski (2011).

▶ Prob 2: Motivation of focus movement

Wagner assumes that focus movement is used to strengthen the ∃-presupposition of *only*. This goal, however, can be achieved simply by phonetic markings.

▶ Prob 3: Extension Condition

Chomsky (1995): all movement operations extend the root of the structure that they apply to.

▶ Prob 4: Associating with verbs anti-licenses NPIs

In (2), the direct object should be allowed to evacuate the VP, and the remnant VP subsequently associate with *only* (John Gajewski p.c. to Wagner 2006).

(2)   *John only CUT any vegetables.

▶ Prob 5: Associating into islands yields overly strong readings

(3)   Sue only invited ⌜ JOHN$_F$'s advisors ⌟.
       → Sue didn't invite anyone's advisors except John's.
       ↛ Sue didn't invite anyone except John's advisors.

The Grammatical View of NPI-licensing

▶ Why is NPI *any* only acceptable in DE contexts?

Chierchia (2006, 2013): In a non-DE context, all the (proper) sub-domain alternatives of *any* are not entailed. Applying O_D negates all of them, resulting in a contradiction to the assertion and making the sentence G(rammatically)-trivial.

(4) $O(p) = p \land \forall q \in \mathscr{A}lt(p)[p \not\subseteq q \to \neg q]$
(5)   a.   *John read any paper.
     b. O_D [John read any$_D$ paper]
     c.   Assertion: $\exists x \in D[P(x) \land R(j,x)]$
     d. $D\text{-ALT} = \{\exists x \in D'[P(x) \land R(j,x)] \mid D' \subseteq D\}$

$D = \{p_1, p_2\}$

$D\text{-ALT} = \{\{p_1, p_2\}, \{p_1\}, \{p_2\}\}$

$(p_1 \lor p_2) \land \neg p_1 \land \neg p_2 = \bot$

▶ Why does *only* license weak NPI *any*?

The assertion is DE in the unfocused part (Krifka 1995, Lahiri 1998, Chierchia 2013), and the presupposition is irrelevant for weak NPI-licensing (Gajewski 2011).

(6)   Only JOHN read any paper.
     a.   Assertion: $\forall y \exists x \in D[P(x) \land R(y,x) \to y = j]$
     b.   Presupposition: $\exists x \in D[P(x) \land R(j,x)]$

(7)   a. O_D [only [JOHN$_F$ read any$_D$ paper]]
     b.   D-ALT = { only [JOHN$_F$ read any$_{D'}$ paper] : $D' \subseteq D$ }

▶ Prob 6: Why are (1b-c) bad?

If LFs in (8) are well-formed (O_D and *only* check off [D] and [F], respectively), the grammatical view would predict (1b-c) to be grammatical.

(8)   a. O_D only [John read ANY$_{D,F}$ paper]
     b. O_D only [John read [any$_D$ PAPER]$_F$]

▶ Prob 7: Why is (1d) bad?

(9) O_D only [John read any$_D$ PAPER$_F$]

▶ Prob 8: In (6), F-alternatives can't be propositional

Although the position for q is DE, the position for q isn't.

(10)   Only$(p) = \forall q \in \mathscr{A}lt(p)[q \to p \subseteq q]$

My Proposal (I): Focus Movement + Grammatical View

Assumptions on feature-checking
- [D] and [F] are features of the same type.
- *Only* checks off all the unchecked features in its c-commanding domain.

▶ (1b-c): Associating *only* with *any* is G-trivial (P6)

When *only* associates with *any* or the whole *any*-phrase, it will check off both [F] and [D] features. No matter whether *any* is interpreted in-situ or with movement, the [D] feature is evaluated in a UE context, yielding a G-triviality/contradiction.

(11)   a.   Only [John read [any$_D$ PAPER]$_F$]   ⊥
      b. O_D [any$_D$ PAPER]$_i$ [only [John read $x_{i,F}$]]   ⊥

▶ (1a): NPI-licensing requires focus movement

If focus is always interpreted in-situ, due to Relativized Minimality (Rizzi 1990) and Focus Intervening Effects (Beck 2006), [D] will be checked by *only*, yielding G-trivialities.

(12)   a.   Mary only gave any funding to JOHN$_F$.
      b. O_D only [Mary gave any$_D$ funding to JOHN$_F$]   ⊥ (RM)
      c. O_D [(JOHN$_{i,F}$) only [Mary gave any$_D$ funding to t_i]   √

(13)   a.   Only JOHN$_F$ read any paper.
      b.   [O_D [only [JOHN$_F$ read any$_D$ paper]]]   ⊥ (FIE)
      c.   [O_D [(JOHN$_{i,F}$) only [t_i read any$_D$ paper]]]   √

- The requirement of avoiding G-triviality motivates focus movement. **(P2)**
- When necessary, focus moves to the specifier of *only*. **(P3)**

If interpreting focus in-situ doesn't yield a contradiction, focus isn't moved.

(14)   a.   Mary only didn't give any$_D$ funding to JOHN$_F$
      b.   Only O_D not [Mary gave any$_D$ funding to JOHN$_F$]   √
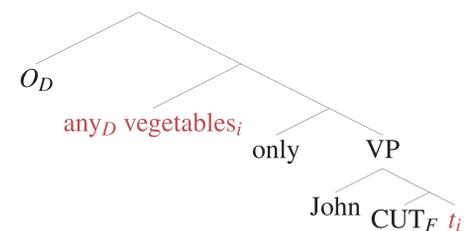
▶ (1d): Associating into islands is G-trivial (P7)

If *any* and the focus are in the same island, *only* cannot license *any*.

(15) O_D [([any$_D$ PAPER$_F$]$_i$) only [John read t_i]]   ⊥

▶ (2): Associating *only* with verbs is G-trivial (P4)

In (2), the only syntactically well-formed way to move *any*P is as follows. However, interpreting *any*P under the immediate scope of O_D also yields a contradiction. (cf. 16)

(16)   If John only CUT any vegetables (and didn't STEAM any vegetables), his wife would be unhappy.

My Proposal (II): Focus Interpretation

The quantification domain of *only* =
- the focus value of the c-commanding domain, if focus is in-situ. (Rooth 1985)
- the focus value of the moved phrase, otherwise. **(P5, P8)**

(17)   a.   ⟦JOHN$_F$⟧$_f$ = D_e
     b.   ⟦JOHN$_F$'s advisors⟧$_f$ = $\{A(x) : x \in D_e\}$
     c.   ⟦(3)⟧ = $\forall y \in \{A(x) : x \in D_e\}[I(s,y) \to A(j) \subseteq y]$

Selected References

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Acknowledgements