*Pre-DP *only* is a propositional operator at LF: a new argument from ellipsis*

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1 Overview

- *Only* is traditionally taken to encode a **propositional** operator.

(1) **Propositional *only*:**
$[\![\textbf{only}]\!]^C = \lambda \boldsymbol{p}_{\langle s,t\rangle}.\lambda w : p(w).\, \forall p' \in C[p'(w) \rightarrow p \subseteq p']$

- Yet, *only* can occur at various positions, including at a **pre-DP** position.

(2) a. Jill **only** brought wine. (pre-vP)
b. Jill brought **only** wine. (pre-DP)

Question: How to reconcile the meaning of *only* with its occurrence pre-DP (2b)?

- **Quantifier-approach**: flexibility in *only*'s semantic type; [*only* DP] compose to form a single **quantifier** (Rooth 1985, see also Wagner 2006).

(3) **Quantifier *only*:**
$[\![\textbf{only}_Q]\!]^C = \lambda \boldsymbol{Q}_{\langle \boldsymbol{est,st}\rangle}.\, \lambda f_{\langle e,st\rangle}.\, [\![\textbf{only}]\!]^C(Q(f))$

(4) **LF in the Q-approach:**
$[_{\text{TP}}$ Jill$_1$ $[_{v\text{P}}$ **only wine**$_{\boldsymbol{Foc}}]_2$ $[_{v\text{P}}$ t_1 brought $t_2]]]$

- **Propositional-approach**: Maintains a uniform propositional operator; pre-DP *only* is not itself interpreted but reflects **concord with a covert ONLY**.[1]

(5) **LF in the P-approach:**
$[_{\text{TP}}$ Jill$_1$ [**ONLY** $[_{v\text{P}}$ t_1 brought **wine**$_{\boldsymbol{Foc}}]]]$

  - For various arguments see e.g. Hirsch 2022 and references therein
  - We will discuss the concord relation itself later on (section 5)
  - For now, we take (5) as the representation on the P-approach.

Today: an argument for the P-approach (based on Benbaji 2021).

- The argument involves an interaction between the scope of *only* and ellipsis:

[1]The version of the concord analysis we will adopt is based on Quek and Hirsch (2017), Hirsch (2017). For proposals with a similar syntax and/or semantics, see the works of Bayer (1996, 2018, 2020), Kayne (1998), Lee (2004), von Fintel and Iatridou (2007), Horvath (2007), Cable (2010), Barbiers (2014), Hole (2015, 2017), Branan and Erlewine (2020), Sun (2020, 2021), a.o.

(6) Jill may bring only wine. Bill may △, too. (*may* > *only*, ***only** > **may***)

– See Benbaji (2021) for parallel data to (6) in Hebrew.

- **Form of the argument**: the scope restriction follows from independent constraints in the P-approach, but not the Q-approach. Without stipulations, the Q-approach *over-generates* the unattested wide scope reading.

Road map: Section 2 presents the core generalizations that form the basis of the argument. Sections 3-4 lay out the argument. Section 5 hints at a possible extension of the theory that we defend here to other concord phenomena beyond *only*.

2 Data: Pre-DP *only*, modals, and ellipsis

- Pre-DP *only* is known to scopally interact with modals (after Taglicht 1984).

(7) Jill **may** bring **only** wine. (*may* > *only*, *only* > *may*)

a. ***may** > **only***: *Jill is allowed to not bring anything other than wine*
b. ***only** > **may***: *Jill is not allowed to bring anything other than wine*

- However: **VP ellipsis** in (8) **disambiguates** to surface scope:[2]

(8) Jill may bring only wine. Bill may △, too. (*may* > *only*, ***only** > **may***)

- If the VP is overtly repeated (and merely deaccented), the ambiguity remains:

(9) Jill may bring only wine. Bill may bring only wine, too.

- The data replicates with modal verbs, such as *allowed* and *has to* (which differ from modal auxiliaries in their syntax):

(10) Jill is **allowed** to bring **only** wine. Bill is allowed to △, as well.
(*allowed* > *only*, ***only** > **allowed***)

(11) Jill **has to** bring **only** wine. Bill has to △, as well.
(*has.to* > *only*, ***only** > **has.to***)

- **Question**: What is behind the disambiguation effect of ellipsis in (8), (10)-(11)?

[2] (8) may also allow for ellipsis of just *bring wine*, with *only* absent from the ellipsis clause. This possibility, however, is irrelevant for the following.

2.1 An independent constraint

- Independently, it has been observed by Beaver and Clark (2008) (B&C) that ***only* cannot associate into ellipsis sites**.
  - This generalization is motivated by data involving pre-$\underline{v}$P *only* such as (12):

(12) A: I **only** know he brought **WHITE** wine. What about you?

a. B: I **only** know he brought **WHITE**$_{Foc}$ wine, too.
b. *B: I **only** know he did ~~bring **WHITE**$_{Foc}$ wine~~, too.
c. B: I do **only** ~~know he did bring **WHITE**$_{Foc}$ wine~~, too.
d. (B: I know he did ~~bring white wine~~, too.)

(13) **Beaver and Clark's Constraint**: *only* and its associated *Foc* cannot be separated by a node targeted for ellipsis. (cf. B&C, pp.177)[3]

- As we show (building on Benbaji 2021), the scope restriction observed with pre-DP *only* is **predicted from B&C's constraint — only on the P-analysis**.

3 The argument

3.1 P-analysis

- How can the **P-approach** exploit (13) to explain our core data?
- We illustrate with an example involving the auxiliary *may* (repeated from (7)), but the argument generalizes to the modal verb examples in (10)-(11).

(14) Jill may bring only wine. ($may > only, only > may$)

- For concreteness, we assume that the modal *may* is base generated in T and that the covert operator **ONLY**, being a propositional operator, attaches to vP or higher nodes.
- The basic ambiguity in (7) (without ellipsis) is thus generated by adjoining ONLY at different scope sites in the narrow syntax:

[3] B&C's constraint could in principle be illustrated using simpler structures, as in (i) from Stockwell 2020:237. We used the bi-clausal configuration in (12) instead in order to neutralize a possible objection to (i), namely that (ia) could be unacceptable because it is not very natural for *only* to surface immediately higher than auxiliaries to begin with.

(i) a. John only eats CHEESE. *BILL **only** does ~~eat **CHEESE**$_{Foc}$~~, too.
b. John only eats CHEESE. BILL does ~~**only** eat **CHEESE**$_{Foc}$~~, too.

(15) a. *may > only* LF: [TP Jill$_1$ [T′ **may** [vP **ONLY** [vP t_1 bring wine$_{Foc}$]]]]
b. *only > may* LF: [TP Jill$_1$ [T′ **ONLY** [T′ **may** [vP t_1 bring wine$_{Foc}$]]]]

- VP-ellipsis is assumed to target the complement of T
- And we take B&C constraint (13) to now be a **constraint on the relationship between** *FoC* **and (covert)** ONLY.

(16) **Beaver and Clark's Constraint**, *P-approach version*: ONLY and its associated *Foc* cannot be separated by a node targeted for ellipsis.

  - In section 5 we consider whether (16) may be part of a more general pattern.

- The disambiguation effect of ellipsis, repeated in (17), follows from (16):

(17) Jill may bring only wine. Bill may △, too. (*may > only*, ***only > may***)

(18) a. [TP Jill$_1$ [T′ may ~~[vP ONLY [vP t_1 bring wine$_{Foc}$]]]~~] **(*respects (16)*)**
b. *[TP Jill$_1$ [T′ ONLY [T′ may ~~[vP t_1 bring wine$_{Foc}$]]]~~] **(*violates (16)*)**

  - In (18a), both ONLY and its associate are inside the ellipsis site
  - But with ONLY adjoined higher, (18b), just the associate is inside ellipsis.

- In the appendix we consider a different assumption about the syntax of the modal and conclude it does not threaten our overall conclusion here.

3.2 Q-analysis over-generates

- The Q-approach, on the other hand, wrongly predicts the unattested reading.
- If *only* is not separated from its associated DP at LF, but forms a complex quantifier with it, it is not clear what blocks an inverse-scope LF. QR of *only*-DP in (19b) generates *only > may* and does not run afoul of B&C's constraint.

(19) a. *may > only* LF: [TP Bill$_1$ [T′ may [vP ~~[only wine$_{Foc}$]$_2$~~ [vP t_1 bring t_2]]]]
b. ***only > may*** LF: [TP Bill$_1$ [T′ [only wine$_{Foc}$]$_2$ [T′ may [vP ~~t_1 bring t_2~~]]]]

- To block inverse scope, **some other constraint** would have to prevent the [*only DP*] quantifier from undergoing QR out of the ellipsis site.
- Crucially, however: there is **no general ban** on a quantifier taking wide-scope taking out of an ellipsis site (Sag 1976; Fox 2000, a.o.):

(20) a. The duke **may** marry **most** commoners.
b. The prince may Δ, too. (✓ *most* > *may*)

(21) a. **A** boy is standing on **every** building.
b. A girl is Δ, too. (✓ *every* > *a*)

- While we cannot rule out a stipulation specifically on QR of [*only DP*] in ellipsis contexts, that would not seem to follow from a general constraint.

4 Scope of *only* correlated with the size of ellipsis

- We saw earlier that the interaction between *only* and modal **verbs** is also subject to B&C's constraint.
  - (22) is repeated from (11):

(22) Jill **has to** bring **only** wine. Bill has to △, as well.
(*has.to* > *only*, ***only** > **has.to***)

- The P-approach together with B&C's constraint predicts correctly that a **higher ellipsis** which includes the modal verb will allow the inverse-scope reading
  - This is borne out:

(23) Jill **has to** bring **only** wine. Bill does △, as well.
(*has.to* > *only*, ✓***only** > **has.to***)

- Predicted, because when the matrix VP is elided there is a possible parse where ONLY is high enough (to derive the reading) but still inside the ellipsis site.

(24) $[_{TP}$ Bill$_1$ $[_{T'}$ does $[_{vP}$ ~~ONLY $[_{\bar{v}P}$ have to $[_{\bar{v}P}$ t_1 bring wine$_{F\bar{o}C}$~~$]]]]]$

- The general prediction of the theory is schematized in (25):

(25) ***Prediction**: the size of ellipsis affects the scope possibility of 'only'*
a. [... M ... ~~$[_E$ ... only DP ... $]$~~] (✘ ONLY > *M*)
b. [... ~~$[_E$ ... M ... only DP ... $]$~~] (✓ ONLY > *M*)

- We give another example that bears out this prediction in a fairly sharp way, by exploiting pragmatic biases on the accessibility of the different readings

- Consider as baseline the set-up in (26):

  (26) To get tenure, Anna **has to** write **only** [$_{DP}$ **two** papers].
  $\rightsquigarrow$ *Anna does not have to write more than two papers* (*only* > *has.to* > *two*)

- World knowledge strongly biases towards the reading *only* > *has.to* > *two*[4]
- A structure like (26) is bi-clausal, so it potentially hosts two VP-ellipsis sites
- As predicted, only high ellipsis preserves the pragmatically-favoured reading:

  (27) Anna has to write only two papers.
  a. #Ben **has to**, also. (#They're both so lucky!) (✘*only* > *has.to* > *two*)
  b. Ben **does**, also. (They're both so lucky!) (✓*only* > *has.to* > *two*)

  – If ellipsis targets the complement of *have to*, (27a), the biased reading is lost;

  – Whereas if ellipsis includes *have to*, (27b), the reading is preserved

- The LF of the favoured reading can only host high ellipsis, given B&C's constraint:

  (28) a. *[$_{TP}$ Ben$_1$ [$_{T'}$ ONLY [$_{vP}$ have [to ~~[$_{\overline{v}P}$ t_1 write two$_{Foc}$ papers]]]]]
  b. [$_{TP}$ Ben$_1$ [$_{T'}$ does [$_{vP}$ ~~ONLY [$_{\overline{v}P}$ have to [$_{\overline{v}P}$ t_1 write two$_{Foc}$ papers~~]]]]]

- Once again, only when the matrix VP elided, in (28b), is there a possible parse where ONLY is high enough but still within the ellipsis site.

[4] This is not just an inverse scope reading, but more specifically a clear *split* scope reading. See Hirsch 2017 for an independent argument for the P-approach based on the scope split in (26).

To summarize:

- We compared two approaches to the syntax-semantics of pre-DP *only*:
  - **Quantifier-approach**: Assumes flexibility in *only*'s semantic type; [*only* DP] is a generalized quantifier.
  - **Propositional-approach**: Maintains a uniform propositional operator; pre-DP *only* is not itself interpreted but reflects the presence of a covert ONLY.

(29) **LF in the P-approach:**
$[_{\text{TP}}$ Jill$_1$ [**ONLY** $[_{v\text{P}}$ t_1 brought **wine**$_{\boldsymbol{Foc}}$]]]

- We provided an argument (following Benbaji 2021) against the Q-approach and in support of positing Logical Forms such as (29), given an independently motivated constraint on the relationship between *only* and its focus.

5 Beyond *only*

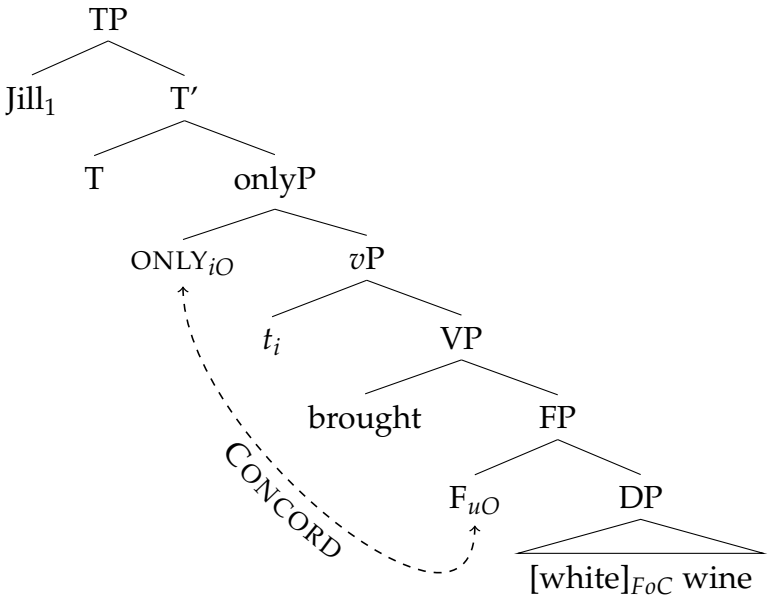
- In this section, we consider whether the results for *only* under ellipsis may fit with properties of potential **concord phenomena** more generally.
- This section is tentative, and establishes a direction for future research.

5.1 *Only* in a system of concord

- We argued in favor of a concord analysis of pre-DP *only*. But so far we ignored some of the details: what is the mechanism responsible for spelling out a propositional abstract ONLY as *only* in pre-DP positions?
- For concreteness, consider the derivation in Quek and Hirsch 2017, Hirsch 2017 for *only* concord
  - *Only* is built from two heads: ONLY (operator) + F (inert marker);
  - F Agrees with ONLY, and overt *only* can optionally realize F.

(30) *The anatomy of 'only' (detailed)*:

a.



b. PF rule (English): Realize ONLY at PF with *only* in exactly one of the linked positions: {ONLY$_{iO}$, F$_{uO}$}.

(31) **Possible PFs** of (30a): *Jill* (***only***) *brought* (***only***) *WHITE wine*

– The distance between F and *FoC* is assumed to be subject to locality constraints

5.2 B&C's Constraint as a concord constraint?

- This opens up a different way to think about B&C's constraint.
- **Suppose** that instead of regulating the relation between ONLY and *FoC*, B&C's constraint in fact **regulates the relation between ONLY and F** (=the position that realizes ONLY).
  - I.e., the constraint may restrict the dependency between the operator and the concord item.
- If so, similar restrictions might arise with other (potential) concord phenomena.

5.3 Negative indefinites

- Penka 2011: negative indefinites reflect concord with a silent sentential negation

(32) Mary read **no book**.

(33) [TP Mary$_1$ [NEG$_{[i\text{NEG}]}$ [vP t_1 read $\exists_{[u\text{NEG}]}$ book]]]

- One potential argument comes from **split-scope readings**

(34) The company need fire no employees. (Potts 2000)

a. **Available**: $\neg > need > \exists$
'The company doesn't need to fire any employee.'

b. LF: $[_{TP}$The com'$_1$ $[\mathbf{NEG_{[iNEG]}}$ **need** $[_{vP}$ $\mathbf{\exists_{[uNEG]}}$ emplo' $[_{vP}$ t_1 fire $t_2]]]]$

- **Observe**: negative indefinites **mirror *only*** with ellipsis (Van Craenenbroeck and Temmerman 2017)[5]

- In the baseline in (35), the negation can take scope above the modal:

(35) Quentin Tarantino can offer no help. ($no > can$)
'It is **not possible** for Tarantino to offer help.'

- But, with ellipsis, the scope of negation interacts with the size of ellipsis.

(36) A- Who can offer no help?

a. #B- Quentin Tarantino can! **($*no > can$)**

b. B'- Quentin Tarantino! ($\checkmark no > can$)

(Van Craenenbroeck and Temmerman 2017)

- This contrast would follow from a counterpart of B&C's constraint:

(37) **Constraint on negative indefinites**:
NEG and and a concord item ($\exists_{[u\text{NEG}]}$) cannot be separated by a node targeted for ellipsis.

- A high NEG would be separated from the indefinite in (36a) but not in (36b):

(38) a. $[_{TP}$ Mary$_1$ $[\text{NEG}_{[i\text{NEG}]}$ can $[\sout{_{vP}\ t_1\ \text{offer}\ \exists_{[u\text{NEG}]}\ \text{help}}]]]$ (***violates (37)***)

b. $[_{TP}$ Mary$_1$ $\sout{[\text{NEG}_{[i\text{NEG}]}\ \text{can}\ [_{vP}\ t_1\ \text{offer}\ \exists_{[u\text{NEG}]}\ \text{help}]}]]$ (***respects (37)***)

- **Hence**: pre-DP *only* and negative indefinites in English **may be unified** as concord phenomena, and both obey a parallel constraint in ellipsis contexts.

- It is possible to unify the two constraints under a general principle:

[5]We thank Ido Benbaji (p.c.) for drawing our attention to Van Craenenbroeck and Temmerman (2017)'s paper.

(39) **A general constraint?**
$OP_{[iOP]}$ and $X_{[uOP]}$ cannot be separated by ellipsis.

- **Next step:** To what extent is a general constraint viable with concord cross-linguistically?[6]

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[6] One obvious prediction of (39) is that *overt* negative concord languages like Italian, Polish, Spanish and Hebrew will not allow ellipsis to intervene between the (overt) negation marker and (an elided) negative indefinite. At least in the latter two languages, this prediction does not seem to be borne out. A Hebrew example is provided in (i).

(i) Ani raiti miSehu, ve-ata **lo** ~~raita **af** exad~~
I saw someone, and-you **not** ~~saw **N-** one~~
'I saw someone, and you didn't ~~see anyone~~' (Hebrew)

It seems relevant that, as opposed to English, the negative marker which licenses object neg-DPs is overt in neg-concord languages. However, at present we are unsure what to make of this fact. We leave a more serious investigation to future research.

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Appendix: Modal Reconstruction

- In our discussion of the syntax of auxiliary modals around (15), we took it that auxiliary modals are generated in T and are scopally immobile
- But we must consider the hypothesis that auxiliary modals move up to T from a vP-internal position (see Iatridou and Zeijlstra 2013, a.o.)
- Would that affect the argument for the P-approach?
- For one, whatever are the conclusions about modal auxiliaries, we showed in the text that our results equally apply to modal *verbs*, for which no similar (scope-shifting) movement has been motivated
- Still, the quesiton remains about auxiliaries. In this section we consider the possibility of auxiliary movement and conclude that the argument for P-approach remains

5.4 The issue

- One motivation for hypothesizing modal reconstruction is the observation that modals can take scope lower than negation (see e.g. Iatridou and Zeijlstra 2013) and pre-$\underline{v\text{P}}$ *only*:

(40) a. John may only learn Spanish ($\checkmark only > may$)
b. John may not eat the cake ($\checkmark not > may$)

- The possibility of modal reconstruction seems at first glance to run the risk of losing the account we provided for the core facts regarding ellipsis
- Consider the possible derivation in (41a), where *may* reconstructs

(41) Jill may bring only wine. Bill may △, too. ($may > only$, ***only** > **may***)
a. $[_{\text{TP}}$ Bill$_1$ $[_{\text{T}'}$ may ~~$[_{\overline{v\text{P}}}$ ONLY $[_{v\text{P}}$ **may** $[_{v\text{P}}$ t_1 bring wine$_{Foc}$~~$]]]]$

– In (41) the interpreted position is indicated in bold, and the position marked in grey is merely pronounced

- This representation does not violate B&C's constraint
- In order to still not overgenerate the unattested reading, something must be said about this representation
- (Cf. (18b), without modal reconstruction, which does violate B&C's constraint.)

5.5 Another independent constraint

- We note that **modals never take scope below vP-*only* if their complement elides:**

(42) a. Bill may only eat the cake. John, also, may only eat the cake. ($only > may$)
b. Bill may only eat the cake. John, also, may. (***only > may***)

- We suggest the following constraint:

(43) **Modal reconstruction constraint**:
Auxiliary modals do not reconstruct into an ellipsis site.

- If modals never reconstruct into an ellipsis site, we can conclude that the derivation in (41a) is ruled out independently

- **Crucially**, we still need B&C constraint, to rule out ellipsis of the most embedded VP/vP in (41a).