

Wagner (2006): NPI licensing and *only*¹

1 Review: two approaches to English VP-*only*

- (1) **Association with focus, in-situ (Rooth, 1985):**

$$\llbracket \widehat{\text{only}} \alpha_t \rrbracket = 1 \iff \forall \phi \in \llbracket \alpha \rrbracket^f (\phi \neq \llbracket \alpha \rrbracket^o \rightarrow \phi \text{ is false})$$

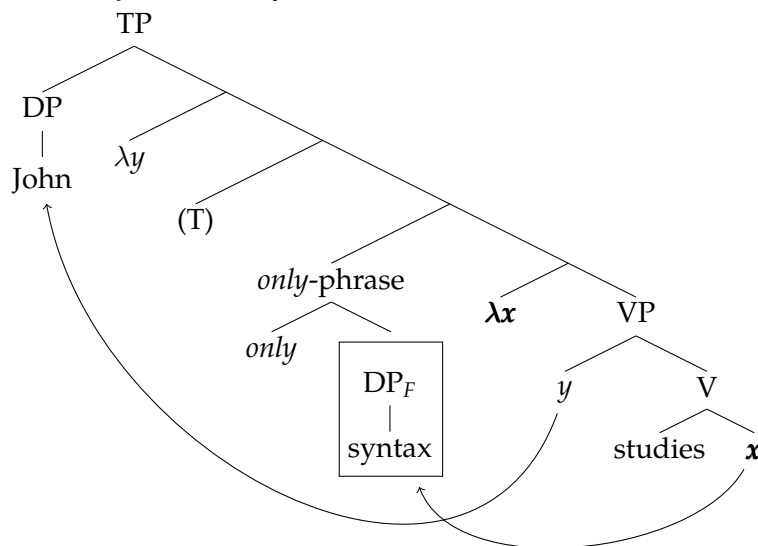
- (2) **Covert focus movement:**

Only is always a two-place operator:

$$\llbracket \widehat{\text{only}} \alpha_e \rrbracket = \lambda P_{\langle e,t \rangle} . \forall x \in \llbracket \alpha \rrbracket^f (x \neq \llbracket \alpha \rrbracket^o \rightarrow P(x) \text{ is false})$$

Adverb *only* covertly moves the F-marked constituent to become its *first argument*.

- (3) John *only* studies [syntax]_F



Only can associate into syntactic islands, which may be problematic for the focus movement view (Anderson, 1972; Jackendoff, 1972; Rooth, 1985).

- ☞ A possible solution is *covert focus movement with pied-piping* (Drubig, 1994; Krifka, 2006, a.o.) which we discussed before (Day 20 handout).
 - We also discussed further evidence from intervention effects in focus pied-piping (Erlewine and Kotek, 2014) (Day 24 handout).

Wagner (2006): evidence from NPI licensing for covert focus movement with pied-piping

¹This handout is a modified version of Michael’s 2005 SALT handout.

Wagner (2006) notation:

- The first argument of *only*/quantifier; Wagner (2006) calls this the **syntactic restrictor**. In the cases of interest, this corresponds to the pied-piping.
- *Focus*, inside the pied-piping.
- \lceil The second argument of *only*/quantifier \rceil , i.e. its nuclear scope.

2 Background: NPI licensing and Strawson Entailment

NPIs are licensed in *downward entailing* (DE) environments (Ladusaw, 1979).

- (4) a. *Every linguistics student \lceil knows any famous linguist. \rceil
b. Every student with any knowledge in linguistics \lceil knows Jim Mccawley \rceil .

'Every' is DE in its first, but not in its second argument:

- (5) a. Every student \lceil knows Mccawley \rceil .
→ Every linguistics student \lceil knows Mccawley. \rceil
b. Every student \lceil knows a famous linguist. \rceil
↯ Every student \lceil knows Mccawley. \rceil

Conversely, the exclusive *only* licenses NPIs in its scope, but not in its restrictor:

- (6) a. Only John \lceil ate any kale \rceil .
b. *Only any students \lceil ate kale \rceil .

Unexpectedly, *only* does not seem to be DE in *either* argument:

- (7) a. Only John \lceil ate vegetables \rceil . ↯
Only John \lceil ate kale \rceil .
b. Only students \lceil ate kale \rceil . ↯
Only Linguistics students \lceil ate kale \rceil .

von Stechow (1999): A *Strawson-entails* B if A entails B granted that the presuppositions of B are true:

- (8) a. Only John \lceil ate vegetables \rceil
b. Presupposition: John ate kale
c. → Only John \lceil ate kale \rceil .

The second argument of *only* is *Strawson downward entailing* (SDE), but not its first:

- (9) a. Only students \lceil ate kale \rceil
b. Presupposition: Linguistics students ate kale
c. \nrightarrow Only linguistics students \lceil ate kale \rceil .

only is Downward-Strawson-Entailing (DSE) in the second argument (its scope) but not in first argument (its restrictor). NPIs are licensed in DSE-Environments. [ONLY + Restrictor] is a DSE-operator.

3 NPIs and constituent *only*

☞ *only* does not license NPIs in its restrictor, *not even in the parts that are not the focus*:

- (10) a. * Only any inhabitant of *Twin Earth* \lceil met Particle Man \rceil .
b. * Only an *author* of any comic \lceil met Particle Man \rceil .
c. Only *Particle Man* \lceil met any inhabitant of *Twin Earth* \rceil .

The first argument of *only* is generally not Strawson-Downward-Entailing, as was discussed above. (Apparent counterexamples are discussed in the paper's section 2.3.)

4 NPIs and VP-*only*

VP-*only* can license NPI inside of VPs (von Stechow, 1999):

- (11) There only \lceil was any precipitation in *Medford* \rceil .

Therefore the restrictor of *only* cannot be the entire VP. The solution proposed here is that (11) involves focus movement. Consider also:

- (12) a. John only \lceil gave any kale to *his* friends \rceil .
b. John only \lceil gave *kale* to any of his friends \rceil .

The way I implement this idea is that this movement provides the complement for *only*:

- (13) a. [only *his* friends] [λx . John gave any kale to x].
b. [only *kale*] [λx . John gave x to any of his friends].

Downward-Strawson Entailment predicts correct Licensing:

- (14) a. John only \lceil gave vegetables to his friends \rceil .
 b. Presupposition: John gave kale to his friends.
 c. \rightarrow John only \lceil gave kale to his friends \rceil .

Bruening (2001) observes that in double object construction, the scope between the indirect and direct object is frozen (15a), as opposed to the dative construction, where both scopes are available (15b).

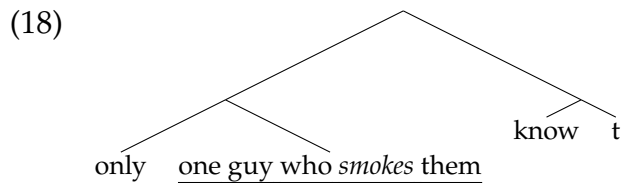
- (15) a. I gave a child each doll. $a > each, *each > a$
 b. I gave a doll to each child $a > each, each > a$

Correct Prediction for NPI Licensing: **Double-Object-Restriction.**

- (16) a. She only \lceil gave her student any funding. \rceil
 b. *She only \lceil gave any student summer funding \rceil .

- (17) I don't know anyone who smokes bananas, I only know a guy who *grows* them.
 (Anderson, 1972)

Drubig (1994): The entire island is pied piped.



Given the distribution of NPIs in the case of NP-only, the fact that VP-only licenses NPIs in the non-focal part of the VP is evidence for focus movement. The double-object Restriction is a first piece of evidence that regular constraints on movement apply.
Next two sections: evidence for pied-piping.

4.1 The Head Restriction

When *only* associates with a head, the entire projection is restrictor of *only*, since *heads* cannot undergo \bar{A} -Head-Movement, and thus must pied-pipe at least their complement:

- (19) **Prediction I: The Head Restriction:**
 Association with the head of a constituent not license NPIs in its complement.

Consider NPI licensing in cases of association with the verb:

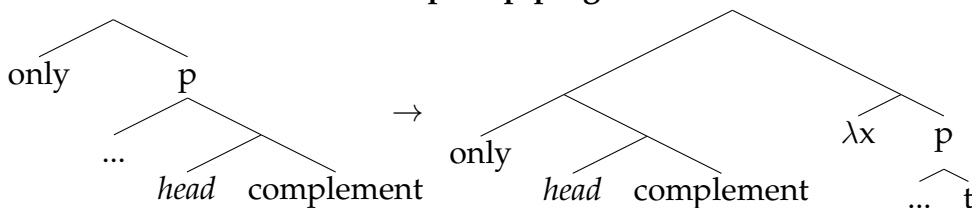
- (20) **Association with a verb:**
 While John was willing to help cooking the vegetables, he was a bit particular about which chore he was going to be assigned.
 a. *John only cut any vegetables.
 b. John didn't *cut* any vegetables.

This sentence should be grammatical if 'cut' was the focus of *only*, and 'any vegetables' is in the scope of *only*, that is, if the LF of the sentence in (20) looked as follows:

- (21) [only *cut*] [λx . John *x* any vegetables]

Applying the same logic as in the case of DP-*only*, the facts can be explained if we take *the entire VP* to be the restrictor of *only* in cases of association with the verb:

- (22) **Association with a head and pied-piping:**



- (23) [only cut vegetables] [λx . John *x*]

- (24) **Association with a preposition:**
 There are several parks in this city, and one is allowed to drive through, but only at 10mph. I wonder whether John always went *through* the parks, or whether he sometimes went *around* any park.
 a. *John only drove through any park.
 b. John didn't drive *around* any park.

(25) **Association with complementizer:**

Did she tell you at what time we will arrive?

- a. *She didn't tell me when *anyone* will arrive. She only \lceil told me that anyone will arrive \rceil .
- b. She didn't tell me when *anyone* will arrive. In fact, she didn't (even) tell me *that* anyone will arrive.

(26) **Association with head noun with a relative clause:**

- a. *She only \lceil went to talks that were given by any students \rceil .
- b. She didn't go to *talks* that were given by any students.

(27) **Association with head noun with a possessor:**

- a. *Anna only \lceil knew anyone's parents \rceil , but she didn't know any of the other guests.
- b. Anna didn't know anyone's *parents*, but she knew all the other guests.

As predicted by the Movement theory of Focus-Association, association with a head does not license NPIs in its complement, since it is pied-piped and thus part of the restrictor of *only*.

4.2 The Island Restriction

Association into islands is allowed. This was taken to argue against the movement approach (e.g. Rooth, 1985). Drubig (1994) proposes that the entire island pied pipes.

(28) **Prediction II: Island Restriction**

Association with a constituent within an island cannot license an NPI in the same island.

(29) **NPI in relative clause island:**

- a. Yesterday during the dinner we talked about the restaurants we had been to, and who had recommended them to us. Mary was very negative about many places. I don't mind that she's very picky about restaurants, but I think she was just trying to flatter John.
She never complained about a restaurant that *John* had recommended to anyone.
- b. Yesterday during the dinner we talked about the restaurants we had been to, and who had recommended them to us. Mary, as usual, seized the opportunity to annoy John.
*She only \lceil complained about a restaurant that *John* had recommended to anyone \rceil .

A second argument is based on ‘because’ clauses. First, as expected, NPIs are licensed elsewhere in the VP when associating with because-clauses.

(30) Mary only \ulcorner gave anything to anyone because Anna did \urcorner .

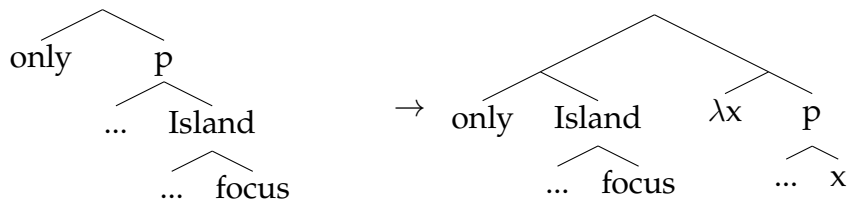
Because clauses constitute islands of extraction. The prediction is now that association into the because clause does not license NPIs in the non-focal part of the because clause:

(31) **NPI in *because* clause:**

*Mary only \ulcorner gave a book to John because Bill gave any book to him \urcorner .

The facts follow if the island pied-pipes, and becomes as a whole the restrictor of *only*:

(32) **Association into an island:**



Association into islands involves pied-piping. The observations are predicted by the theory defended here, but are unaccounted for in a pure in-situ theory of focus association.

5 Other focus-sensitive operators

Replacive negation licenses NPIs in its restrictor but not in its scope (the exact reverse of *only*):

- (33) a. Not any inhabitant of Earth but an inhabitant of *Twin Earth* \ulcorner met Particle Man \urcorner .
 b. Not an author of any comic but a reader of some comic \ulcorner met Particle Man \urcorner .
 c. * Not Particle Man but *Universe Man* \ulcorner met any inhabitant of Twin Earth yesterday \urcorner .

Replacive negation associates by movement:

- (34) a. * Mary didn't \ulcorner give anything to anyone because Anna did, but because John did \urcorner .
 b. Mary didn't \ulcorner gave a book to John because anyone else did, but because she wanted to \urcorner .

Prediction: association *into* an island should license an NPI in the same island, because it will be pied-piped and end up as the restrictor. This prediction is borne out:

- (35) Mary didn't \lceil give a book to John because *Bill* gave any book to him \rceil , but because Anna did.

Consider also: Does every exclusive associate by movement?

- (36) 'Just' can license NPIs in principle but does not show movement evidence:
a. Just because he was lucky did the attempt have any success.
b. ?*She just gave any funding to *her* students.

'Just' seems to differ from *only* in its behavior with respect to NPI licensing, and maybe with respect to whether or not it associates by movement.

Question: Does this teach us that focus movement always occurs?

References

- Anderson, Stephen R. 1972. How to get 'even'. *Language* 48:893–906.
- Bruening, Benjamin. 2001. QR obeys superiority: Frozen scope and ACD. *Linguistic Inquiry* 32:233–273.
- Drubig, Hans Bernhard. 1994. Island constraints and the syntactic nature of focus and association with focus. *Arbeitspapiere des Sonderforschungsbereichs 340: Sprachtheoretische Grundlagen der Computerlinguistik* 51.
- Erlewine, Michael Yoshitaka, and Hadas Kotek. 2014. Intervention in focus pied-piping. In *Proceedings of NELS 43*, ed. Hsin-Lun Huang, Ethan Poole, and Amanda Rysling, volume 1, 117–130. URL <http://semanticsarchive.net/Archive/WIzNzViN/>.
- von Stechow, Kai. 1999. NPI licensing, Strawson entailment, and context dependency. *Journal of Semantics* 16:97–148.
- Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. MIT Press.
- Krifka, Manfred. 2006. Association with focus phrases. In *The architecture of focus*, ed. Valéria Molnár and Susanne Winkler, 105–136. Mouton de Gruyter.
- Ladusaw, William A. 1979. Polarity sensitivity as inherent scope relations. Doctoral Dissertation, University of Texas at Austin.
- Rooth, Mats. 1985. Association with focus. Doctoral Dissertation, University of Massachusetts, Amherst.
- Wagner, Michael. 2006. Association by movement: evidence from NPI-licensing. *Natural Language Semantics* 14:297–324.