

## NPI-licensing

Now, looking at Wagner (2006), and a bit of von Fintel (1999)

# 1 Logical licensing conditions for NPIs

## 1.1 NPIs and downward entailment

First, “negative polarity items” (“NPIs”). This part is mainly from von Fintel (1999). Ladusaw (1979) observed that NPIs are generally possible in downward entailing contexts. A downward-entailing context is one in which replacing a general term with a more specific term maintains the truth of the statement—and an upward-entailing context is one in which replacing a specific term with a more general term maintains the truth of the statement. (Think: general is up.)

- (1) Upward entailing  $\uparrow$ 
  - a. It rained.
  - b. It rained hard.
- (2) Downward entailing  $\downarrow$ 
  - a. It is not the case that it rained.
  - b. It is not the case that it rained hard.

Quantifiers like *some*, *every*, and *no* relate two *arguments*. The one that comes after the quantifier is called the *restriction*, and the rest of the sentence is called the *scope*. Different quantifiers have different entailment properties in their restriction and scope.

- (3) Properties of quantifiers *some*, *every*, and *no*

Some	$\uparrow$	$\uparrow$
Every	$\downarrow$	$\uparrow$
No	$\downarrow$	$\downarrow$
- (4)
  - a. sparrow (specific)  $\Rightarrow$  bird (general)
  - b. Some **sparrow** is in the tree  $\Rightarrow$  Some **bird** is in the tree
  - c. Every **sparrow** is in the tree  $\Leftarrow$  Every **bird** is in the tree
  - d. No **sparrow** is in the tree  $\Leftarrow$  No **bird** is in the tree

- (5) a. is chirping (specific)  $\Rightarrow$  making noise (general)
- b. Some sparrow **is chirping**  $\Rightarrow$  Some sparrow **is making noise**
- c. Every sparrow **is chirping**  $\Rightarrow$  Every sparrow **is making noise**
- d. No sparrow **is chirping**  $\Leftarrow$  No sparrow **is making noise**

What makes Ladusaw's (1979) proposal elegant is the fact that in all of these places where downward-entailingness can be established logically, NPIs are allowed.

- (6) a. Some (student who has \*ever been to Rome) (bought \*any postcards there).
- b. No (student who has ever been to Rome) (bought any postcards there).
- c. Every (student who has ever been to Rome) (bought \*any postcards there).

## 1.2 *Only* and Strawson-entailment

The problem with *only* is that Ladusaw's (1979) proposal does not *seem* to work. NPIs are allowed in the VP, but it does not appear to be downward-entailing (nor, actually, does it appear to be upward-entailing).

- (7) Only John ever kissed any sparrows.
- (8) a. Only John kissed a bird.  $\Leftarrow \neq \Rightarrow$
- b. Only John kissed a sparrow.

(If only John kissed a bird, it could be that John kissed a pheasant, and nobody else kissed any birds at all. Or, if only John kissed a sparrow, it could be that someone else kissed a pheasant.)

In order to save the the otherwise very elegant proposal that being a downward-entailing environment is required for the use of NPIs, von Stechow (1999) suggests that checking for downward-entailing in this case needs to be checked *under the presumption that the presuppositions of the consequent are satisfied*. The idea is like this:

*Only X VP* is only defined if *X VP* is true, and asserts that *Y VP* is true for no *Y* other than *X*.

Applied to the bird-kissing cases, we have this:

- (9) Does *only John kissed a bird* S-entail *only John kissed a sparrow*?
  - a. Being a sparrow  $\Rightarrow$  being a bird.
  - b. John kissed a sparrow. (*only John kissed a sparrow* presupposes this.)
  - c. Only John kissed a bird. (presuming John kissed a bird, nobody else did.)
  - d.  $\therefore$  Only John kissed a sparrow.

Since that works, we can say that the “scope” of *only* is downward-Strawson-entailing (“DSE”), and that’s a place where NPIs are possible. The restrictor isn’t.

- (10) \* Only any students kissed a sparrow.
- (11) Does *only people kissed a sparrow* S-entail *only students kissed a sparrow*?
- Being a student (specific)  $\Rightarrow$  being a person (general).
  - Students kissed a sparrow. (*only students kissed a sparrow* presupposes this.)
  - Only people kissed a sparrow. (presuming people kissed a sparrow, nothing else did.)
  - $\nRightarrow$  Only students kissed a sparrow.

## 2 NPIs and the restrictor of *only*

Now, back to focus and Wagner’s (2006) discussion—that much was mainly setting up a diagnostic.

- (12) *Only* can sit either on the NP or on the VP.
- John played *only baseball*.
  - John *only* played *baseball*.

Now: *only* associates with focus, there is a different meaning for each of the two sentences below.

- (13) a. John *only* gave a *book* to Mary.  
b. John *only* gave a book to *Mary*.

Wagner (2006) elaborates a bit on the contribution of focus specifically to the determination of downward-entailingness. (10) showed that in general the restrictor of *only* is not DSE (or at least that NPIs are not allowed). However, logically speaking at least, parts of the restrictor that are not contained in the focus do seem to be DSE.

- (14) a. student (specific)  $\Rightarrow$  person (general)  
b. Only people from *Boston*  $\lceil$  met David Tennant  $\rceil$ .  
c. Presupposition of (14d): Students from Boston met David Tennant.  
d.  $\Rightarrow$  Only students from *Boston*  $\lceil$  met David Tennant  $\rceil$ .

- (15) a. Boston (specific)  $\Rightarrow$  New England (general)  
 b. Only students from *New England*  $\lceil$  met David Tennant  $\rceil$ .  
 c. Presupposition of (15d): Students from Boston met David Tennant.  
 d.  $\nRightarrow$  Only students from *Boston*  $\lceil$  met David Tennant  $\rceil$ .

However, NPIs don't seem to distinguish between being in the focus and not being in the focus—an NPI is not allowed even outside the focus.

- (16) \* Only any resident of *Boston*  $\lceil$  met David Tennant  $\rceil$ .

Wagner (2006) suggests that it's the presupposition in (14c) that is not quite right. That it should not be as specific as it is—it should be instead: *Someone met David Tennant*. That is, there is something that can be used in place of the restriction of *only* that will render the sentence true.

- (17)  $\exists x.x$  met David Tennant.

If that were the case, we'd correctly get lack of downward-entailingness anywhere in the restriction (because the whole restriction is treated as a unit). This is maybe a little bit magical, but suppose it is right. Essentially, I think, without further exploration, this boils down to the stipulation that: The entire restrictor of *only* is not DSE.

- (18) a. student (specific)  $\Rightarrow$  person (general)  
 b. Only people from *Boston*  $\lceil$  met David Tennant  $\rceil$ .  
 c. Presupposition of (18d): Someone met David Tennant.  
 d.  $\nRightarrow$  Only students from *Boston*  $\lceil$  met David Tennant  $\rceil$ .

Wagner (2006) wants to use the availability of NPIs as a diagnostic for DSE-hood, and since the restrictor is not DSE, as a diagnostic for restrictor-hood.

### 3 Moving the restrictor

For the VP *only*, NPIs are allowed all over the place. So, the whole VP can't be the restrictor. Wagner (2006) proposes that the focused noun phrase *moves* covertly up next to *only* in order to serve as its restrictor. That would mean that we expect that (a) the focused noun phrase should not be able to contain NPIs, (b) constraints on movement should govern the connection between the focused noun phrase and *only*, (c) NPIs outside the focus are possible.

- (19) a. \* John only gave kale to *his* friends from any state.  
 b. \* John only gave *kale of any color* to his friends.

- (20) a. John only gave any kale to *his* friends.  
 b. John only gave *kale* to any of his friends.

So far, so good. Now, one place where movement is restricted is in double object constructions. In the version without *to*, *each* cannot take scope over *a*—meaning that the covert movement (“QR”) that would be needed to derive this meaning is somehow blocked.

- (21) a. I gave a child each doll. a > each, \*each > a  
 b. I gave a doll to each child. a > each, each > a

There is an effect here with *only* as well. First, the effect, and then a bit about what it might mean.

- (22) a. She only  $\lceil$  gave *her* student any funding.  $\rceil$   
 b. \* She only  $\lceil$  gave any student *summer* funding.  $\rceil$   
 c. She only  $\lceil$  gave students *summer* funding.  $\rceil$

The fact that (22c) is ok suggests that if movement is required, but cannot take *summer funding* by itself, some other kind of movement must happen. The fact that (22b) doesn't allow NPIs suggests that the position of *any students* is in this case part of the restrictor—perhaps the whole VP is. That is, if movement from a particular position is disallowed, a larger constituent can be moved instead.

Another thing you shouldn't be able to move is the *head* of a constituent—for example, the verb alone. If the verb is focused, the whole VP has to become the restrictor—and so there should be no NPIs in a VP with a focused verb. Even though it should have been DSE. Same thing works for PPs. And CPs. The regular negation is there to show what a good NPI might sound like.

- (23) a. \* John only  $\lceil$  *cut any vegetables*  $\rceil$ .  
 b. John didn't  $\lceil$  *cut any vegetables*  $\rceil$ .

- (24) a. kale (specific)  $\Rightarrow$  vegetable (general)  
 b. John only ATE vegetables.  
 c. Presupposition of (24d): John did something with kale.  
 d.  $\Rightarrow$  John only ATE kale.

- (25) a. \* John only  $\lceil$  drove *through any park*  $\rceil$ .  
 b. John didn't  $\lceil$  drove *through any park*  $\rceil$ .

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

As for islands—the general freedom of focus from island constraints is one of the things that has gone *against* assuming movement is needed for focus interpretation. But, we can do the same trick here (and as we saw in earlier weeks): If you would have otherwise needed to move something out of an island, then don't—take the whole island instead.

What this means is that we predict that NPIs shouldn't be allowed anywhere inside an island within which the associate of *only* sits.

- (27) 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.
- b. **She never complained about**  
a restaurant that *John* had recommended to anyone.
- (28) a. 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.
- b. ?\* **She only**  $\lceil$ complained about
- a restaurant that *John* had recommended to anyone $\rfloor$ .

Another island for movement: *because*-clauses.

- (29) \* Mary only  $\lceil$ gave a book to John because *Bill* gave any book to him $\rfloor$ .
- (30) Mary didn't give a book to John because *Bill* gave any book to him.
- (31) She only gave anything to anyone because *you* did.

## 4 Another focus operator: Replacive negation

Replacive negation is a focus sensitive operator that licenses NPIs in its restrictor, but not in its scope. That's the reverse situation from *only*.

- (32) a. Not any inhabitant of *Earth* but an inhabitant of *Twin Earth*  $\lceil$  met Particle Man  $\rceil$ .
- b. \* Not *Particle Man* but *Universe Man*  $\lceil$  met any inhabitant of Twin Earth yesterday  $\rceil$ .

An interesting side note (provided in support of the idea that replacive negation has opposite monotonicity from *only*) is that quantifiers with the same monotonicity combine with *and*, while quantifiers with opposite monotonicity combine with *but*. (Could be, the judgments don't seem all that clear to me.)

- (33) Not the entire family but only John showed up at graduation.
- (34) Forty parents and some students showed up at graduation.
- (35) No students but every parent showed up at graduation.
- (36) ? No students and every parent showed up at graduation.
- (37) Some parents but no students showed up at graduation.
- (38) ? Some parents and no students showed up at graduation.

However, we should expect to find basically the reverse NPI pattern with replacive negation that we had with *only*. NPIs should be ok within an island only if the whole island moves out to become the restrictor of the replacive negation.

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

## 5 So?

What Wagner (2006) was basically arguing for, in the end, is an understanding of focus association—at the very least for the connection between *only* (and maybe replacive negation) and its focused associate—that makes use of movement to bring *only* and the restriction together.

In support of that: where movement is blocked, association as restrictor can't happen (or, rather, what seems to happen is that a larger constituent becomes the restrictor)—something that we diagnosed by looking at where NPIs can be (specifically, not within the restrictor of *only*).

## References

- von Stechow, Kai. 1999. NPI-licensing, Strawson-entailment and context dependency. *Journal of Semantics* 16(2): 97–148.
- Ladusaw, William. 1979. *Polarity sensitivity as inherent scope relations*. Ph.D. thesis, University of Texas.
- Wagner, Michael. 2006. NPI-licensing and focus movement. In Effi Georgala & Jonathan Howell (eds.) *Proceedings of SALT 15*. Ithaca, NY: CLC Publications.