

On the Dependent Character of PI Licensing*

Vincent Homer

vincenthomer@gmail.com

<http://sites.google.com/site/vincenthomer>

May 21, 2011

1 The Problem

- The acceptability conditions of NPIs (ex. *any*) and PPIs (ex. *some*) don't seem to be the mirror images of each other. **No complementarity:**
 - (1) It's **impossible** that he stole anything.
 - (2) It's **impossible** that he stole something. \checkmark IMPOSSIBLE>SOME
- *Some* doesn't even seem to be anti-licensed by certain licensors of *any*:
 - (3) **At most five people** stole something. \checkmark AT_MOST_5>SOME
 - (4) **No one** stole something. \checkmark NO_ONE>SOME
- Consensus so far: only Anti-Additive expressions (Zwarts 1998), such as negation, negative quantifiers, *impossible*, etc. are anti-licensors of *some*, cf. Krifka 1992, Szabolcsi 2004 a.o.:
- These (apparent) discrepancies are all the more surprising because *some* and *any* are intuitively closely related.

Q1: Is unification possible?

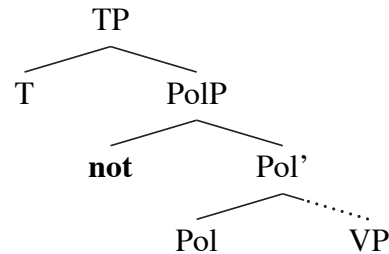
I answer 'yes'.

To see that unification is indeed possible, one needs to take **constituency** seriously (locality is obviously part of the game, witness the pair (2)-(4)).

*Thanks to Dominique Sportiche, Philippe Schlenker, Heather Burnett, Susan Schweitzer, Benjamin Spector, Emmanuel Chemla, and to the audiences at the LingLunch at Paris 7 Diderot, the Syn-Sem Seminar at UCLA, and the Workshop on Intervention at Glow 34 in Vienna. For more details, please refer to Homer 2010a.

2 Flip-flop Exists

- Assumption: Each clause, positive or negative, has a **Pol** head. Negation sits in Spec,PolP (cf. Σ in Laka 1990).
- With very rare exceptions (Schmerling 1971), it is widely assumed that NPIs are never anti-licensed by an even number of DE expressions, because of e.g.:



It is **impossible** that he didn't steal anything.

- In other words, 'flip-flop' is assumed not to exist.
 - Such an assumption supports the view that NPIs are licensed by **operators** (structural relation between an operator and an NPI equipped with the right feature, cf. Ladusaw 1979, von Stechow 1999, Bhatt and Schwarz 2003, Szabolcsi 2004, Guerzoni 2006, Guerzoni and Sharvit 2007, Gajewski 2009 a.o.).
 - New: However, the **French** NPIs *quoi/qui que ce soit*, *quelque NP que ce soit*, can indeed be anti-licensed by an even number of DE expressions, similarly for *any* in **English dialect A** ((6) ok in dialect B) and *yet* in all English dialects:
- (5) Il est [**impossible** qu' il ait volé quoi que ce soit.
it is impossible that he has stolen what that this be
'It is impossible that he stole anything.'
- (6) *Il n' est [**pas** ✗ **impossible** qu' il ait volé quoi que ce soit.
it NEG is NEG impossible that he have stolen what that this be
Intended: 'It is not impossible that he stole anything.'
- (7) [**Non** qu' il soit [**impossible** qu' il ait volé quoi que ce soit.
not that it be impossible that he have stolen what that this be
'Not that it is impossible that he stole anything.'

*It is **not impossible** that John has arrived yet.

- This is the effect of composing 2 DE expressions: the result is UE, which creates an anti-licensing context for the NPIs.

Implication: NPIs are licensed by environments, not by operators.

- **Domain of π :** A constituent upon which the licensing of π can be checked.
- Not all constituents are **eligible**: e.g. in each clause C , the **PolP** of C is the **minimal** domain of *quoi que ce soit*, i.e. the smallest constituent eligible for the checking of its acceptability (minimal domains are PI specific).

(5) $[_{TP} [_{PolP} \swarrow_1] \text{impossible} [_{CP} [_{PolP} \swarrow_1] [\text{quoi que ce soit}]_1]$

(6)* $[_{TP} [_{PolP} \swarrow_1] \text{pas impossible} [_{CP} [_{PolP} \swarrow_1] [\text{quoi que ce soit}]_1]$

(7) $[_{TP} [_{PolP} \swarrow_1] \text{non} [_{CP} [_{PolP} \swarrow_1] \text{impossible} [_{CP} [_{PolP} \swarrow_1] [\text{quoi que ce soit}]_1]$

- An NPI π^- is licensed in a sentence S only if π^- is in a **constituent** A of S such that A is DE w.r.t. the position of π^- .
- A constituent A is DE (non DE) w.r.t. the position of α ($[\alpha] \in D_\sigma$) iff the function $\lambda x. [A[\alpha/v_\sigma]]^{g[v_\sigma \rightarrow x]}$ is DE (non DE resp.).

Gajewski 2005

Q2: Is the licensing of any environment-based in English dialect B? Yes, cf. section 5.

3 Flip-flop with PPIs

- What others (Szabolcsi (2004) a.o.) call ‘**rescuing**’ (=the fact that a DE expression can license an occurrence of *some* placed under a clausemate AA expression) is **nothing but flip-flop** with PPIs.
- PolP is also the minimal domain of *some*, as shown by (8) and (10).

(8) He did[n’t steal something. *NOT>SOME

* $[_{TP} \swarrow_1] [_{PolP} \swarrow_1] \text{not something}_1$

(9) It’s [impossible that he did[n’t steal something. ✓IMPOSSIBLE>SOME

$[_{TP} [_{PolP} \swarrow_1] \text{impossible} [_{CP} [_{PolP} \swarrow_1] \text{not something}_1]$

New:

(10) It’s [not impossible that he did[n’t steal something. *NOT>SOME

* $[_{TP} [_{PolP} \swarrow_1] \text{not impossible} [_{CP} [_{PolP} \swarrow_1] \text{not something}_1]$

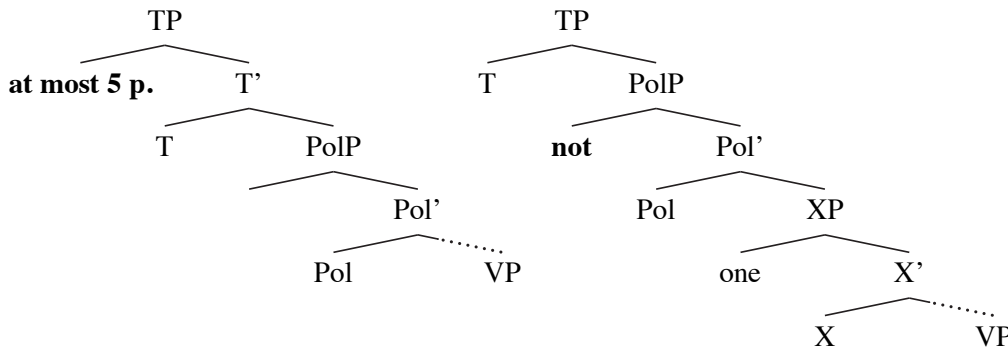
4 A Confound

- It is never noticed that negativity (strict DENess vs. AAty) is not the only difference between (3) and (4) repeated below: the two DE expressions are not in the same position.

(3) It’s impossible that he stole anything.

(4) It’s impossible that he stole something. ✓IMPOSSIBLE>SOME

- Negative quantifiers are made up of negation and an existential quantifier (Jacobs 1980, Ladusaw 1992, Geurts 1996, de Swart 2000, Zeijlstra and Penka 2005, Penka 2007, Iatridou and Sichel 2008, a.o.).



- The subject quantifier *at most five people* can be interpreted outside of PolP, witness:

At most five people didn't come. AT_MOST_FIVE > NOT

- The subject quantifier *no one* on the other hand is fully contained in PolP.

Q3: Some anti-licensed in DE environments?

5 Entanglement & Cyclicity

5.1 Some and Any are Entangled

- Observe that two PPIs or two NPIs are licensed under a superordinate negation:

(11) It's **impossible** that someone stole something. IMPOSSIBLE > SOME

(12) It's **impossible** that anyone stole anything.

- **New:** We can create an ill-formed configuration by placing 2 PIs of opposite polarity together under a superordinate DE expression.
- *Some* and *any* are **entangled:** we witness a **polarity clash** in (13) (the two PIs cannot both have narrow scope), which shows that the acceptability of a PI in a given constituent *A* depends on the licensing of all other PIs in *A*.

(13) It's **impossible** that someone stole anything. *IMPOSSIBLE > SOME

*[_{TP} [_{PolP} ↘₁ ↘₂ **impossible** [_{CP} ↗₁ ↗₂ someone₂ [_{PolP} anything₁

⇒ Important implication: Since the judgment on (13) is the same in English_A and English_B, the licensing of *any* is **environment-based in English_B** as well, but the minimal domain of *any* in this dialect is smaller than PolP. **(Answer to Q2)**

- **New:** Let us now revert the order of the PIs (14): this time they can both have narrow scope:

(14) It's **impossible** that anyone **stole something.** \checkmark IMPOSSIBLE>SOME

- **Licensing is cyclic:** the PPI in (14) is licensed at a previous stage of a cycle.

$[_{TP} [_{PolP} \swarrow_1 \searrow_2] \text{impossible} [_{CP} \text{anyone}_2 [_{PolP} \swarrow_1] \text{something}_1]$

- Cyclicity visible with NPIs as well (15).

(15) It's **impossible** that anyone did **n't steal anything.**

$[_{TP} [_{PolP} \swarrow_1 \searrow_2] \text{impossible} [_{CP} \searrow_1 \swarrow_2] \text{anyone}_2 [_{PolP} \searrow_1] \text{not anything}_1]$

- **Licensing Condition of Polarity Items:** A PI π is licensed in a sentence S only if π is contained in at least one eligible constituent A of S which has the right monotonicity w.r.t. the position of π , and all other PIs in A are licensed **within** A .

5.2 Entanglement with 2 PPIs

- First, observe that a subject PPI can (only) reconstruct under a clausemate negation if it gets rescued.
- Two readings are possible (*Someone/Everyone is hiding*) in (16), depending on the position where the subject gets interpreted:

(16) It's **impossible** that someone isn't hiding.

$[_{TP} [_{PolP} \swarrow_1] \text{impossible} [_{CP} [_{PolP} \searrow_1] \text{not someone}_1] \quad \simeq \text{Someone is hiding}$
 $[_{TP} [_{PolP} \searrow_1] \text{impossible} [_{CP} \swarrow_1] \text{someone}_1 [_{PolP} \text{not}] \quad \simeq \text{Everyone is hiding}$

- **New:** Let's add a PPI (*somewhere*) which needs rescuing: the subject PPI can no longer outscope the lower negation (obligatory reconstruction).

(17) – A: Someone is hiding.

– B: That's exactly true, it's **impossible** that someone isn't hiding somewhere.

$[_{TP} [_{PolP} \swarrow_1 \swarrow_2] \text{impossible} [_{CP} [_{PolP} \searrow_1 \searrow_2] \text{not someone}_2 \text{ somewhere}_1]$

(18) – A: Everyone is hiding.

– B: #That's exactly true, it's **impossible** that someone isn't hiding somewhere.

* $[_{TP} [_{PolP} \swarrow_1 \searrow_2] \text{impossible} [_{CP} \searrow_1 \swarrow_2] \text{someone}_2 [_{PolP} \searrow_1] \text{not somewhere}_1]$

7 Complementarity

- **[New:]** With **entanglement**, we now have a probe: let's use a strictly DE expression in a polarity clash configuration: just like in (13), *some* is anti-licensed:

(22) **At most five people** sold someone anything. *n.s.SOME

*[TP ↘₁ ↘₂ **at most 5 people** [PolP ↗₁ ↗₂ **someone₂ anything₁** sell

- Therefore *some* is anti-licensed by **DEness**. (Answer to Q3)
- It is also not anti-licensed by non-monotonicity (unlike *any*):

(23) **No one** sold exactly 42 people *anything/something. ✓NO>EX_42>SOME

- In sum, the monotonicity properties that make *some* acceptable are the complement of the monotonicity properties that make *any* acceptable and vice versa.
- **In any given constituent** where acceptability is checked, *some* and *any* are in **complementary distribution**.

$$[_{XP} \dots \left\{ \begin{array}{c} \text{any} \\ \text{XOR} \\ \text{some} \end{array} \right\}$$

8 Some is not a (Standard) Intervener

- One might notice that in the crucial examples, e.g. (13), (18), (19a), *some* is supposed to outscope *any* or some PPI in need of rescuing: it is *prima facie* as if *some* disrupts a relationship between a licenser and an item in needs of licensing, in other words it acts as an *intervener* of some kind (from the operator-based perspective).
- This is not in fact the case.

8.1 Double Object Construction

- **[New:]** There is a configuration in which *some* is anti-licensed due to *any*, namely when the two PIs are the internal arguments of a double object verb (scope freezing ensures that the PIs have surface scope).
- In (24) and (25), *some* is in PolP, and *any* is also in PolP, which is the minimal domain of *some*.
- No matter what their respective scope is, a clash obtains:

(24) **At most five people** sold someone anything. *n.s.SOME

* $\left[\begin{array}{|c|c|c|} \hline \text{TP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **at most 5 people** $\left[\begin{array}{|c|c|c|} \hline \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **someone₂ anything₁ sell**

(25) **At most five people** sold anyone something.

*n.s.SOME

* $\left[\begin{array}{|c|c|c|} \hline \text{TP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **at most 5 people** $\left[\begin{array}{|c|c|c|} \hline \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **anyone₂ something₁ sell**

8.2 A General Phenomenon

- Other PPIs entangled with *any* (N.B.: modals which I showed to be PPIs, e.g. *must* and *should*, are not entangled with *any*, cf. Homer 2010a,b):

(26) There isn't anyone here who wouldn't rather do *anything/something downtown.

[Baker 1970] ✓NOT>NOT>SOME

$\left[\begin{array}{|c|c|c|c|} \hline \text{TP} & \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 & \rightsquigarrow_3 \\ \hline \end{array} \right]$ **not anyone₃** $\left[\begin{array}{|c|c|c|} \hline \text{CP} & \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **not [would rather]₂ something₁ do**
 * $\left[\begin{array}{|c|c|c|c|} \hline \text{TP} & \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 & \rightsquigarrow_3 \\ \hline \end{array} \right]$ **not anyone₃** $\left[\begin{array}{|c|c|c|} \hline \text{CP} & \text{PolP} & \rightsquigarrow_1 & \rightsquigarrow_2 \\ \hline \end{array} \right]$ **not [would rather]₂ anything₁ do**

8.3 Against Double Licensing

- **[New:]** An inference can salvage a PPI by breaking the monotonicity in its position:

(27) Make sure that he didn't steal something.

✓NOT>SOME

↪ It is possible that he stole something.

- This is one way among many a PPI can be salvaged (implicatures, **sub-triggering**, are some other ways, cf. Homer 2010a). It is impossible to analyze (27) as 'double licensing', which is the **cornerstone of Szabolcsi 2004**: clearly, *some* doesn't interrupt a licensing relation in (13), (18), (19a), since *make sure* is not an NPI licenser:

*Make sure that he stole anything.

Likewise with *I hope*...

I hope he didn't steal something.

✓NOT>SOME

↪ It is possible that he stole something.

*I hope he stole anything.

8.4 Difference with Known So-Called Interveners

- *Every* is one of Linebarger interveners (Linebarger 1980, 1987):

(28) a. If someone stole a camera, we're in trouble.

b. If John stole anything, we're in trouble.

c. If someone stole anything, we're in trouble.

?IF>SOME

(29)*If everyone stole anything, we're in trouble.

- The difference is expected: *if*-clauses are not in fact DE but pseudo-DE (they are only DE given background assumptions).
- Narrow scope of the PPI is not perfect though. I propose that this is due to the tension placed on the system (constituent both DE and pseudo-DE).

Conclusion

- Unified environment-based theory;
- *Some* and *any* are entangled;
- Licensing is cyclic.

References

- Baker, Carl Leroy. 1970. Double negatives. *Linguistic Inquiry* 1:169–186.
- Bhatt, Rajesh, and Bernhard Schwarz. 2003. Notes on Szabolcsi's 'Positive polarity-negative polarity'. Ms.
- Chierchia, Gennaro. 2004. Scalar implicatures, polarity phenomena, and the syntax/pragmatics interface. In *Structures and beyond*, ed. A. Belletti, 39–103. Oxford: Oxford University Press.
- von Stechow, Kai. 1999. NPI licensing, Strawson entailment, and context dependency. *Journal of Semantics* 16:97–148.
- Gajewski, Jon. 2005. Neg-raising: Polarity and presupposition. Doctoral Dissertation, MIT, Cambridge, Mass.
- Gajewski, Jon. 2009. A note on licensing strong NPIs. Ms., University of Connecticut.
- Geurts, Bart. 1996. On *No*. *Journal of Semantics* 13:67–86.
- Guerzoni, Elena. 2006. Intervention effects on NPIs and feature movement: Towards a unified account of intervention. *Natural Language and Semantics* 14:359–398.
- Guerzoni, Elena, and Yael Sharvit. 2007. A question of strength: On NPIs in interrogative clauses. *Linguistics and Philosophy* 30:361–391.
- Homer, Vincent. 2010a. Domains of polarity items. Ms., UCLA.
- Homer, Vincent. 2010b. Neg-raising and positive polarity: The view from modals. Ms., UCLA.
- Iatridou, Sabine, and Ivy Sichel. 2008. Negative DPs and scope diminishment: Some basic patterns. In *Proceedings of NELS 38*.
- Jacobs, Joachim. 1980. Lexical decomposition in Montague grammar. *Theoretical Linguistics* 7:121–136.
- Krifka, Manfred. 1992. Some remarks on polarity items. In *Semantic universals and universal semantics*, ed. Zaefferer, 150–189. Berlin: Foris.

- Ladusaw, William A. 1979. Polarity sensitivity as inherent scope relations. Doctoral Dissertation, University of Texas, Austin.
- Ladusaw, William A. 1992. Expressing negation. In *Proceedings of SALT 2*, ed. Chris Barker and David Dowty, 237–259. Columbus: Ohio State University.
- Laka, Itziar. 1990. Negation in syntax: On the nature of functional categories and projections. Doctoral Dissertation, MIT, Cambridge, Mass.
- Linebarger, Marcia C. 1980. The grammar of negative polarity. Doctoral Dissertation, MIT.
- Linebarger, Marcia C. 1987. Negative polarity and grammatical representation. *Linguistics and Philosophy* 10:325–387.
- McCawley, James D. 1998. *The syntactic phenomena of English*. University of Chicago Press.
- Penka, Doris. 2007. Negative indefinites. Doctoral Dissertation, Universität Tübingen, Tübingen, Germany.
- Schmerling, Susan F. 1971. A note on negative polarity. In *Papers in Linguistics*, volume 4.1, 200–206. Champaign, Ill.: Linguistic Research Inc.
- de Swart, Henriëtte. 2000. Scope ambiguities with negative quantifiers. In *Reference and anaphoric relations*, ed. Klaus von Stechow and Urs Egli, 109–132. Dordrecht: Kluwer.
- Szabolcsi, Anna. 2004. Positive polarity-negative polarity. *Natural Language and Linguistic Theory* 22:409–452.
- Zeijlstra, Hedde, and Doris Penka. 2005. Negative indefinites in Dutch and German. Ms., Universität Tübingen, Tübingen, Germany.
- Zwarts, Frans. 1998. Three types of polarity. *Plurality and Quantification* 69:177–238.

Appendix on Intervention

- Disruption of NPI licensing (**‘intervention’**) caused by the presence of certain expressions, e.g. *every, always, and...*;
 - The very same expressions **‘shield’** PPIs. I submit that this is not accidental. Shielding is the same phenomenon as intervention (since *any* and *some* are in fact in complementary distribution in any given constituent).
- (30) a. ***Not** everyone understood anything.
 b. **Not** everyone understood something. ✓NOT>SOME
 c. **Not** a single person understood something. *NOT>SOME
- In both case, there is a **monotonicity disruption**. Yet another argument in favor of the **environment-based approach** to licensing.

N.B.: Split scope, therefore the constituency is [not [every [VP]]]:

- (31) Not everyone can be on the Board. NOT>CAN>EVERY
- According to Chierchia (2004), the interveners form a natural class: they are all **strong scalar terms**. Ex.: <*every*, most, some>, <*and*, or>.

- Scalar implicatures triggered by a DE function like *not* outscoping a strong scalar term disrupt NPI licensing.
- (32) a. It is **not** the case that *everybody* has roses.
 b. *Scalar implicature*: Somebody has roses.
- Grammar provides *two* meanings: plain and strong.
 - The notion of meaning which is relevant for NPI licensing is the notion of *strong meaning*: the strong meaning of sentence ϕ noted $\llbracket \phi \rrbracket^s$ is the *conjunction* of the *plain meaning* (truth conditions) of ϕ and its *implicatures*.
 - Indirect implicatures triggered by a DE expression like *not* outscoping a strong scalar term disrupt NPI licensing.
- (33) *It is **not** the case that *everybody* has any roses.
- (34) $\llbracket \text{blue roses} \rrbracket \subseteq \llbracket \text{roses} \rrbracket$
- (35) a. It is not the case that everybody has **roses**.
Scalar Implicature: Somebody has roses.
 b. It is not the case that everybody has **blue roses**.
Scalar Implicature: Somebody has blue roses.
- (36) $\llbracket (35a) \rrbracket^s = \neg[\forall x \text{ some}_D'(\text{roses}')](\lambda y. x \text{ has } y)$
 $\wedge \exists x \text{ some}_D'(\text{roses}')(\lambda y. x \text{ has } y)$
- (37) $\llbracket (35b) \rrbracket^s = \neg[\forall x \text{ some}_D'(\text{blue roses}')](\lambda y. x \text{ has } y)$
 $\wedge \exists x \text{ some}_D'(\text{blue roses}')(\lambda y. x \text{ has } y)$
- $$\llbracket (35a) \rrbracket^s \not\equiv \llbracket (35b) \rrbracket^s$$



1. The Problem

• The acceptability conditions of NPIs (ex. *any*) and PPIs (ex. *some*) don't seem to be the mirror images of each other. **No complementarity:**

- (1) It's **impossible** that he stole anything.
 (2) It's **impossible** that he stole something. ✓IMP>SOME

• *Some* doesn't even seem to be anti-licensed by certain licensers of *any* (consensus so far: only Anti-Additive expressions are anti-licensers of *some*):

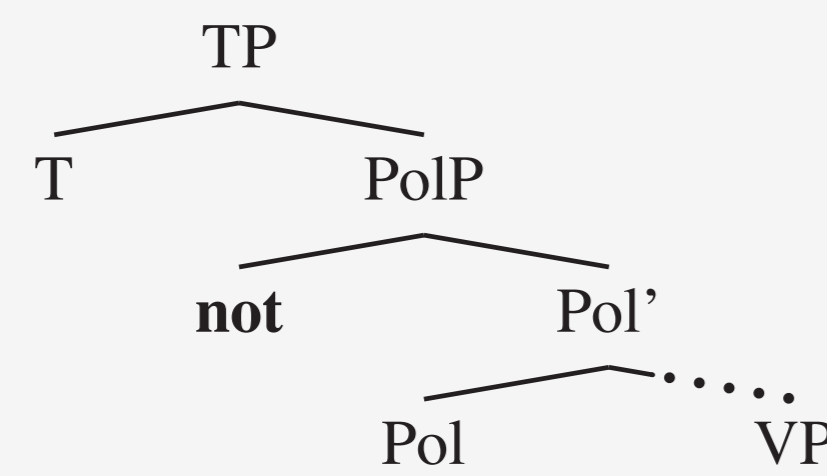
- (3) **At most five people** stole something. ✓AT_MOST_5>SOME
 (4) **No one** stole something. *NO_ONE>SOME

Q1: Is unification possible?

I answer 'yes'.

2. Flip-flop Exists

• Assumption: Each clause, positive or negative, has a Pol head. Negation sits in Spec,PolP.



• The French NPI *quoi que ce soit* can be anti-licensed by an even number of DE expressions, similarly for *any* in English dialect A ((6) ok in dialect B) and *yet* in all English dialects:

- (5) Il est **impossible** qu' il ait volé quoi que ce soit.
 it is impossible that he has stolen what that this be
 (6) *Il n'est **pas impossible** qu' il ait volé quoi que ce soit.
 (7) **Non** qu' il soit **imposs.** qu' il ait volé quoi que ce soit.

NPIs licensed in syntactic domains, not by operators.

• **Domain of π :** A constituent upon which the acceptability of π can be checked. Not all constituents are eligible: e.g. in each clause *C*, the PolP of *C* is the **minimal** domain of *quoi que ce soit*, i.e. the smallest constituent eligible for the checking of its acceptability (minimal domains are PI specific).

- (5) [TP [PolP \sim 1] impossible [CP [PolP \nearrow 1] [qqcs]₁]
 (6) * [TP [PolP \nearrow 1] pas impossible [CP [PolP \nearrow 1] [qqcs]₁]
 (7) [TP [PolP \nearrow 1] non [CP [PolP \sim 1] imp. [CP [PolP \nearrow 1] [qqcs]₁]

• An NPI π^- is licensed in a sentence *S* only if π^- is in a **constituent** *A* of *S* such that *A* is DE w.r.t. the position of π^- .

• A constituent *A* is DE w.r.t. the position of α ($[[\alpha] \in D_\sigma]$) iff the function $\lambda x. [[A[\alpha/v_\sigma]]]^{g[v_\sigma \rightarrow x]}$ is DE. Gajewski 2005

Q2: Is the licensing of *any* environment-based in English dialect B?
 Yes, cf. section 5.

3. Flip-flop with PPIs

• What others (Szabolcsi (2004) a.o.) call 'rescuing' is nothing but flip-flop with PPIs. PolP is also the minimal domain of *some*.

- (8) He did **n't** steal something. *NOT>SOME

* [TP [PolP \sim 1] [CP [PolP \sim 1] not something]₁

- (9) It's **imposs.** that he did **n't** steal something. ✓IMP>SOME

[TP [PolP \nearrow 1] impossible [CP [PolP \sim 1] not something]₁

- (10) It's **not imp.** that he did **n't** steal something. *NOT>SOME

* [TP [PolP \sim 1] not impossible [CP [PolP \sim 1] not something]₁

5. Entanglement & Cyclicity

- (11) It's **impossible** that someone stole something. IMP>SOME (12) It's **impossible** that anyone stole anything.

• *Some* and *any* are **entangled:** we witness a **polarity clash**, which shows that the acceptability of a PI in a given constituent *A* depends on the licensing of all other PIs in *A*.

- (13) It's **imposs.** that someone stole anything. *IMP>SOME * [TP [PolP \sim 1] [CP [PolP \sim 2] imposs. [CP \nearrow 1] \nearrow 2] someone₂ [PolP \nearrow 1] anything]₁

⇒ The licensing of *any* is **environment-based in English_B**, but the minimal domain of *any* is smaller than PolP. (Answ. to Q2)

• **Licensing is cyclic:** the PPI in (14) is licensed at a previous stage of a **cycle**. Cyclicity visible with NPIs as well (15).

- (14) It's **imposs.** that anyone stole something. ✓IMP>SOME [TP [PolP \sim 1] [CP [PolP \sim 2] imposs. [CP \nearrow 1] anyone₂ [PolP \nearrow 1] something]₁

- (15) It's **impossible** that anyone did **n't** steal anything. [TP [PolP \nearrow 1] [CP [PolP \sim 2] imp. [CP \sim 1] anyone₂ [PolP \sim 1] not anything]₁

• **Licensing of PIs:** A PI π is licensed in a sentence *S* only if π is contained in at least one eligible constituent *A* of *S* which has the right monotonicity w.r.t. the position of π , and all other PIs in *A* are licensed **within** *A*.

• Entanglement with 2 PPIs: –First, observe that a subject PPI can (only) reconstruct under a clausemate negation if it gets rescued. Two readings are possible (*Someone/Everyone is hiding*) in (16), depending on the position where the subject is interpreted.

- (16) It's **impossible** that someone isn't hiding. [TP [PolP \nearrow 1] impossible [CP [PolP \sim 1] not someone₁]
 [TP [PolP \sim 1] impossible [CP \nearrow 1] someone₁ [PolP not]

–Let's add a PPI (*somewhere*) which needs rescuing: the subject PPI can no longer outscope the lower negation.

- (17) –A: Someone is hiding. [TP [PolP \nearrow 1] impossible [CP [PolP \sim 2] not someone₂ somewhere₁]
 –B: That's exactly true, it's **impossible** that someone isn't hiding somewhere.

- (18) –A: Everyone is hiding. * [TP [PolP \nearrow 1] impossible [CP \sim 1] someone₂ [PolP \sim 1] not somewhere₁]
 –B: #That's exactly true, it's **impossible** that someone isn't hiding somewhere.

- B': That's exactly true, it's **impossible** that anyone isn't hiding somewhere.

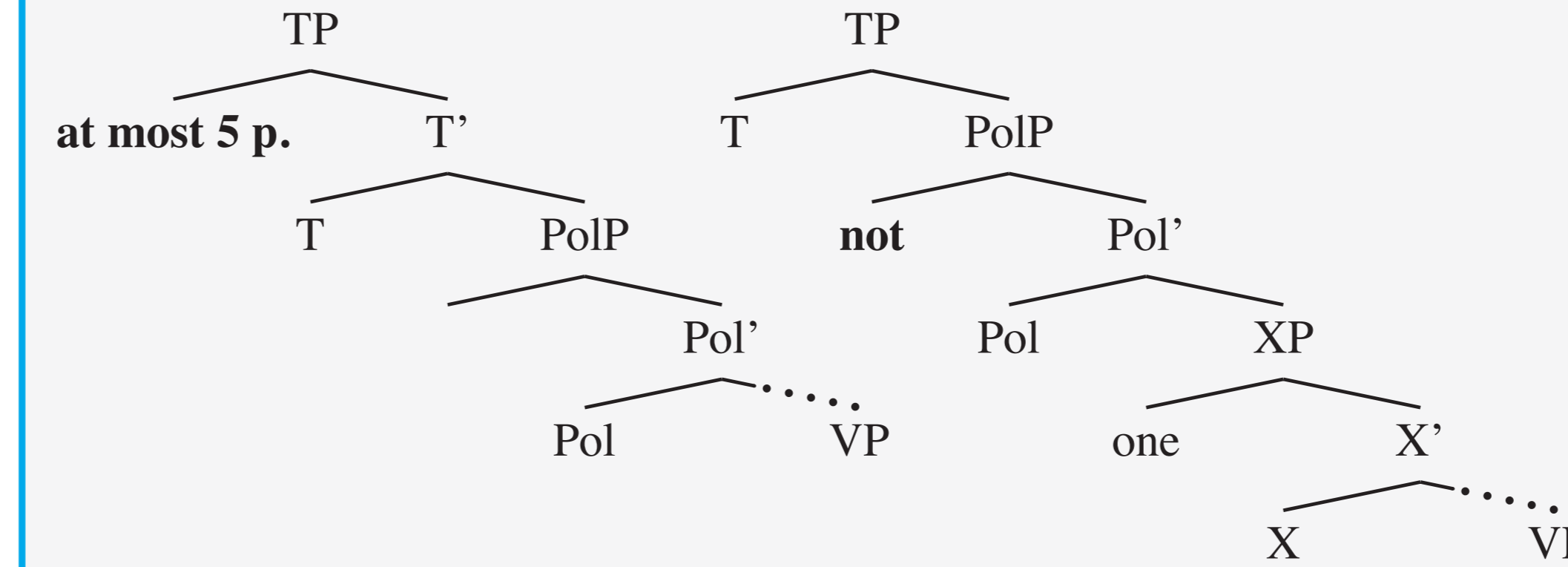
- [TP [PolP \nearrow 1] impossible [CP \sim 1] anyone₂ [PolP \sim 1] not somewhere₁]

• Similar facts already observed with the PPIs *already* and *still* (Baker 1970, Ladusaw 1979, McCawley 1998):

- (19) a. You **can't** convince me that someone hasn't already solved this problem. *NOT>SOME>NOT; NOT>NOT>SOME
 b. You **can't** convince me that someone hasn't solved this problem. NOT>SOME>NOT; NOT>NOT>SOME

4. A Confound

• Negativity is not the only difference between (3) and (4): the DE expressions are not in the same position. Negative quantifiers are made up of negation and an existential quantifier (Geurts 1996, Zeijlstra & Penka 2005, Iatridou & Sichel 2008, a.o.).



Q3: *Some* anti-licensed in DE environments?

6. Licensing is Liberal

• *Some* and *any* licensed in different constituents in (20)-(21):
 (20) It's **impossible** that he didn't steal anything.

[TP [PolP \nearrow 1] impossible [CP [PolP \sim 1] not anything]₁

- (21) It's **impossible** that he didn't steal something.

[TP [PolP \nearrow 1] impossible [CP [PolP \sim 1] not something]₁

7. Complementarity

• With **entanglement**, we have a test: *some* is anti-licensed by **DEness**, not by non-monotonicity (unlike *any*): (Answ. Q3)

- (22) **At most five people** sold someone anything. *n.s.SOME

- (23) **No one** sold exactly 42 people *anything/something.

• The monotonicity properties that make *some* acceptable are the complement of the monotonicity properties that make *any* acceptable and vice versa.

• **In any given constituent** where acceptability is checked, *some* and *any* are in **complementary distribution**.

8. *Some* is not an Intervener

• Double object constructions with *any* and *some* in PolP:

- (24) **At most five people** sold someone anything. *n.s.SOME

* [TP [PolP \sim 1] [CP [PolP \sim 2] at most 5 p. [PolP \nearrow 1] someone₂ anything]₁ sell

- (25) **At most five people** sold anyone something. *n.s.SOME

* [TP [PolP \sim 1] [CP [PolP \sim 2] at most 5 p. [PolP \nearrow 1] anyone₂ something]₁ sell

• Other PPIs entangled with *any*:

- (26) There **isn't** anyone here who wouldn't rather do *anything/something downtown. [Baker 1970] ✓NOT>NOT>SOME

• An inference can salvage a PPI by breaking the monotonicity in its position (against 'double licensing', Szabolcsi 2004):

- (27) Make sure that he **didn't** steal something. ✓NOT>SOME
 ⇨ It is possible that he stole something.

9. Conclusion

- **Unified environment-based theory;**
- *Some* and *any* are entangled;
- Licensing is cyclic.

Selected References

Baker, C. L. (1970). Double negatives. *LI* 1:169-186. • Gajewski, J. (2005). Neg-raising: Polarity and presupposition. • Ladusaw, W. (1979). Polarity sensitivity as inherent scope relations. • Szabolcsi, A. (2004). Positive polarity - negative polarity. *NLLT* 22:409-452.