Splitting the atoms of subtractive modification

Luka Crnič

Logic in Language and in Conversation
Utrecht University, September 19-20, 2016

Slides: `http://bit.ly/exceptives`

Subtractive modification

Subtractive modifiers have an intricate distribution

(1) **Connected exceptive modifiers**

a. Every book but War and Peace is worth reading.
b. No book but War and Peace is worth reading.
c. *Some book but War and Peace is worth reading.

(2) **Approximative modifiers**

a. Almost every book is worth reading.
b. Almost no book is worth reading.
c. *Almost some book is worth reading.

Generalization about subtractive modifiers (good enough)

- They can modify universal quantifiers
- They cannot modify existential quantifiers

Subtractive modification

Semantic import of subtractive modifiers corresponds to two salient inferences:

- Subtraction inference
- Negative inference

(3) Every book but War and Peace is worth reading.

a. **Sub:** Every book that is not War and Peace is worth reading.
b. **Neg:** Not every book is worth reading. ($\Rightarrow$ WP isn't worth reading.)

(4) Almost every book is worth reading.

a. **Sub:** Close to every book is worth reading.
b. **Neg:** Not every book is worth reading.

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

Subtractive modification

Semantic import of subtractive modifiers corresponds to two salient inferences:

- Subtraction inference
- Negative inference

(3) Every book but War and Peace is worth reading.

a. **Sub:** Every book that is not War and Peace is worth reading.
b. **Neg:** Not every book is worth reading. ($\Rightarrow$ WP isn't worth reading.)

(4) Almost every book is worth reading.

a. **Sub:** Close to every book is worth reading.
b. **Neg:** Not every book is worth reading.

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

Connected exceptives

von Fintel's (1993) groundbreaking idea was to derive the distribution of (connected) exceptives from the nature of their semantic contribution to the sentences in which they occur (cf. also Moltmann 1995).

- Exceptives are ungrammatical if they give rise to trivial* truth-conditions
- Exceptives are grammatical if they give rise to contingent truth-conditions

* Slightly more precisely: an exception sentence is perceived to be ungrammatical if the trivial truth-conditions are effectively independent of the non-functional (non-logical) material used in the sentence (cf. Gajewski 2002, Chierchia 2013).

Connected exceptives

Modification of universal quantifiers

(5) Every book but War and Peace is worth reading.

Truth-conditions assigned by von Fintel to the sentence

(6) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{\text{= Every book that is not WP is worth reading}} \wedge$

$$\underbrace{\forall X \subseteq E\text{: } (\text{book}\backslash X \subseteq \text{worth reading}) \rightarrow \{\text{WP}\} \subseteq X}_{\text{= \{WP\} is the minimal set X s.t. every book that is not in X is worth reading}}$$

Slightly reformated and simplified characterization

(7) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{\text{= Every book that is not WP is worth reading}} \wedge \underbrace{\text{book} \not\subseteq \text{worth reading}}_{\text{= } \neg\text{Every book is worth reading}}$

$\downarrow$ Sub $\qquad\qquad$ $\downarrow$ Neg

Modification of universal quantifiers

(5) Every book but War and Peace is worth reading.

Truth-conditions assigned by von Fintel to the sentence

(6) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{\text{= Every book that is not WP is worth reading}} \wedge$

$$\underbrace{\forall X \subseteq E\text{: } (\text{book}\backslash X \subseteq \text{worth reading}) \rightarrow \{\text{WP}\} \subseteq X}_{\text{= \{WP\} is the minimal set X s.t. every book that is not in X is worth reading}}$$

Slightly reformated and simplified characterization

(7) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{\text{= Every book that is not WP is worth reading}} \wedge \underbrace{\text{book} \not\subseteq \text{worth reading}}_{\text{= } \neg\text{Every book is worth reading}}$

$\downarrow$ Sub $\qquad\qquad$ $\downarrow$ Neg

Modification of universal quantifiers

(5) Every book but War and Peace is worth reading.

Truth-conditions assigned by von Fintel to the sentence

(6) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{=\text{Every book that is not WP is worth reading}} \wedge$

$$\underbrace{\forall X \subseteq E\text{: } (\text{book}\backslash X \subseteq \text{worth reading}) \rightarrow \{\text{WP}\} \subseteq X}_{=\{\text{WP}\}\text{ is the minimal set X s.t. every book that is not in X is worth reading}}$$

Slightly reformated and simplified characterization

(7) $\underbrace{\text{book}\backslash\{\text{WP}\} \subseteq \text{worth reading}}_{=\text{Every book that is not WP is worth reading}} \wedge \underbrace{\text{book} \not\subseteq \text{worth reading}}_{=\neg\text{Every book is worth reading}}$

$\downarrow$ Sub $\qquad\qquad$ $\downarrow$ Neg

Connected exceptives

Modification of negative quantifiers

(8) No book but War and Peace is worth reading.

(9) $\underbrace{\text{book}\backslash\{\text{WP}\} \cap \text{worth reading}\} = \emptyset}_{\text{= No book that is not WP is worth reading}} \wedge \underbrace{\text{book} \cap \text{worth reading} \neq \emptyset}_{\text{= }\neg\text{No book is worth reading}}$

Modification of existential quantifiers

(10) *Some book but War and Peace is worth reading.

(11) $\underbrace{\text{book}\backslash\{\text{WP}\} \cap \text{worth reading} \neq \emptyset}_{\text{= Some book that is not WP is worth reading}} \wedge \underbrace{\text{book} \cap \text{worth reading} = \emptyset}_{\text{= }\neg\text{Some book is worth reading}}$

Connected exceptives

Modification of negative quantifiers

(8) No book but War and Peace is worth reading.

(9) $\underbrace{\text{book}\backslash\{\text{WP}\} \cap \text{worth reading}\} = \emptyset}_{\text{= No book that is not WP is worth reading}} \wedge \underbrace{\text{book} \cap \text{worth reading} \neq \emptyset}_{\text{= } \neg\text{No book is worth reading}}$

Modification of existential quantifiers

(10) *Some book but War and Peace is worth reading.

(11) $\underbrace{\text{book}\backslash\{\text{WP}\} \cap \text{worth reading} \neq \emptyset}_{\text{= Some book that is not WP is worth reading}} \wedge \underbrace{\text{book} \cap \text{worth reading} = \emptyset}_{\text{= } \neg\text{Some book is worth reading}}$

Connected exceptives and compositionality

(12) **Bulky Lexical Item Assumption**
Exceptive morpheme *but* encodes both Sub and Neg.

Connected exceptives as modifiers of quantificational determiners

(13) $[\![\text{but}]\!](E)(P)(Q)(R) = 1$ iff $Q(P \setminus E)(R) \wedge \neg Q(P)(R)$

Sub Neg

Approximatives

The same strategy of explaining the distribution of approximatives has been applied to subtractives (see, e.g., Penka 2006, Nouwen 2006).

Modification of universal quantifiers

(14) Almost every book is worth reading.

Truth-conditions assigned by Penka, Morzycki, etc., to the sentence

(15) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{every}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{=\text{Close to every book is worth reading}} \wedge$

$\downarrow$

Sub

$\underbrace{\text{book} \not\subseteq \text{worth reading}}_{=\neg\text{Every book is worth reading}}$

$\downarrow$

Neg

Approximatives

The same strategy of explaining the distribution of approximatives has been applied to subtractives (see, e.g., Penka 2006, Nouwen 2006).

Modification of universal quantifiers

(14) Almost every book is worth reading.

Truth-conditions assigned by Penka, Morzycki, etc., to the sentence

(15) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{every}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to every book is worth reading}} \quad \wedge$

$\downarrow$

Sub

$\underbrace{\text{book} \not\subseteq \text{worth reading}}_{= \neg\text{Every book is worth reading}}$

$\downarrow$

Neg

Approximatives

The same strategy of explaining the distribution of approximatives has been applied to subtractives (see, e.g., Penka 2006, Nouwen 2006).

Modification of universal quantifiers

(14) Almost every book is worth reading.

Truth-conditions assigned by Penka, Morzycki, etc., to the sentence

(15) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{every}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to every book is worth reading}} \wedge$

$\downarrow$

Sub

$\underbrace{\text{book} \not\subseteq \text{worth reading}}_{= \neg\text{Every book is worth reading}}$

$\downarrow$

Neg

Approximatives

Modification of negative quantifiers

(16) Almost no book is worth reading.

(17) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{no}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to no book is worth reading}} \quad \wedge$

$$\underbrace{\text{book} \cap \text{worth reading} \neq \emptyset}_{= \neg\text{No book is worth reading}}$$

Modification of existential quantifiers

(18) *Almost some book is worth reading.

(19) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{some}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to some book is worth reading}}{}^{1} \quad \wedge$

$$\underbrace{\text{book} \cap \text{worth reading} = \emptyset}_{= \neg\text{Some book is worth reading}}$$

[1] Additional assumptions about the scale of Q are required.

Approximatives

Modification of negative quantifiers

(16) Almost no book is worth reading.

(17) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{no}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to no book is worth reading}} \wedge$

$$\underbrace{\text{book} \cap \text{worth reading} \neq \emptyset}_{= \neg\text{No book is worth reading}}$$

Modification of existential quantifiers

(18) *Almost some book is worth reading.

(19) $\underbrace{\exists Q\ (Q \text{ is close to } [\![\text{some}]\!] \wedge Q(\text{book})(\text{worth reading}))}_{= \text{Close to some book is worth reading}}{}^{1} \wedge$

$$\underbrace{\text{book} \cap \text{worth reading} = \emptyset}_{= \neg\text{Some book is worth reading}}$$

[1] Additional assumptions about the scale of Q are required.

(20) **Bulky Lexical Item Assumption**
Approximative morpheme *almost* encodes both Sub and Neg.

Almost as a modifier of a quantifier (cf., e.g., Keenan 1996, Morzycki 2001)

(21) $[\![\text{almost}]\!](Q)(P)(R) = 1$ iff $\exists Q'(Q' \text{ is close to } Q \wedge Q'(P)(R)) \wedge \neg Q(P)(R)$

Sub Neg

Almost as a clausal modifier (e.g., Penka 2006)

(22) $[\![\text{almost}]\!](p) = 1$ iff $\exists q(q \text{ is close to } p \wedge q) \wedge \neg p$

Sub Neg

Summary

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

One popular set of answers (von Fintel, Penka, Nouwen, i.a.):

- The acceptability of subtractive modifiers is determined on the basis of the truth-conditions that these help bring about (see esp. von Fintel 1993):
  - if the truth-conditions are contingent, the subtractive modifier is acceptable,
  - if the truth-conditions are trivial, the subtractive modifier is unacceptable.

- The semantic contribution of subtractive modifiers is fully encoded in their lexical meaning (Bulky Lexical Item Assumptions).

$$[_S \ldots \text{almost/but NP} \ldots]$$
$$\downarrow$$
$$\text{Sub+Neg}$$

Summary

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

One popular set of answers (von Fintel, Penka, Nouwen, i.a.):

- The acceptability of subtractive modifiers is determined on the basis of the truth-conditions that these help bring about (see esp. von Fintel 1993):
  - if the truth-conditions are contingent, the subtractive modifier is acceptable,
  - if the truth-conditions are trivial, the subtractive modifier is unacceptable.

- The semantic contribution of subtractive modifiers is fully encoded in their lexical meaning (Bulky Lexical Item Assumptions).

$$[_S \ldots \text{almost/but NP} \ldots]$$
$$\downarrow$$
$$\text{Sub+Neg}$$

Summary

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

One popular set of answers (von Fintel, Penka, Nouwen, i.a.):

- The acceptability of subtractive modifiers is determined on the basis of the truth-conditions that these help bring about (see esp. von Fintel 1993):
  - if the truth-conditions are contingent, the subtractive modifier is acceptable,
  - if the truth-conditions are trivial, the subtractive modifier is unacceptable.

- The semantic contribution of subtractive modifiers is fully encoded in their lexical meaning (Bulky Lexical Item Assumptions).

$$[_S \ldots \text{almost/but NP} \ldots] \downarrow \text{Sub+Neg}$$

Summary

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

One popular set of answers (von Fintel, Penka, Nouwen, i.a.):

- The acceptability of subtractive modifiers is determined on the basis of the truth-conditions that these help bring about (see esp. von Fintel 1993):
  - if the truth-conditions are contingent, the subtractive modifier is acceptable,
  - if the truth-conditions are trivial, the subtractive modifier is unacceptable.

- ~~The semantic contribution of subtractive modifiers is fully encoded in their lexical meaning (Bulky Lexical Item Assumptions).~~

$$[_S \ \ldots \text{ almost/but NP } \ldots]$$
$$\downarrow$$
$$\text{Sub} + \sout{\text{Neg}}$$

Preview

We will explore subtractives in three types of configurations:

- Ellipsis contexts
- Negative quantifiers
- *Almost any*

and argue for a different take on subtractive modification:

- **Sub** is triggered by the subtractives
- **Neg** is triggered by a different operator
- This operator must be syntactically embeddable
- There is no binding/movement dependency between the two

Our conclusions will be shown to be compatible with the analyses in Gajewski 2013 (but not 2008) and Spector 2014. (See also Sadock 1981.)

Reminder: ellipsis licensing and parallelism

(23) a. John didn't read any book. Bill did $\triangle$.
b. $\triangle$ = read a book

(24) **Parallelism Condition on Ellipsis Licensing**
Ellipsis of a constituent ϵ is licensed only if at LF ϵ is dominated by some constituent, β, such that there is an antecedent constituent in the discourse, α, such that the meaning of α is in the focus value of β, that is, if it holds that $[\![\alpha]\!] \in \text{ALT}(\beta)$. ($\alpha$, β = Parallelism Domains, PDs)

(25) $[\![[\text{neg } [\text{John read any book}]]]\!] \in \text{ALT}([\text{did}_F\ [\text{Bill}_F \text{ read a book}]])$
$(= \{(\text{X read a book}), \neg(\text{X read a book}) \mid \text{X} \in \text{D}_e\})$

Reminder: ellipsis licensing and parallelism

(23) a. John didn't read any book. Bill did $\triangle$.
b. $\triangle$ = read a book

(24) **Parallelism Condition on Ellipsis Licensing**
Ellipsis of a constituent ϵ is licensed only if at LF ϵ is dominated by some constituent, β, such that there is an antecedent constituent in the discourse, α, such that the meaning of α is in the focus value of β, that is, if it holds that $[\![\alpha]\!] \in \text{ALT}(\beta)$. ($\alpha$, β = Parallelism Domains, PDs)

(25) $[\![$[neg [John read any book]]$]\!] \in \text{ALT}([\text{did}_F\ [\text{Bill}_F \text{ read a book}]])$
$\left(= \{(\text{X read a book}), \neg(\text{X read a book}) \mid \text{X} \in \text{D}_e\}\right)$

Reminder: ellipsis licensing and parallelism

(26) John solved no exercises. ??You had to △ to get an A.

(27)
a. [John solved no exercises] available
b. [$\Box_F$ [you$_F$ solve no exercises]] parse!
c. ⟦solve no exercises⟧ ∈ ALT(solve no exercises)

(28)
a. [John solved no exercises] unavailable
b. [no exercises] λx [$\Box_F$ [you$_F$ solve x]] parse!
c. ⟦J. solved no exercises⟧ ∈ ALT([no exercises] λx [$\Box_F$ [u$_F$ solve x])

(29) **Scope Parallelism Generalization** (simplified)
The scope relations between QPs in the ellipsis PD must be identical to those between their anteceding elements in the antecedent PD.

(e.g., Fiengo & May 1994, Fox 2000, Griffiths and Lipták 2014)

Reminder: ellipsis licensing and parallelism

(26) John solved no exercises. ??You had to △ to get an A.

(27)
a. [John solved no exercises] — available
b. [$\Box_F$ [you$_F$ solve no exercises]] — parse!
c. ⟦solve no exercises⟧ ∈ ALT(solve no exercises)

(28)
a. [John solved no exercises] — unavailable
b. [no exercises] λx [$\Box_F$ [you$_F$ solve x]] — parse!
c. ⟦J. solved no exercises⟧ ∈ ALT([no exercises] λx [$\Box_F$ [u$_F$ solve x])

(29) **Scope Parallelism Generalization** (simplified)
The scope relations between QPs in the ellipsis PD must be identical to those between their anteceding elements in the antecedent PD.

(e.g., Fiengo & May 1994, Fox 2000, Griffiths and Lipták 2014)

Reminder: ellipsis licensing and parallelism

(26) John solved no exercises. ??You had to △ to get an A.

(27)
a. [John solved no exercises] — available
b. [$\Box_F$ [you$_F$ solve no exercises]] — parse!
c. ⟦solve no exercises⟧ ∈ ALT(solve no exercises)

(28)
a. [John solved no exercises] — unavailable
b. [no exercises] λx [$\Box_F$ [you$_F$ solve x]] — parse!
c. ⟦J. solved no exercises⟧ ∈ ALT([no exercises] λx [$\Box_F$ [u$_F$ solve x])

(29) **Scope Parallelism Generalization** (simplified)
The scope relations between QPs in the ellipsis PD must be identical to those between their anteceding elements in the antecedent PD.

(e.g., Fiengo & May 1994, Fox 2000, Griffiths and Lipták 2014)

Reminder: ellipsis licensing and parallelism

(26) John solved no exercises. ??You had to △ to get an A.

(27)
a. [John solved no exercises] — available
b. [$\Box_F$ [you$_F$ solve no exercises]] — parse!
c. $[\![$solve no exercises$]\!] \in$ ALT(solve no exercises)

(28)
a. [John solved no exercises] — unavailable
b. [no exercises] λx [$\Box_F$ [you$_F$ solve x]] — parse!
c. $[\![$J. solved no exercises$]\!] \in$ ALT([no exercises] λx [$\Box_F$ [u$_F$ solve x])

(29) **Scope Parallelism Generalization** (simplified)
The scope relations between QPs in the ellipsis PD must be identical to those between their anteceding elements in the antecedent PD.

(e.g., Fiengo & May 1994, Fox 2000, Griffiths and Lipták 2014)

Two sequences

Sequence with a connected exceptive

(30) In the exam, I solved every exercise but the last one.
You really had to $\triangle$ to get an A.

Sequence with an approximative

(31) In the exam, I solved almost every exercise.
You really had to $\triangle$ to get an A.

Two sequences

Sequence with a connected exceptive

(30) In the exam, I solved every exercise but the last one.
You really had to $\triangle$ to get an A.

Sequence with an approximative

(31) In the exam, I solved almost every exercise.
You really had to $\triangle$ to get an A.

Connected exceptives puzzle

(32) In the exam, I solved every exercise but the last one.
You really had to $\triangle$ to get an A.

Parse of the first sentence

(33) [I solved [every exercise but the last one]]

Potential parses of the second sentence

(34) a. $[\Box_F$ [you$_F$ solved [every exercise but the last one]]]
b. [every exercise but the last one] [$\lambda 4$ [$\Box_F$ [you$_F$ solved t_4]]]

The first potential parse has a pragmatically marked meaning, while the last one violates Scope Parallelism Generalization.

Connected exceptives puzzle

(32) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

Parse of the first sentence

(33) [I solved [every exercise but the last one]]

Potential parses of the second sentence

(34) a. [$\Box_F$ [you$_F$ solved [every exercise but the last one]]]

b. [every exercise but the last one] [$\lambda 4$ [$\Box_F$ [you$_F$ solved t_4]]]

The first potential parse has a pragmatically marked meaning, while the last one violates Scope Parallelism Generalization.

Approximatives puzzle

(35) In the exam, I solved almost every exercise.
You really had to △ to get an A.

Parse of the first sentence

(36) a. [I solved [almost every] exercise] (QDet modification)
b. [almost [I solved every exercise]] (clausal modification)

Potential parses of the second sentence

(37) a. $\Box_F$ [you$_F$ solved [almost every exercise]]
b. $\Box_F$ [almost [you$_F$ solved every exercise]]
c. [almost every exercise] [λx [$\Box_F$ [you$_F$ solved x]]]
d. [almost [$\Box_F$ [I solved every exercise]]]

The first two parses have a pragmatically marked meaning, while the last two parses violate Scope Parallelism Generalization. (Moreover, the last one is wedded to movement *sui generis*; see, e.g., Rooth 1985 for related discussion.)

Approximatives puzzle

(35) In the exam, I solved almost every exercise.
You really had to △ to get an A.

Parse of the first sentence

(36) a. [I solved [almost every] exercise] (QDet modification)
b. [almost [I solved every exercise]] (clausal modification)

Potential parses of the second sentence

(37) a. $\Box_F$ [you$_F$ solved [almost every exercise]]
b. $\Box_F$ [almost [you$_F$ solved every exercise]]
c. [almost every exercise] [λx [$\Box_F$ [you$_F$ solved x]]]
d. [almost [$\Box_F$ [I solved every exercise]]]

The first two parses have a pragmatically marked meaning, while the last two parses violate Scope Parallelism Generalization. (Moreover, the last one is wedded to movement *sui generis*; see, e.g., Rooth 1985 for related discussion.)

Several sequences

(38) John read no book but War and Peace. Mary did $\triangle$ however.

$\triangle$ = read some book other than War and Peace

(39) I could find no solution except to use exhaustivity, but Irene might $\triangle$.

$\triangle$ = find some solution other than to use exhaustivity

(40) John didn't read any book but War and Peace. Mary did $\triangle$ however.

$\triangle$ = read some book other than War and Peace

Several sequences

(38) John read no book but War and Peace. Mary did $\triangle$ however.

$\triangle$ = read some book other than War and Peace

(39) I could find no solution except to use exhaustivity, but Irene might $\triangle$.

$\triangle$ = find some solution other than to use exhaustivity

(40) John didn't read any book but War and Peace. Mary did $\triangle$ however.

$\triangle$ = read some book other than War and Peace

Puzzle

(41) John read no book but War and Peace. Mary did $\triangle$ however.

Parse of the first sentence

(42) a. [John read [no book but WP]]
b. $(\text{book}\backslash\{\text{WP}\} \cap \text{worth reading} = \emptyset) \wedge (\text{book} \cap \text{worth reading} \neq \emptyset)$

Potential parses of the second sentence

(43) a. [did_F [Mary_F read [some book]]]
b. [did_F [Mary_F read [some book other than WP]]]
c. [did_F [Mary_F read [some book but WP]]]

None of these parses have an appropriate focus value to satisfy Parallelism except the last one, though this is at the cost of having a contradictory meaning.

Puzzle

(41) John read no book but War and Peace. Mary did $\triangle$ however.

Parse of the first sentence

(42) a. [John read [no book but WP]]
b. $(\text{book}\backslash\{\text{WP}\} \cap \text{worth reading} = \emptyset) \wedge (\text{book} \cap \text{worth reading} \neq \emptyset)$

Potential parses of the second sentence

(43) a. [did_F [Mary_F read [some book]]]
b. [did_F [Mary_F read [some book other than WP]]]
c. [did_F [Mary_F read [some book but WP]]]

None of these parses have an appropriate focus value to satisfy Parallelism except the last one, though this is at the cost of having a contradictory meaning.

Two sequences

(44) While Mary aced every course but her electives, most boys only aced a few $\triangle$. However, every boy did ace almost all of his electives.

(45) Joe threw away every book that he owned but his textbooks. I would never throw away even one $\triangle$. I'd also not throw away my textbooks.

Puzzle

(46) While Mary aced every course but her electives, most boys only aced a few △. However, every boy did ace almost all of his electives.

Parse of the first sentence

(47) [Mary$_x$ [aced [every course but her$_x$ electives]]]

Potential parses of the second sentence

(48) a. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses]]

b. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses other than their$_x$ electives]]

c. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses but their$_x$ electives]]

The first parse fails to convey the observed meaning (as witnessed by the continuation), the second parse fails to have an appropriate focus value, and the last parse has a contradictory meaning.

Puzzle

(46) While Mary aced every course but her electives, most boys only aced a few △. However, every boy did ace almost all of his electives.

Parse of the first sentence

(47) [Mary$_x$ [aced [every course but her$_x$ electives]]]

Potential parses of the second sentence

(48) a. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses]]

b. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses other than their$_x$ electives]]

c. [most boys$_F$]$_x$ [only$_F$ aced [a few$_F$ courses but their$_x$ electives]]

The first parse fails to convey the observed meaning (as witnessed by the continuation), the second parse fails to have an appropriate focus value, and the last parse has a contradictory meaning.

Diagnosis

(49) **Bulky Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub and Neg.

b. Approximative morpheme *almost* encodes Sub and Neg.

If a subtractive in an ellipsis context is contained in an antecedent VP/NP/etc., it must be contained in the antecedent Parallelism Domain. (Parallelism, etc.)

(50) [... $[_{\text{Ant}}$ ... almost/but NP ...] ...]

But then it needs to be contained also in a structurally parallel position in the ellipsis Parallelism Domain! (Parallelism + Scope Parallelism Generalization)

(51) [... $[_{\text{Ellipsis}}$ ... almost/but NP ...] ...]

↓

Sub+Neg

This results in undergeneration: the relevant sequences are either predicted to be unacceptable (Neg triggers a contradictory meaning - Existentials, Nouns) or fails to allow some observed readings (Neg is not observed - Universals).

Diagnosis

(49) **Bulky Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub and Neg.

b. Approximative morpheme *almost* encodes Sub and Neg.

If a subtractive in an ellipsis context is contained in an antecedent VP/NP/etc., it must be contained in the antecedent Parallelism Domain. (Parallelism, etc.)

(50) [... $\underline{[_{\text{Ant}} \ldots \text{almost/but NP} \ldots]}$ ...]

But then it needs to be contained also in a structurally parallel position in the ellipsis Parallelism Domain! (Parallelism + Scope Parallelism Generalization)

(51) [... $\underline{[_{\text{Ellipsis}} \ldots \text{almost/but NP} \ldots]}$ ...]

↓

Sub+Neg

This results in undergeneration: the relevant sequences are either predicted to be unacceptable (Neg triggers a contradictory meaning - Existentials, Nouns) or fails to allow some observed readings (Neg is not observed - Universals).

Diagnosis

(49) **Bulky Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub and Neg.

b. Approximative morpheme *almost* encodes Sub and Neg.

If a subtractive in an ellipsis context is contained in an antecedent VP/NP/etc., it must be contained in the antecedent Parallelism Domain. (Parallelism, etc.)

(50) [... $\underline{[_{\text{Ant}} \ldots \text{almost/but NP} \ldots]}$ ...]

But then it needs to be contained also in a structurally parallel position in the ellipsis Parallelism Domain! (Parallelism + Scope Parallelism Generalization)

(51) [... $\underline{[_{\text{Ellipsis}} \ldots \text{almost/but NP} \ldots]}$ ...]

$\downarrow$

Sub+Neg

This results in undergeneration: the relevant sequences are either predicted to be unacceptable (Neg triggers a contradictory meaning - Existentials, Nouns) or fails to allow some observed readings (Neg is not observed - Universals).

Another puzzle about connected exceptives

Split readings of negative quantifiers have been a convincing argument that they should be analyzed as involving an existential quantifier (e.g., Zeijlstra 2004)

(52) a. The company need fire no employees.
b. Possible reading: $\neg\Box$(the company fires some employees)

(53) a. You have to read no book this month.
b. Possible reading: $\neg\Box$(you read some book this month)

Split readings are available with negative quantifiers with connected exceptives

(54) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(55) a. You have to read no book but War and Peace this month.
b. Possible reading: $\neg\Box$(you read some book other than WP)

Another puzzle about connected exceptives

Split readings of negative quantifiers have been a convincing argument that they should be analyzed as involving an existential quantifier (e.g., Zeijlstra 2004)

(52) a. The company need fire no employees.
b. Possible reading: $\neg\Box$(the company fires some employees)

(53) a. You have to read no book this month.
b. Possible reading: $\neg\Box$(you read some book this month)

Split readings are available with negative quantifiers with connected exceptives

(54) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(55) a. You have to read no book but War and Peace this month.
b. Possible reading: $\neg\Box$(you read some book other than WP)

Another puzzle about connected exceptives

Modification of existentials with connected exceptives should result in triviality!

(56) The company need fire no employees but the negligent one.

(57) $[\![$[neg [$\Box$ [C fire [SOME employees but N]]]]]$]\!]$ = tautology

Gajewski 2008 presents two further puzzles

- NPIs can be modified by connected exceptives
- Negative quantifiers modified by connected exceptives license NPIs

Another puzzle about connected exceptives

Modification of existentials with connected exceptives should result in triviality!

(56) The company need fire no employees but the negligent one.

(57) $[\![$[neg [$\Box$ [C fire [SOME employees but N]]]]]$]\!]$ = tautology

Gajewski 2008 presents two further puzzles

- NPIs can be modified by connected exceptives
- Negative quantifiers modified by connected exceptives license NPIs

Another puzzle about approximatives

Modification of NPIs by *almost* is possible

(58)
a. In a story that didn't see almost any coverage here ...
b. Global warming: we didn't see almost any snow in the winter.
c. I'm in the 5th week and I didn't see almost any results.
d. I don't pay almost a single cent for any of my art work.

(Horn 2002)

(59) ... the extra money when you do get called is so huge that you have to push if there's almost any chance that you'll be called.

(Kilbourn-Ceron 2016)

(60)
a. An infant without almost any external body skin was born in ...
b. The best pellet for almost any high end PCP rifle was ...

(61)
a. The next morning I felt nearer to Jon than I almost ever did before.
b. I have made as many original experiments this summer as I almost ever did in the same time.

Modification of existentials with *almost* should result in triviality!

Another puzzle about approximatives

Modification of NPIs by *almost* is possible

(58)
a. In a story that didn't see almost any coverage here ...
b. Global warming: we didn't see almost any snow in the winter.
c. I'm in the 5th week and I didn't see almost any results.
d. I don't pay almost a single cent for any of my art work.

(Horn 2002)

(59) ... the extra money when you do get called is so huge that you have to push if there's almost any chance that you'll be called.

(Kilbourn-Ceron 2016)

(60)
a. An infant without almost any external body skin was born in ...
b. The best pellet for almost any high end PCP rifle was ...

(61)
a. The next morning I felt nearer to Jon than I almost ever did before.
b. I have made as many original experiments this summer as I almost ever did in the same time.

Modification of existentials with *almost* should result in triviality!

Another puzzle about approximatives

Modification of NPIs by *almost* is possible

(58)
a. In a story that didn't see almost any coverage here ...
b. Global warming: we didn't see almost any snow in the winter.
c. I'm in the 5th week and I didn't see almost any results.
d. I don't pay almost a single cent for any of my art work.

(Horn 2002)

(59) ... the extra money when you do get called is so huge that you have to push if there's almost any chance that you'll be called.

(Kilbourn-Ceron 2016)

(60)
a. An infant without almost any external body skin was born in ...
b. The best pellet for almost any high end PCP rifle was ...

(61)
a. The next morning I felt nearer to Jon than I almost ever did before.
b. I have made as many original experiments this summer as I almost ever did in the same time.

Modification of existentials with *almost* should result in triviality!

Splitting subtractives

(62) **~~Bulky~~ Lean Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub ~~and Neg.~~

b. Approximative morpheme *almost* encodes Sub ~~and Neg.~~

Neg inference is induced by exh

(63) $\text{exh}(S)(w) = 1$ iff $S(w) = 1 \wedge \forall S' \in \text{ALT}(S)\text{: } S \not\subseteq S' \rightarrow S'(w) = 0$

Schematic of subtractive modification

(64) [... [exh [... almost/but ...]]]

↓ Neg ↓ Sub

Splitting subtractives

(62) **~~Bulky~~ Lean Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub ~~and Neg.~~

b. Approximative morpheme *almost* encodes Sub ~~and Neg.~~

Neg inference is induced by exh

(63) $\text{exh}(S)(w) = 1$ iff $S(w) = 1 \wedge \forall S' \in \text{ALT}(S): S \not\subseteq S' \rightarrow S'(w) = 0$

Schematic of subtractive modification

(64) [... [exh [... almost/but ...]]]

↓ Neg ↓ Sub

Splitting subtractives

(62) **~~Bulky~~ Lean Lexical Items Assumption**

a. Exceptive morpheme *but* encodes Sub ~~and Neg.~~

b. Approximative morpheme *almost* encodes Sub ~~and Neg.~~

Neg inference is induced by exh

(63) $\text{exh}(S)(w) = 1$ iff $S(w) = 1 \wedge \forall S' \in \text{ALT}(S)\text{: } S \not\subseteq S' \rightarrow S'(w) = 0$

Schematic of subtractive modification

(64) [... [exh [... almost/but ...]]]

↓ Neg ↓ Sub

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) $ALT(\text{every book but WP}) = \{\text{every book, every book but WP}\}$

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. $(book \setminus WP \subseteq worth) \wedge (book \not\subseteq worth)$

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. $(book \setminus WP \cap worth = \emptyset) \wedge (book \cap worth \neq \emptyset)$

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. $(book \setminus WP \cap worth \neq \emptyset) \wedge (book \cap worth = \emptyset)$

(cf. Gajewski 2013, Hirsch 2016)

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) ALT(every book but WP) = {every book, every book but WP}

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. (book\WP $\subseteq$ worth) $\wedge$ (book $\not\subseteq$ worth)

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. (book\WP $\cap$ worth $= \emptyset$) $\wedge$ (book $\cap$ worth $\neq \emptyset$)

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. (book\WP $\cap$ worth $\neq \emptyset$) $\wedge$ (book $\cap$ worth $= \emptyset$)

(cf. Gajewski 2013, Hirsch 2016)

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) $\text{ALT}(\text{every book but WP}) = \{\text{every book, every book but WP}\}$

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. $(\text{book} \setminus WP \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Gajewski 2013, Hirsch 2016)

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) $\text{ALT}(\text{every book but WP}) = \{\text{every book, every book but WP}\}$

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. $(\text{book} \setminus WP \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Gajewski 2013, Hirsch 2016)

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) $\text{ALT}(\text{every book but WP}) = \{\text{every book, every book but WP}\}$

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. $(\text{book} \setminus WP \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Gajewski 2013, Hirsch 2016)

Splitting connected exceptives

Meaning of connected exceptives

(65) $[\![\text{but}]\!](D')(D)(Q) = Q(D \setminus D')$

(66) $[\![[\text{every } [\text{book } [\text{but War and Peace}]]]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus \{WP\})$

(67) $\text{ALT}(\text{every book but WP}) = \{\text{every book, every book but WP}\}$

Derivation of the basic data

(68) a. Every book but War and Peace is worth reading.
b. [exh [[every book but WP] is worth reading]]
c. $(\text{book} \setminus WP \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(69) a. No book but War and Peace is worth reading.
b. [exh [[no book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(70) a. *Some book but War and Peace is worth reading.
b. [exh [[some book but WP] is worth reading]]
c. $(\text{book} \setminus WP \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Gajewski 2013, Hirsch 2016)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \setminus D')$, where D' is small (and context-dependent)

(72) $[\![[\text{almost every}]\ \text{book}]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74) a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \setminus D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75) a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76) a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \setminus D')$, where D' is small (and context-dependent)

(72) $[\![[\text{almost every}]\ \text{book}]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74) a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \setminus D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75) a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76) a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \setminus D')$, where D' is small (and context-dependent)

(72) $[\![[[\text{almost every}]\ \text{book}]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74) a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \setminus D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75) a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76) a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \setminus D')$, where D' is small (and context-dependent)

(72) $[\![[[\text{almost every}]\ \text{book}]]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \setminus D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74)
a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \setminus D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75)
a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76)
a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \setminus D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \backslash D')$, where D' is small (and context-dependent)

(72) $[\![[\text{almost every}]\ \text{book}]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \backslash D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74)
a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \backslash D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75)
a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \backslash D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76)
a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \backslash D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Splitting approximatives

Meaning of approximatives

(71) $[\![\text{almost}]\!](Q)(D) = Q(D \backslash D')$, where D' is small (and context-dependent)

(72) $[\![[\text{almost every}]\ \text{book}]\!] = [\![\text{every}]\!]([\![\text{book}]\!] \backslash D')$, where D' is small

(73) ALT(almost every book) = {every book, almost every book}

Derivation of the basic data

(74)
a. Almost every book is worth reading
b. [exh [[[almost every] book] worth reading]]
c. $(\text{book} \backslash D \subseteq \text{worth}) \wedge (\text{book} \not\subseteq \text{worth})$

(75)
a. Almost no book is worth reading.
b. [exh [[[almost no] book] is worth reading]]
c. $(\text{book} \backslash D \cap \text{worth} = \emptyset) \wedge (\text{book} \cap \text{worth} \neq \emptyset)$

(76)
a. *Almost some book is worth reading.
b. [exh [[[almost some] book] is worth reading]]
c. $(\text{book} \backslash D \cap \text{worth} \neq \emptyset) \wedge (\text{book} \cap \text{worth} = \emptyset)$

(cf. Spector 2014 on *almost* modifying degree predicates)

Ellipsis and exh

(77) John solved some of the exercises. Bill did △ too.

(78) a. [exh [John solved some of the exercises]]
b. [exh [Bill_F solved some of the exercises]]

(79) John solved some of the exercises. Bill did △ too. In fact, Bill solved all of the exercises.

(80) a. [exh [John solved some of the exercises]]
b. [Bill_F solved some of the exercises]

(81) **Fact about exh and ellipsis** (Fox 2004)
Since exh does not stand in a movement/binding dependency with its associate, it need not occur in the Parallelism Domains relevant for ellipsis licensing (or in the sentences containing these).

Ellipsis and exh

(77) John solved some of the exercises. Bill did △ too.

(78) a. [exh [John solved some of the exercises]]
b. [exh [Bill_F solved some of the exercises]]

(79) John solved some of the exercises. Bill did △ too. In fact, Bill solved all of the exercises.

(80) a. [exh [John solved some of the exercises]]
b. [Bill_F solved some of the exercises]

(81) **Fact about exh and ellipsis** (Fox 2004)
Since exh does not stand in a movement/binding dependency with its associate, it need not occur in the Parallelism Domains relevant for ellipsis licensing (or in the sentences containing these).

Ellipsis and exh

(77) John solved some of the exercises. Bill did △ too.

(78) a. [exh [John solved some of the exercises]]
b. [exh [Bill_F solved some of the exercises]]

(79) John solved some of the exercises. Bill did △ too. In fact, Bill solved all of the exercises.

(80) a. [exh [John solved some of the exercises]]
b. [Bill_F solved some of the exercises]

(81) **Fact about exh and ellipsis** (Fox 2004)
Since exh does not stand in a movement/binding dependency with its associate, it need not occur in the Parallelism Domains relevant for ellipsis licensing (or in the sentences containing these).

Ellipsis and exh

(77) John solved some of the exercises. Bill did △ too.

(78) a. [exh [John solved some of the exercises]]
b. [exh [Bill_F solved some of the exercises]]

(79) John solved some of the exercises. Bill did △ too. In fact, Bill solved all of the exercises.

(80) a. [exh [John solved some of the exercises]]
b. [Bill_F solved some of the exercises]

(81) **Fact about exh and ellipsis** (Fox 2004)
Since exh does not stand in a movement/binding dependency with its associate, it need not occur in the Parallelism Domains relevant for ellipsis licensing (or in the sentences containing these).

Ellipsis and exh

(77) John solved some of the exercises. Bill did △ too.

(78) a. [exh [John solved some of the exercises]]
b. [exh [Bill_F solved some of the exercises]]

(79) John solved some of the exercises. Bill did △ too. In fact, Bill solved all of the exercises.

(80) a. [exh [John solved some of the exercises]]
b. [Bill_F solved some of the exercises]

(81) **Fact about exh and ellipsis** (Fox 2004)
Since exh does not stand in a movement/binding dependency with its associate, it need not occur in the Parallelism Domains relevant for ellipsis licensing (or in the sentences containing these).

Connected exceptives

(82) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

(83) a. [exh [I solved [every exercise but L]]]

b. [exh [□ [you$_F$ solved every exercise other than L]]]

(84) □(I solved every exercise that is not L) ∧ ¬□(I solved every exercise)

Approximatives

(85) In the exam, I solved almost every exercise.
You really had to △ to get an A.

(86) a. [exh [I solved [[almost every] exercise but L]]]

b. [exh [□ [you$_F$ solved [[almost every] exercise]]]]

(87) □(I solved every exercise that is not in D) ∧ ¬□(I solved every exercise)

Universals

Connected exceptives

(82) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

(83) a. [exh [I solved [every exercise but L]]]

b. [exh [□ [you$_F$ solved every exercise other than L]]]

(84) □(I solved every exercise that is not L) ∧ ¬□(I solved every exercise)

Approximatives

(85) In the exam, I solved almost every exercise.
You really had to △ to get an A.

(86) a. [exh [I solved [[almost every] exercise but L]]]

b. [exh [□ [you$_F$ solved [[almost every] exercise]]]]

(87) □(I solved every exercise that is not in D) ∧ ¬□(I solved every exercise)

Connected exceptives

(82) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

(83) a. [exh [I solved [every exercise but L]]]

b. [exh [□ [you$_F$ solved every exercise other than L]]]

(84) □(I solved every exercise that is not L) ∧ ¬□(I solved every exercise)

Approximatives

(85) In the exam, I solved almost every exercise.
You really had to △ to get an A.

(86) a. [exh [I solved [[almost every] exercise but L]]]

b. [exh [□ [you$_F$ solved [[almost every] exercise]]]]

(87) □(I solved every exercise that is not in D) ∧ ¬□(I solved every exercise)

Connected exceptives

(82) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

(83) a. [exh [I solved [every exercise but L]]]

b. [exh [□ [you$_F$ solved every exercise other than L]]]

(84) □(I solved every exercise that is not L) ∧ ¬□(I solved every exercise)

Approximatives

(85) In the exam, I solved almost every exercise.
You really had to △ to get an A.

(86) a. [exh [I solved [[almost every] exercise but L]]]

b. [exh [□ [you$_F$ solved [[almost every] exercise]]]]

(87) □(I solved every exercise that is not in D) ∧ ¬□(I solved every exercise)

Universals

Connected exceptives

(82) In the exam, I solved every exercise but the last one.
You really had to △ to get an A.

(83) a. [exh [I solved [every exercise but L]]]

b. [exh [□ [you$_F$ solved every exercise other than L]]]

(84) □(I solved every exercise that is not L) ∧ ¬□(I solved every exercise)

Approximatives

(85) In the exam, I solved almost every exercise.
You really had to △ to get an A.

(86) a. [exh [I solved [[almost every] exercise but L]]]

b. [exh [□ [you$_F$ solved [[almost every] exercise]]]]

(87) □(I solved every exercise that is not in D) ∧ ¬□(I solved every exercise)

Existentials, nouns

Existentials

(88) John read no book but War and Peace. Mary did △ however.

(89) a. [neg [John read [SOME book but WP]]]

b. [Mary$_F$ read [SOME book other than WP]]

(90) (λx. Mary read x) $\cap$ book$\backslash\{WP\} \neq \emptyset$

Nouns

(91) While Mary aced every course but her electives, most boys only aced a few △. However, every boy did ace almost all of his electives.

(92) a. [Mary$_x$ aced every course but her$_x$ electives]

b. [most boys$_F$]$_x$ [only$_F$ aced a few$_F$ courses other than their$_x$ el.]

(93) Most boys only aced a few courses other than their electives.

Existentials, nouns

Existentials

(88) John read no book but War and Peace. Mary did △ however.

(89) a. [neg [John read [SOME book but WP]]]

b. [Mary_F read [SOME book other than WP]]

(90) $(\lambda x.\ \text{Mary read } x) \cap \text{book} \backslash \{\text{WP}\} \neq \emptyset$

Nouns

(91) While Mary aced every course but her electives, most boys only aced a few △. However, every boy did ace almost all of his electives.

(92) a. [Mary_x aced every course but her_x electives]

b. [$\text{most boys}_F]_x$ [only_F aced a few_F courses other than their_x el.]

(93) Most boys only aced a few courses other than their electives.

Summary

Neg being split away from Sub allows the subtractive to contribute only a weak meaning to the antecedent Parallelism Domain

(94) [... [exh [... [$_{\text{Ant}}$ ... almost/but ...] ...]]]

↓ Neg ↓ Sub

The meaning of the anteceded subtractive in the elided constituent can be strengthened – but it need not to be (and not in a parallel position):

(95) [... [(exh) ... [... [$_{\text{Ellipsis}}$ ... almost/other than ...] ...]]]

↓ (Neg) ↓ Sub

This analysis of connected exceptives in ellipsis thus closely resembles the standard treatments of other types of alternations in ellipsis contexts.

Summary

Neg being split away from Sub allows the subtractive to contribute only a weak meaning to the antecedent Parallelism Domain

(94) [... [exh [... [$_{\text{Ant}}$ ... almost/but ...] ...]]]

↓ Neg ↓ Sub

The meaning of the anteceded subtractive in the elided constituent can be strengthened – but it need not to be (and not in a parallel position):

(95) [... [(exh) ... [... [$_{\text{Ellipsis}}$ ... almost/other than ...] ...]]]]

↓ (Neg) ↓ Sub

This analysis of connected exceptives in ellipsis thus closely resembles the standard treatments of other types of alternations in ellipsis contexts.

Summary

Neg being split away from Sub allows the subtractive to contribute only a weak meaning to the antecedent Parallelism Domain

(94) [... [exh [... [$_{\text{Ant}}$ ... almost/but ...] ...]]]

↓ Neg ↓ Sub

The meaning of the anteceded subtractive in the elided constituent can be strengthened – but it need not to be (and not in a parallel position):

(95) [... [(exh) ... [... [$_{\text{Ellipsis}}$ ... almost/other than ...] ...]]]]

↓ (Neg) ↓ Sub

This analysis of connected exceptives in ellipsis thus closely resembles the standard treatments of other types of alternations in ellipsis contexts.

Further puzzles

Negative quantifiers

(96) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(97) [exh [neg [□ [C fire [SOME employees but N]]]]

(98) $\neg\Box$(C fire some employees that are not N) $\wedge$ $\Box$(C fire some employees)

Almost NPIs

(99) If you read almost any book on exposure, you know how to shoot.

(100) [exh [if you read [[almost any] book on exposure]] [you know ...]]

(101) (If you read some of those ten books on exposure, you know how to shoot) $\wedge$ $\neg$(If you read some of those twelve books on exposure, you know how to shoot)

Further puzzles

Negative quantifiers

(96) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(97) [exh [neg [$\Box$ [C fire [SOME employees but N]]]]

(98) $\neg\Box$(C fire some employees that are not N) $\wedge$ $\Box$(C fire some employees)

Almost NPIs

(99) If you read almost any book on exposure, you know how to shoot.

(100) [exh [if you read [[almost any] book on exposure]] [you know ...]]

(101) (If you read some of those ten books on exposure, you know how to shoot) $\wedge$ $\neg$(If you read some of those twelve books on exposure, you know how to shoot)

Further puzzles

Negative quantifiers

(96) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(97) [exh [neg [$\Box$ [C fire [SOME employees but N]]]]

(98) $\neg\Box$(C fire some employees that are not N) $\wedge$ $\Box$(C fire some employees)

Almost NPIs

(99) If you read almost any book on exposure, you know how to shoot.

(100) [exh [if you read [[almost any] book on exposure]] [you know ...]]

(101) (If you read some of those ten books on exposure, you know how to shoot) $\wedge$ $\neg$(If you read some of those twelve books on exposure, you know how to shoot)

Further puzzles

Negative quantifiers

(96) a. The company need fire no employees but the negligent one.
b. Possible reading: $\neg\Box$(C fires some employee other than N)

(97) [exh [neg [$\Box$ [C fire [SOME employees but N]]]]

(98) $\neg\Box$(C fire some employees that are not N) $\wedge$ $\Box$(C fire some employees)

Almost NPIs

(99) If you read almost any book on exposure, you know how to shoot.

(100) [exh [if you read [[almost any] book on exposure]] [you know ...]]

(101) (If you read some of those ten books on exposure, you know how to shoot) $\wedge$ $\neg$(If you read some of those twelve books on exposure, you know how to shoot)

Conclusion

- What governs the distribution of subtractives?
- How precisely do Sub and Neg come about?

- Ellipsis (and further) data provided support for:

(102) **Lean Lexical Items Assumption**

a. Exceptive morpheme *but* encodes only Sub.
b. Approximative morpheme *almost* encodes only Sub.

- Neg must be induced higher in the strucure.
- We showed that exh is a plausible candidate for inducing Neg.
- Many questions: variation, locality, obligatoriness, etc.