Session IV: 24-07-09
Focus-sensitive particles and quantificational adverbs

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• **Schedule:**

i. The formal representation of focus  
ii. The discourse-anaphoric nature of focus  
iii. The meaning of marked focus constructions  
iv. FOC-particles and Q-Adverbs  
v. Extensions and case studies

• **Plan for today:**

  i. Exclusive particles: ONLY in English and German

  ii. Additive particles: ALSO/TOO and EVEN

  iii. The focus-sensitivity of adverbial quantifiers

i. Exclusive particles: ONLY in English and German
(1) John only introduced BILL_F to Sue.

ii. Additive particles: ALSO/TOO and EVEN
(2) John also introduced BILL_F to Sue.
(3) John even introduced BILL_F to Sue.

iii. The focus-sensitivity of adverbial quantifiers
(4) JOHN_F always introduced his friends to his parents.
(5) John always introduced HIS FRIENDS_F to his parents.

i. Exclusive particles: ONLY in English and German
(1) John *only* introduced $\text{BILL}_F$ to Sue.

ii. Additive particles: ALSO/TOO and EVEN
(2) John *also* introduced $\text{BILL}_F$ to Sue.
(3) John *even* introduced $\text{BILL}_F$ to Sue.

iii. The focus-sensitivity of adverbial quantifiers
(4) $\text{JOHN}_F$ *always* introduced his friends to his parents.
(5) John *always* introduced $\text{HIS FRIENDS}_F$ to his parents.

i. Exclusive particles: ONLY in English and German
   (1) John *only* introduced $\text{BILL}_F$ to Sue.

ii. Additive particles: ALSO/TOO and EVEN
   (2) John *also* introduced $\text{BILL}_F$ to Sue.
   (3) John *even* introduced $\text{BILL}_F$ to Sue.

iii. The focus-sensitivity of adverbial quantifiers
   (4) $\text{JOHN}_F$ *always* introduced his friends to his parents.
   (5) John *always* introduced $\text{HIS FRIENDS}_F$ to his parents.

The meaning of only with the ~ operator (Rooth 1992, 1996) (cf. # 48/Tuesday)

(6) John only introduced $\text{BILL}_F$ to Sue.

LF: $[S \text{ only } C [S [S \text{ John introduced } \text{BILL}_F \text{ to Sue}] \sim C ]]$

(7) $[[\text{only}]] = \lambda C. \lambda p. \forall q [q \in C \land \forall q \leftrightarrow q = p]$

➢ Tri-partite quantificational structure:

only(C)(S)

**Simplified SM format for today:**

(8) John only introduced $\text{BILL}_F$ to Sue.

(9) a. $¬\exists x [ x \in \text{ALT}_C \land x \neq \text{Bill} \land \text{John introduced } x \text{ to Sue} = 1]$

b. $\forall x [x \in \text{ALT}_C \land \text{John introduced } x \text{ to Sue} = 1 \rightarrow x = \text{Bill}]$

where $\text{ALT}_C$ is the set of C-restricted alternatives to the focus value

(10) **ONLY (FOC) (BACKGROUND)**

**Simplified SM format for today:**

(11) John only introduced $\text{BILL}_F$ to Sue.

(12) Lexical entry of *only* I:

$$[[\text{only}]] = \lambda x_{<\tau>}. \lambda P_{<\tau,t>}. \neg \exists y_{<\tau>} [y \in \text{ALT}_C \land y \neq x \land P(y) = 1]$$

Simplified SM format for today:

(13) John only introduced $\text{BILL}_F$ to Sue.

(13a') Sample calculation I

\[
[[\text{only}] \ (\text{Bill}) \ (\lambda x . \text{John intro. } x \text{ to Sue})
\]
\[
= [\lambda x_{<>} \cdot \lambda P_{<t,t>} . \neg \exists y_{<>} \ [y \in \text{ALT}_C \wedge y \neq x \wedge P(y) = 1]]\]

(Bill) (\lambda x . John intro. $x$ to Sue)
\[
= \lambda P_{<t,t>} . \neg \exists y_{<>} \ [y \in \text{ALT}_C \wedge y \neq \text{Bill} \wedge P(y) = 1]\]

(\lambda x . John intro. $x$ to Sue)
\[
= \neg \exists y_{<>} \ [y \in \text{ALT}_C \wedge y \neq \text{Bill} \wedge \text{John intro. } x \text{ to Sue}]\]

Simplified SM format for today:

(14) John only introduced $\text{BILL}_F$ to Sue.

(15) Lexical entry of *only* II:

$$[[\text{only}]] = \lambda x_{<\tau>} \cdot \lambda P_{<\tau,t>} \cdot \forall y_{<\tau>} [y \in ALT_C \land P(y) = 1 \leftrightarrow y = x]$$

Simplified SM format for today:

(16) John only introduced \textbf{BILL} \textsubscript{F} to Sue.

(16a‘) Sample calculation II

\[ [\text{[only]}] (\text{Bill}) (\lambda x . \text{John intr. } x \text{ to Sue}) \]
\[ = [\lambda x \, \text{. } \lambda P_{\langle \tau, t \rangle} . \forall y_{\langle \tau \rangle} [y \in \text{ALT}_C \land P(y) = 1 \leftrightarrow y = x]] \]
\[ (\text{Bill}) (\lambda x . \text{John intr. } x \text{ to Sue}) \]
\[ = \lambda P_{\langle \tau, t \rangle} . \forall y_{\langle \tau \rangle} [y \in \text{ALT}_C \land P(y) = 1 \leftrightarrow y = \text{Bill}] \]
\[ (\lambda x . \text{John intr. } x \text{ to Sue}) \]
\[ = \forall y_{\langle \tau \rangle} [y \in \text{ALT}_C \land \text{John int. } y \text{ to Sue} \leftrightarrow y = \text{Bill}] \]

The semantics of *only* - further issues

A. Entailment vs. presupposition(?) of *only*

B. Scalar vs. non-scalar readings of *only*

C. Evaluational vs. non-evaluational readings of *only*

D. Scope issues and syntax

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

- The exclusion of alternatives found with *only* is an entailment.

It is unstable under negation...

(17) Paul didn’t only PLAY CARDS\textsubscript{F}.  
\[ \rightarrow \text{Paul did nothing apart from card-playing.} \]

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

- The exclusion of alternatives found with *only* is an entailment.

It is unstable under negation...

...and in antecedents of conditionals.

(18) If Paul only \( \text{PLAYS CARDS}_F \), he’ll fail the exam..
    \( \rightarrow \) Paul did nothing apart from card-playing.

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

- But what about Paul’s card-playing?

(19) Paul only $\text{PLAYS CARDS}_F$

$\Rightarrow$ ‘Paul does nothing apart from card-playing.’

$\Diamond$? ‘Paul plays cards.’

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

• But what about Paul’s card-playing?

(20) Paul only $\text{PLAYS CARDS}_F$

$\exists$ ‘Paul plays cards.’

$\exists = \text{presupposes?}

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

- But what about Paul’s card-playing?

„The semantics for *only* says this: it asserts that no proposition from the set of relevant contrasts C other than the one expressed by its sister sentence α is true. There is in addition an implicature that α is in fact true. There is an industry devoted to the issue whether the latter ingredient is an implicature (conversational or conventional), a presupposition, or part of the truth-conditions […] For our purposes, we don’t need to decide.“

(von Fintel 1994: 133)

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

• Evidence for presupposition

(21) Paul only £PLAYS CARDS$_F$

Presupposes? ‘Paul plays cards.’

(22) Stability under negation

It is not the case that Paul only £PLAYS CARDS.

‘Paul plays cards.’

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

- Evidence against presupposition

(23) Paul only \( \text{PLAYS CARDS}_F \) presupposes? ‘Paul plays cards.’

(24) Instability in antecedents of conditionals
If Paul only \( \text{PLAYS CARDS} \), he’ll fail the exam. ‘Paul plays cards.’

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

What counts more?

- **Evidence for presupposition**
  
  stability under negation

- **Evidence against presupposition**
  
  instability in antecedents of conditionals

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

What counts more?

- **Evidence for presupposition**
  - stability under negation

- **Evidence against presupposition**
  - instability in antecedents of conditionals

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

**Q:** Why does the evidence against presupposition count more?

The semantics of *only* - further issues
A. Entailment vs. presupposition(?) of *only*

Q: Why does the evidence against presupposition count more?

A: Because Test I, embedding under negation, is itself focus-sensitive; Test II, embedding in antecedents of conditionals, is not.

The focus sensitivity of negation is probably a confounding factor.

The semantics of *only* - further issues
B. Scalar vs. non-scalar readings of *only*

- *Only* may, but need not, interact with scales.

(25) Paul only had a cup of tea, and nothing else.

The semantics of *only* - further issues
B. Scalar vs. non-scalar readings of *only*

- *Only* may, but need not, interact with scales.

(26) Paul only had a cup of tea, **and nothing else.**

(27) Paul only had a cup of tea, **and no more.**

The semantics of *only* - further issues

B. Scalar vs. non-scalar readings of *only*

- *Only* may, but need not, interact with scales.

Implementation I: *only*\textsubscript{SC} vs. *only*\textsubscript{non-SC}

(28) $[[\text{only}_{\text{non-SC}}]] = \neg\exists x \ [ x \in \text{ALT}_C \land x \neq [[\text{FOC}]] \land [[\text{BG}]](x) = 1]$

The semantics of only - further issues

B. Scalar vs. non-scalar readings of only

- Only may, but need not, interact with scales.

Implementation I: only_{SC} vs. only_{non-SC}

(29) \[ [[\text{only}_{\text{non-SC}}]] = \neg \exists x \ [ x \in \text{ALT}_C \land x \neq [[\text{FOC}]] \land \neg[[\text{BG}]](x) = 1 ] \]

(30) \[ [[\text{only}_{SC}]] = \neg \exists x \ [ x \in \text{ALT}_C \land x > \text{value}_{SC}([[\text{FOC}]]) \land [[\text{BG}]](x) = 1 ] \]

The semantics of *only* - further issues

B. Scalar vs. non-scalar readings of *only*

- *Only* may, but need not, interact with scales.

Implementation II: *Only* is always scalar, but there are unordered scales such that, with such scales, each alternative is mapped to the same scalar value (Jacobs 1983).

\[(31) \quad [[\text{only}_{SC2}]] = \neg \exists x \ [x \in ALT_C \land x \geq value_{SC}([[FOC]]) \land [[BG]](x) = 1]\]

The semantics of *only* - further issues

B. Scalar vs. non-scalar readings of *only*

- Datawise, we seem to need obligatory reference to scales with individual exclusive particles.

The semantics of only - further issues
B. Scalar vs. non-scalar readings of only

- Datawise, we seem to need obligatory reference to scales with individual exclusive particles.

(32) Chinese zhǐ vs. cái I

a. Wǒ zhǐ yǒu yìbāi kuài qián ...
   I only have 100 $ money
   ‘I only have 100 $ …’

b. ... méi yǒu liǎngbāi kuài.
   not have 200 $
   ‘... and not 200 $.’

b’. ... méi yǒu biéde dōngxi.
   not have other things
   ‘... and not other things.’

The semantics of *only* - further issues

B. Scalar vs. non-scalar readings of *only*

- Datawise, we seem to need obligatory reference to scales with individual exclusive particles.

(33) Chinese *zhǐ* vs. *cái* II

a. Wǒ *cái* yǒu yìbāi kuài qián ...
   ‘I only have 100 $ …’
   I *only*sc have 100 $ money

b. ... méi yǒu liǎngbāi kuài.
   ‘… and not 200 $.’
   not have 200 $

b’. # ... méi yǒu biéde dōngxi.
   ‘… and not other things.’
   not have other things

Thanks go to Jin CUI for help with this data!

The semantics of *only* - further issues
B. Scalar vs. non-scalar readings of *only*

- Datawise, we seem to need obligatory reference to scales with individual exclusive particles.

(34) German *nur* vs. *erst* (König 1979):
reference to a temporal scale

a. Ich habe **nur** einen Apfel gegessen.
   ‘I’ve only eaten an apple.’

b. Ich habe **erst** einen Apfel gegessen.
   ‘I’ve only eaten an apple **so far**.’

The semantics of only - further issues
B. Scalar vs. non-scalar readings of only

Conclusions about exclusive particles and scalarity:

• Individual particles definitely encompass scalar meaning components (examples are Chinese cái or German erst).
Conclusions about exclusive particles and scalarity:

- Individual particles definitely encompass scalar meaning components (examples are Chinese *cáí* or German *erst*).

- Whether English *only* should be analyzed as polysemous, or underspecified, or vague with respect to scalarity may be independent of the German and Chinese facts.

The semantics of only - further issues
B. Scalar vs. non-scalar readings of only

Conclusions about exclusive particles and scalarity:

• Individual particles definitely encompass scalar meaning components (examples are Chinese cái or German erst).

• Whether English only should be analyzed as polysemous, or underspecified, or vague with respect to scalarity may be independent of the German and Chinese facts.

• Our(?) hunch: underspecification

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

(35) Paul is only a plumber.
The semantics of *only* - further issues

C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

„The value of the focus is characterised as ranking [...] ‘low’ on some relevant scale.“ (König 1991: 43)

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

„Exclusives have a peculiar duality that seems almost paradoxical. Positive and negative. At one and the same time, they can add emphasis, by saying that some alternative is the strongest that is true, and they can downtone, by underlining the fact that the alternative is not the strongest that in principle might have been the case. We suggest that while exclusives have truth conditional effects, their function is partly MIRATIVE, to say that the true answer to the Current Question is surprisingly weak, and control the flow of discourse by resetting expectations about that answer.“ (Beaver & Clark 2008: 10.2)

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

(36) Paul is only a plumber\textsubscript{F}.
   ‘Being a plumber is (too) little.’
   ‘Being a plumber is bad.’

The semantics of only - further issues
C. Evaluational vs. non-evaluational readings of only

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

- Is this a conversational implicature, or something semantic (presupposition/entailment)?

The semantics of *only* - further issues

C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

- Evidence for semantic basis I:
  Speakers are aware of this meaning component and often aim at controlling it

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

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  Speakers are aware of this meaning component and often aim at controlling it.

(37) Paul is “only” a plumber.

The semantics of *only* - further issues

C. Evaluational vs. non-evaluational readings of *only*

- **Exclusive particles like *only* may, but need not, have evaluational meaning components.**

- **Evidence for semantic basis II:**
  There are contexts in which evaluational meaning components are fully blocked (Hole 2009).

(38) causal vs. *if*-subordination

a. ♻️ I‘m supposed to move out of my study **only** because your mother‘s coming?

b. ☺ I‘m supposed to move out of my study **only if** your mother‘s coming?

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

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- Evidence for semantic basis II:
There are contexts in which evaluational meaning components are fully blocked (Hole 2009).

(39) causal vs. circumstantial prepositions
a. ♿ It‘s *only because of* a famine in a remote country that he wants to leave his family.
b. ☺ It‘s *only in case of* a famine in a remote country that he wants to leave his family.

The semantics of *only* - further issues

C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.

- Evidence for semantic basis II:
  There are contexts in which evaluational meaning components are fully blocked (Hole 2009).

(40) causal vs. sequential *just to*

a. 🌙 He ran away from his family *just to* help the poor.

b. 😊 He ran away from his family *just to* end up in the gutter soon after.

The semantics of *only* - further issues
C. Evaluational vs. non-evaluational readings of *only*

- Exclusive particles like *only* may, but need not, have evaluational meaning components.
- Evidence for semantic basis II:
  There are contexts in which evaluational meaning components are fully blocked (Hole 2009).
- If evaluation were a mere conversational implicature, it shouldnʻt be possible to block it.

The semantics of *only* - further issues

D. Scope issues and syntax

- English probably has adverbial and ad-DP *only*...

The semantics of *only* - further issues

D. Scope issues and syntax

- English probably has adverbial and ad-DP *only*...
- ... where German has been argued to have just adverbial *nur* (Büring & Hartmann 2001)

The semantics of *only* - further issues
D. Scope issues and syntax


(41) Taglicht-sentences
    They were advised to study only **SPANISH**.

The semantics of *only* - further issues

D. Scope issues and syntax


(41) Taglicht-sentences
    They were advised to study only *SPANISH*.
    i. ‘They were advised to study Spanish and nothing else’

The semantics of *only* - further issues
D. Scope issues and syntax


(41) Taglicht-sentences
   They were advised to study only **SPANISH**.
   i. ‘They were advised to study Spanish and nothing else’
      advised >> only Spanish

The semantics of *only* - further issues
D. Scope issues and syntax


(41) Taglicht-sentences
They were advised to study only **SPANISH**.
  i. ‘They were advised to study Spanish and nothing else’
      advised >> only Spanish
    ii. ‘Only Spanish was such that they were advised to
        study it’
      only Spanish >> advised

The semantics of *only* - further issues

D. Scope issues and syntax

(41) Taglicht-sentences
They were advised to study only **SPANISH**.

i. ‘They were advised to study Spanish and nothing else’
   advised >> only Spanish

   LF: they were advised [IP [only Spanish]₁ [to learn t₁]]

ii. ‘Only Spanish was such that they were advised to
    study it’
   only Spanish >> advised

   LF: [IP [only Spanish]₁ [ they were advised [IP to learn t₁]]]

The semantics of *only* - further issues

D. Scope issues and syntax

Büring & Hartmann (2001) on German focus particles:

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

b. Focus particles always adjoin to maximal projections.

c. Focus particles must c-command their foci.

d. Focus particles must be as close as possible to their foci.

The semantics of *only* - further issues

D. Scope issues and syntax

Büring & Hartmann (2001) on German focus particles:

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b. Focus particles always adjoin to maximal projections.
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d. Focus particles must be as close as possible to their foci.

The semantics of *only* - further issues
D. Scope issues and syntax

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

(42) German Taglicht-sentence
Sie haben uns nur SPANISCH\(_f\) zu lernen geraten.
they have us only Spanish to learn advised
‘They advised us to learn only Spanish.’

The semantics of *only* - further issues

D. Scope issues and syntax

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

(42‘) German Taglicht-sentence with B&H syntax

i. Sie haben uns nur [vp [ip pro [vp SPANISCH\textsubscript{F} zu lernen] geraten].

they have us only Spanish to learn advised

‘They advised us to learn only Spanish.’

The semantics of *only* - further issues
D. Scope issues and syntax

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

(42‘‘) German Taglicht-sentence with B&H syntax
i. Sie haben uns nur [VP [IP PRO [VP SPANISCH₇ zu lernen] geraten].
ii. Sie haben uns [VP nur [IP PRO [VP SPANISCH₇ zu lernen] geraten].
iii. Sie haben uns [VP [IP nur PRO [VP SPANISCH₇ zu lernen] geraten].
iv. Sie haben uns [VP [IP PRO [VP nur [VP SPANISCH₇ zu lernen] geraten].
v. *Sie haben uns [VP [IP PRO [VP nur SPANISCH₇ zu lernen] geraten].

they have us Spanish to learn advised
‘They advised us to learn only Spanish.’

The semantics of *only* - further issues

D. Scope issues and syntax

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

(42‘‘‘) German Taglicht-sentence with B&H syntax

v. *Sie haben uns [_{VP} [_{IP} PRO [_{VP} [_{NP} nur SPANISCH_{F} ] zu lernen] geraten]]

they have us Spanish to learn advised

int.QR-ed reading: ‘Only Spanish was such such that they advised us to

study it.’

The semantics of *only* - further issues

D. Scope issues and syntax

a. Focus particles adjoin to extended verbal projections (VP, IP, CP).

(42′′′) German Taglicht-sentence with B&H syntax

\[ v. *\text{Sie haben uns} \left[ \text{VP} \right] \left[ \text{IP} \right] \left[ \text{PRO} \right] \left[ \text{NP} \right] \left[ \text{nur SPANISCH}_F \right] \left[ \text{zu lernen} \right] \left[ \text{geraten} \right] \]

they have us Spanish to learn advised

int.QR-ed reading: ‘Only Spanish was such such that they advised us to study it.’

• But is it really out?
The semantics of ONLY – wrap-up

A. Entailment vs. presupposition(?) of *only*

*Probably both the exclusion of alternatives and the proposition without only are entailed. The latter is controversial.*
The semantics of ONLY – wrap-up

A. Entailment vs. presupposition(?) of only

*Probably both the exclusion of alternatives and the proposition without only are entailed. The latter is controversial.*

B. Scalar vs. non-scalar readings of only

*Only may interact with scales such that only alternatives that are ordered along a scale are considered. It is not necessary to assume polysemy to cope with these facts.*

The semantics of ONLY – wrap-up

A. Entailment vs. presupposition(?) of only

*Probably both the exclusion of alternatives and the proposition without only are entailed. The latter is controversial.*

B. Scalar vs. non-scalar readings of only

*Only may interact with scales such that only alternatives that are ordered along a scale are considered. It is not necessary to assume polysemy to cope with these facts.*

C. Evaluational vs. non-evaluational readings of only

*In some contexts, asserted focus values are evaluated as (too) little or bad. These meaning components have a structural side to them.*

The semantics of ONLY – wrap-up

A. Entailment vs. presupposition(?) of only

*Probably both the exclusion of alternatives and the proposition without only are entailed. The latter is controversial.*

B. Scalar vs. non-scalar readings of only

*Only may interact with scales such that only alternatives that are ordered along a scale are considered. It is not necessary to assume polysemy to cope with these facts.*

C. Evaluational vs. non-evaluational readings of only

*In some contexts, asserted focus values are evaluated as (too) little or bad. These meaning components have a structural side to them.*

D. Scope issues and syntax

*English probably has only-DPs with the predicted QR potential. German nur is standardly said to adjoin to extended verbal categories only.*

Additive particles
– ALSO and EVEN –

A. The meaning of also/too

B. The meaning of even

A. The meaning of *also/too*

A. The meaning of also/ too

(43) Paul also had $\text{WHISKEY}_F$. 

A. The meaning of also/too

(43) Paul also had WHISKEY_f.
    ‘Paul had whiskey, and he had something else.’

A. The meaning of *also/too*

(43) Paul also had \textbf{WHISKEY}_f.
    ‘\textit{Paul had whiskey, and he had something else.’}’
    \uparrow
    \textbf{assertion}

A. The meaning of *also/too*

(43) Paul also had WHISKEYₚ.

‘Paul had whiskey, and he had something else.’

↑

assertion

↑

presupposition

A. The meaning of *also/too*

(43) Paul also had $\text{WHISKEY}_F$.

‘Paul had whiskey, and he had something else.’

↑  assertion  ↑  presupposition

presupposition of (43):

$\exists y \ [y \in \text{ALT}_C \land y \neq \text{whiskey} \land P(y) = 1] $

A. The meaning of *also/too*

(43) Paul also had **WHISKEY**\(_F^\).  
    ‘Paul had whiskey, and **he had something else**.’
    \[\uparrow\quad \uparrow\]
    assertion presupposition

presupposition of (43):
\[\exists y \left[ y \in ALT_C \land y \neq \text{whiskey} \land P(y) = 1 \right]\]

cf. the entailment of *Paul only had WHISKEY*_\(_F^\).
\[\neg \exists y \left[ y \in ALT_C \land y \neq \text{whiskey} \land P(y) = 1 \right]\]
A. The meaning of also/too

BUT:

(44) Paul also had WHISKEY_f.
    ‘Paul had whiskey, and he had something else.’
    ↑
    assertion presupposition

(44’) Paul only had WHISKEY_f.
    ‘Paul had whiskey, and he had nothing else.’
    ↑
    assertion/presupposition entailment

A. The meaning of also/too

BUT:

(44) Paul also had WHISKEYF.

‘Paul had whiskey, and he had something else.’

↑ assertion                          ↑ presupposition

Exercise: Demonstrate that this is really a presupposition.

A. The meaning of *also/too*

Peculiarity I:
English has two different postposed ALSO particles, *too* and *either*. 

A. The meaning of also/too

Peculiarity I:
English has two different postposed ALSO particles, too and either.

*Either* is used if there’s a negation in its scope.
(45) I hope he didn’t come, *either.*
   ‘I hope it ALSO was the case that HE didn’T come.’
   ALSO >> NOT

*Too* is used if there’s no negation in its scope.
(46) I hope he didn’t come, *too.*
   ‘I hope it wasN’T the case that HE came, TOO.’
   NOT >> ALSO

A. The meaning of also/too

Peculiarity II:
Adverbial also and too may interact with subjects.

(47) a. Peter will also join us.
    b. Peter will join us, too.

presupposition: ‘Someone other than Peter will join us.’

A. The meaning of *also/too*

Peculiarity II:
Adverbial *also* and *too* may interact with subjects...

(48)  a. **Peter** will also join us.
    b. **Peter** will join us, too.

    presupposition: ‘Someone other than Peter will join us.’

... where *only* must c-command its focus.

(49)  a. Peter will only **JOIN** us.
    b. #**PETER** will only join us.
A. The meaning of *also/too*

**Peculiarity II:**
Adverbial *also* and *too* may interact with subjects...

Krifka (1999): *Also* and *too* are themselves foci in the alleged subject-focus cases. The subjects are contrastive topics.

A. The meaning of *also/too*

Peculiarity II:
Adverbial *also* and *too* may interact with subjects...

Krifka (1999): *Also* and *too* are themselves foci in
the alleged subject-focus cases. The subjects are really
contrastive topics.

(50) a. /Peter\_CT will ALSO\_F come.
   b. /Peter\_CT will come, TOO\_F.

A. The meaning of *also/too*

Conclusions for ALSO

1. ALSO presupposes the truth of an alternative.

(51) \[[also]\] = \( \lambda x_{<\tau>} \cdot \lambda P_{<\tau,t>} : \exists y_{<\tau>} [y \in ALT_C \land y \neq x \land P(y) = 1] \cdot P(x) = 1 \)

2. Instead of adding asserted information, ALSO marks the independently asserted information as having a true discourse antecedent modulo existential focus closure/contrastive topic closure.

B. The meaning of *even*

B. The meaning of *even*

What is the difference between (52) and (53)?

(52) Paul also drank $\text{ARMAGNAC}_F$.
(53) Paul even drank $\text{ARMAGNAC}_F$. 

B. The meaning of *even*

What is the difference between (52) and (53)?

(52) Paul also drank ARMAGNAC$_F$.
(53) Paul even drank ARMAGNAC$_F$.

There’s some scale necessarily underlying, but not necessarily underlying (52): probability, surprise, semantic strength, ...
What both sentences have in common is the additive presupposition.

B. The meaning of *even*

What is the difference between (52) and (53)?

(52) Paul also drank $ARMAGNAC_F$.
(53) Paul even drank $ARMAGNAC_F$.

(53) is less likely (Karttunen & Peters 1979), more surprising, informationally stronger (Kay 1990), ... than all contextually relevant alternative propositions.

B. The meaning of \textit{even}

(54) Paul had caviar and \textbf{also} some salad.

(54') \#Paul had caviar and \textit{even} some salad.

(OK if Paul is known to hate salad (and caviar))

B. The meaning of *even*

(55) additive presupposition of *even*:
\[ \exists x_{<\tau>} \ [ x \in ALT_C \land x \neq [[FOC]]_{<\tau>} \land [[BG]]_{<\tau,\tau>} (x) = 1 \]  

(56) presupposition of *even* with universal quantificational force:
\[ \forall x_{<\tau>} \ [ x \in ALT_C \land x \neq [[FOC]]_{<\tau>} \land [[BG]]_{<\tau,\tau>} (x) <C ([[BG]]_{<\tau,\tau>} ([[FOC]]_{<\tau>})) \]
Adverbial quantifiers and
Free Association with Focus
(Beaver & Clark 2003, 2008)

(57) a. In St. Petersburg, officers always escorted BALLERINAS_F.
    b. In St. Petersburg, OFFICERS_F always escorted ballerinas.
    (Rooth 1996)
Examples of adverbial quantifiers and Free Association with Focus (Beaver & Clark 2008)

(57) a. In St. Petersburg, officers always escorted BALLERINAS\_F.  
b. In St. Petersburg, OFFICERS\_F always escorted ballerinas.

(57a) and (57b) have different truth-conditions.

Examples of adverbial quantifiers and Free Association with Focus (Beaver & Clark 2008)

(57) a. In St. Petersburg, officers always escorted BALLERINAS\textsubscript{F}.
    b. In St. Petersburg, OFFICERS\textsubscript{F} always escorted ballerinas.

(57a) and (57b) have different truth-conditions.

Exercise: Demonstrate this.

(57) a. In St. Petersburg, officers *always* escorted BALLERINAS$_F$.
   b. In St. Petersburg, OFFICERS$_F$ *always* escorted ballerinas.

(57') a. [Always], [if officers escorted someone in St. Petersburg]$_R$, it was [ballerinas]$_{SC}$.
   b. [Always]$_Q$, [if someone escorted ballerinas in Petersburg]$_R$, it was [officers]$_{SC}$.
One more example of an adverbial quantifier and Free Association with Focus

(58) a. Kim **always** serves Sandy **COURVOISIER**ₚ.  
    b. Kim **always** serves **SANDY**ₚ Courvoisier.

(58‘) a. Always, if Kim serves Sandy something, it is Courvoisier.  
    b. Always, if Kim serves somebody Courvoisier, it is Sandy.
Analogous effects with

• quantificational determiners
• modals and generics
• superlatives
• counterfactuals and reasons
• emotive factives

Analogous effects with

- quantificational determiners

(59) Every ship passed through the lock at night.

(59') a. [Every]₀ [ship of a contextually salient set of ships]₉ [passed through the lock at night]₀.
   b. [Every]₀ [ship that passed through the lock]₉ did so [at night]₀.

Note: purely contextual resolution of the restriction of the Q in (59’a)
(apart from the ship-predicate)
purely sentence-internal resolution in (59’b).

Analogous effects with

- **modals** and generics

(60)  
\begin{align*}
\text{a.} & \quad \text{Dogs} & \text{must} & \text{be } \underline{\text{CARRIED}} \text{.} \\
\text{b.} & \quad \underline{\text{DOGS}} \text{ must} & \text{be carried.}
\end{align*}

(60‘)  
\begin{align*}
\text{a.} & \quad [\text{All}]_{\text{Q}} [\text{situations in which you have a dog with you}]_{\text{R}} , [\text{you must carry it}]_{\text{SC}} \text{.} \\
& \quad \text{(for safety reasons, on an escalator)} \\
\text{b.} & \quad [\text{All}]_{\text{Q}} [(\text{contextually restricted) situations}]_{\text{R}} \text{ are such that } [\text{you must carry a dog}]_{\text{SC}} \text{.} \\
& \quad \text{(it’s the fashion)}
\end{align*}
Analogous effects with

- modals and generics

(61) In France, dogs are carried.

Analogous effects with

- superlatives

(62) a. \( MARY_F \) gave John the biggest box.

b. Mary gave \( JOHN_F \) the biggest box.

Analogous effects with

• **counterfactuals** and reason statements

(63) a. If he hadn‘t married Bertha\(_F\) to Clyde, Aretha couldn‘t have continued to run the business.
   b. If he hadn‘t married Bertha to Clyde\(_F\) , Aretha couldn‘t have continued to run the business.

Analogous effects with

- counterfactuals and reason statements

(64) a. He married Bertha$_F$ to Clyde because Aretha was indispensable in the business.
   b. He married Bertha to Clyde$_F$ because Aretha was indispensable in the business.
Some differences between true focus particles like *only* and quantificational elements associating with focus more freely

- No c-command restriction.

(65) In St. Petersburg, $\text{OFFICERS}_F$ *always* escorted ballerinas.

(66) $\text{DOGS}_F$ *must* be carried.

- Cf. the c-command restriction with *only*.

(67) a. My dog will only eat „$\text{DOG FIRST}_F$“.
    b. My dog will only $\text{EAT}_F$ „Dog First“.
    c. # $\text{MY DOG}_F$ will only eat „Dog First“.

Some differences between true focus particles like *only* and quanticational elements associating with focus more freely

- Association with cliticized material possible (cf. B&C 2003: 342-3)

(65) [Of all the times you talked with Sandy, how often was Fred the person you talked about?]
I ALWAYS discussed ‘im with Sandy.
‘Whenever I discussed someone with Sandy, I discussed Fred with Sandy.’

(66) [Apart from Fred, who else did you discuss with Sandy?]
I ONLY discussed {#‘im/✓HIM} with Sandy.
‘I only discussed Fred with Sandy, and no one else).}

Some differences between true focus particles like *only* and quantificational elements associating with focus more freely

- Generally more reference to the context for restrictor resolution than with *only*
- But:
  (i) *Even* and *also* heavily context-dependent;
  (ii) Scalarity with *only* heavily context-dependent

Beaver & Clark‘s (2003: 349) analysis

- \([\text{NP only VP}] = \)
  
  B&C: \( \forall e . p(e) \rightarrow q(e) \)

  more expl.: \( \exists e . \forall e' . [\text{NP VP}](e') = 1 \rightarrow e' = e \)

- \([\text{NP always VP}] = \)
  
  B&C: \( \forall e . \sigma(e) \rightarrow \exists e' . \rho(e,e') \land q(e') \)
Beaver & Clark’s (2003: 349) analysis

- $$[[\text{NP always VP}]] = \forall e . \sigma(e) \rightarrow \exists e' . \rho(e,e') \land q(e')$$

- $$\sigma$$: „It is the contextual identification of $$\sigma$$ which gives always the anaphoric properties we will be interested in here."

- $$\rho$$: „the relation $$\rho$$ must be determined contextually, and maps events to events; for instance, it could be a function which maps an event $$e$$ to the set of events which immediately follow $$e$$ and share the same agent. [...] $$\rho$$, which we shall term the domain relation, will play little role in the analysis.\text{“}
Beaver & Clark’s (2003: 349, 351) analysis

- \[[\text{NP always } \text{VP}] = \forall e . \sigma(e) \rightarrow \exists e' . \rho(e,e') \land q(e')\]
- \(\sigma\): „It is the contextual identification of \(\sigma\) which gives always the anaphoric properties we will be interested in here.“
- \(\rho\): „the relation \(\rho\) must be determined contextually, and maps events to events; for instance, it could be a function which maps an event \(e\) to the set of events which immediately follow \(e\) and share the same agent. [...] \(\rho\), which we shall term the domain relation, will play little role in the analysis.“

(67) Sandy always feeds \textbf{FIDO}_F Nutrapup.

„context in which we were discussing occasions on which Sandy fed some animal Nutrapup. [...] \(\sigma\) might get set to \(\lambda e[\exists x \text{ animal}(x) \land \text{feeding}(e) \land \text{AGENT}(E)=sandy \land \text{GOAL}(e)=x \land \text{THEME}(e)=\text{nutrapup}]\). [...] \(\rho\) is resolved to the identity relation“
Conclusions about grammaticalized association with focus with, e.g., *only* vs. free AwF

- With *only*, focus marking entails a mapping to the scope of quantification (provided Second-occurrence foci are given a sufficient treatment)
  
  not so with Free AwF

- Less context dependence for the resolution of the restriction with *only*

  more context dependence with Free AwF

- Syntax constraint on foci interacting with *only*: c-command

  not so with Free AwF

Wrap-up:

- Focus-sensitive operators quantify over alternatives to the focus value/to propositions that are relevant in a given context.
- Exclusive particles like *only* quantify exhaustively:
  - all true alternatives are entailed to be identical to the focus value/are entailments of the proposition at hand
  OR
  - no alternative is true
- Additive particles like *also* and *even* presuppose the truth of an alternative.
- Both additive and exclusive particles may make reference to scales.
- Scales are typically context-dependent.
- Free AwF as with adverbial quantifiers etc. is subject to fewer linguistic restrictions, and is more context-dependent, than AwF with *only.*

Thank you!
• Beaver, David & Brady Clark (2003). 'Always and only: Why not all focus-sensitive operators are alike'. NLS 11, 323-362.