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Towards a typology of focus quantifiers

1 Introduction: What are focus quantifiers?

Preliminary definition:

FOCUS QUANTIFIERS are expressions that quantify over sets of alternatives associated with the denotation of a focused constituent.

- FOCUS PARTICLES: *only, even, too* etc. (cf. Horn 1969, Jacobs 1983, van der Auwera 1984, König 1991, etc.)

- (1) He *only* bought [the Apples]_F. (...but he didn't buy the pears.)
 (2) He *even* insulted [the POPE]_F. (...in addition to other, less important, people.)
 (3) There have *also* been some [SMALLer]_F problems. (...in addition to major ones.)

(4) **Albanian** *vetëm* 'only', *dhe* 'also, too'

- a. *vetëm* ai e di.
 only he CL.ACC knows
 'Only he knows it.' (Buchholz & Fiedler 1987: 393)
- b. *dhe* atje nuk u mësua.
 also there not REFL accustomed
 'There, too, he didn't become acclimated.' (Buchholz & Fiedler 1987: 394)

(5) **Wardaman** *gabbari* 'also', *wangi* 'only'

- a. *yijurn ngen-yerde-rri nga-yerde-rri gabbari ngayug-ji*
 face.ABS 3SG>1sg-know-PAST 1SG-know-PAST also 1SG-ERG
 'He recognized me, and I also recognized him.' (Merlan 1994: 306)
- b. *wonggo digirrij Ø-bu-ndi wangi Ø-bu-ndi wabirlmagun*
 not dead.ABS 3SG-hit-PAST only 3SG-hit-PAST grazed
 'He didn't shoot him dead, he only grazed him.' (Merlan 1994: 311)

- AFFIXAL FOCUS QUANTIFIERS: similar function, but different morphological make-up

(6) **Finnish** *-kin* 'too', *-kaan* 'either' (König 1991: 18)

- a. *minä-kin olen hankkinut auto-n.*
 I-too I.have got car-ACC
 'I, too, have got a car.'
- b. *olen hankkinut auto-n-kin*
 I.have got car-ACC-too
 'I have got a CAR, too.'
- c. *en ole hankkinut auto-a-kaan*
 NEG.1SG have.NEG got car-PART-either
 'I haven't got a CAR either.'
- d. *minä-kään en ole hankkinut auto-a*
 I-either NEG.1SG have.NEG got car-PART
 'Neither have I got a car.'

(7) **Japanese** –*mo* ‘too’

Taroo-*mo* sakana-o tabemasu

Taroo-*too* fish-ACC eats

‘Taro, too, eats fish.’

König (1991: 18)

(8) **Oromo (Afaan)** –*s* ‘too’

hakaa fi [fuula isaa] -*s* dhiqate

hand and face his -too washed

‘He washed his hands and the face, too.’ (Griefenow-Mewis 2001: 58)

(9) **Amharic** –*mm* ‘too’

[How old are you?]

– Asra hulätt. – əne-mm.

ten two I-too

‘– Twelve. – Me too.’

(10) wəbitu-mm qoŋgo nat

Wubitu-too pretty is

‘Wubitu, too, is pretty.’

(11) wəbitu qoŋgo-mm nat

Wubitu pretty-too is

‘Wubitu is also PRETTY.’

Leslau (1995: 883)

- PHRASAL FOCUS QUANTIFIERS: English *as well, let alone, in particular*; German *geschweige denn*; Spanish *no más, por lo menos* etc.

(12) *At least* he hasn’t KILLED me.(13) You’d have trouble swinging a gerbil, *let alone* a CAT, in the kitchen.(14) **Albanian** *bile edhe* ‘even’

bile edhe ai e di

even too he CL.ACC knows

‘Even he knows it.’ (Buchholz & Fiedler 1987: 394)

(15) **Tzotzil** *ha? no?oš* ‘only’ (*ha?*: focus marker; *no*: ‘still’; *?oš*: non-present)

ha? no?oš htob čahtohbe timi šavak’ yeč-e

FOC only twenty I.will.give.you if you.give.it like.that-CL

‘I’ll only pay twenty, if you’ll give it for that’.¹

- DISCONTINUOUS FOCUS QUANTIFIERS

(16) **Arabic** *mā ... ?illā* ‘not...but, only’

mā yuħibbu ?illā nafsahu

NEG he.loves but SELF.ACC.3SG

‘He loves only himself.’

Fischer & Jastrow (1996: 390)

(17) **Hebrew** *lo...éla* ‘not...but, only’

hem lo hisigu éla heskem Helki

they not reached but agreement partial

‘They only reached a partial agreement.’

Glinert (1989: 251)

¹ From John Haviland’s online grammar: <http://www.zapata.org/Tzotzil/Dialogs/dlg8.html>

(18) **Modern Breton** *ne...nemet* ‘not ... except, only’

ne welisnemet daou labous-ig en neizh
 not saw except two bird-DIM in nest
 ‘I only saw two birds in the nest.’
 Press (1986: 183)

(19) **French** *ne...que* ‘not...but, only’

Je n’-ai qu’un livre.
 I NEG-have but-a book
 ‘I only have a book’

(20) **English** *not ... until*

He won’t leave the country until the end of this year.
 (cf. German: *erst am Ende dieses Jahres*)

- SUMMARY: morphological parameters in the encoding of focus quantifiers:
 - (a) free vs. bound focus quantifiers (*also* vs. Fin. *-kin*)
 - (b) monomorphic vs. polymorphic focus quantifiers (*only* vs. *at least*)
 - (c) continuous vs. discontinuous focus quantifiers (*at least* vs. *not ... before*)
- four major types of focus quantifiers:

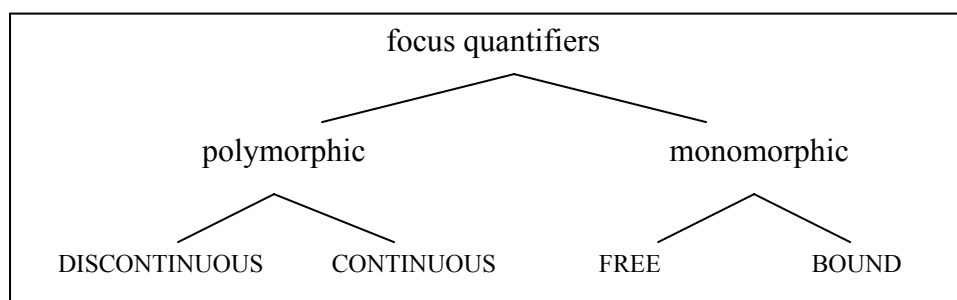


Diagram 1: Morphological types of focus quantifiers

2 Overview of the talk

1. the FUNCTION OF FOCUS QUANTIFIERS: quantification over the domain of alternative values contrasting with the focus
2. further PARAMETERS OF VARIATION:
 - I SEMANTIC parameters
 - (a) the type of quantification expressed
 - (b) discourse pragmatic status of the host sentence
 - (c) scalar vs. non-scalar focus quantifiers
 - II DISTRIBUTIONAL parameters
 - (a) position relative to the focus
 - (b) interaction with negation
 - (c) restrictions on the type of the focus
3. SUMMARY AND OUTLOOK: correlations between parameters of variation

3 The function of focus quantifiers: exclusion and addition of alternatives

- why ‘quantification over sets of alternatives contrasting with the focus of a sentence’?

(21) - Who did John kiss?
 - He kissed [Mary]_F.

- the question in (21) presupposes that John kissed someone; moreover, some contextually predetermined set will always be given/under discussion (cf. Rooth 1985)

(22) John kissed $\left. \begin{array}{l} \text{Mary} \\ \text{Lucy} \\ \text{Jane} \end{array} \right\} \longrightarrow \text{FOCUS}$
 alternatives under discussion

- sentences with *only* provide information not only about the focus value (*Mary*), but also about the alternative values (*Lucy, Jane*)
- the open proposition *John kissed x* applies to the value *Mary*, but not to *Lucy* or *Jane*

(23) John only kissed $\left. \begin{array}{l} \text{Mary} \\ \text{Lucy} \\ \text{Jane} \end{array} \right\} \longrightarrow \text{FOCUS}$
 'John kissed x' does not apply to alternative values

(24) There is no x other than *Mary* such that John kissed x .

→ *only* expresses negated existential quantification over the domain of alternative values ($\neg\exists x\dots$)

- *also* and *too* represent a different type of focus quantifier: they *add* the focus to a previously established non-empty set

(25) John also kissed [Mary]_F.

(26) John also kissed $\left. \begin{array}{l} \text{Mary} \\ \text{Lucy} \\ \text{Jane} \end{array} \right\} \longrightarrow \text{FOCUS}$
 some alternative is true

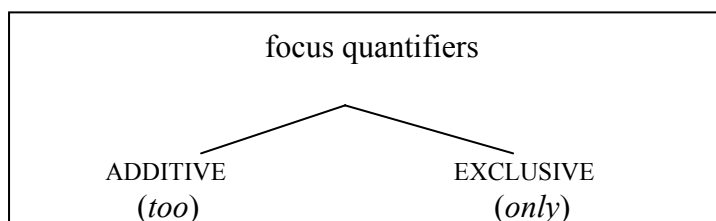
→ *too* expresses existential quantification over the domain of alternative values ($\exists x\dots$)

- are 'focus quantifiers' really 'quantifiers'?
- some focus quantifiers stand in a systematic relation to 'ordinary' quantifiers

(27) All politicians are corrupt. $\forall x[x \text{ is a politician} \rightarrow x \text{ is corrupt}]$

(28) Only politicians are corrupt. $\forall x[x \text{ is corrupt} \rightarrow x \text{ is a politician}]$

- two semantic types of focus quantifiers: EXCLUSIVE vs. ADDITIVE focus quantifiers
- EXCLUSIVE: *only, just, simply, merely, not ... until, etc.*
- ADDITIVE: *too, even, also, as well, etc.*

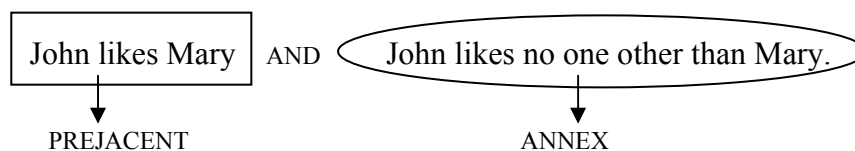


4 Further semantic parameters of variation

4.1 The discourse pragmatic status of focus quantifiers

- sentences with focus quantifiers have a 'bi-propositional structure'

(29) John *only* likes [Mary]_F.



- PREJACENT: host sentence; the sentence minus the focus quantifier
- ANNEX: the quantificational statement contributed by the focus quantifier
- PREJACENT vs. ANNEX and PRESUPPOSITION vs. ASSERTION
- *only*: sentence negation affects the ANNEX but not the PREJACENT

(30) Only [John]_F attended the meeting.

- PRESUPPOSITION: John attended the meeting (PREJACENT)
- ASSERTION: No one other than John attended the meeting (ANNEX)

(31) It is not true that only [John]_F attended the meeting.

- PRES.: John attended the meeting. (PREJACENT)
- ASS.: someone other than John attended the meeting. (ANNEX)

→ in sentences with *only* the PREJACENT is presupposed while the ANNEX is asserted

- converse situation with *also, too*: under negation it is the ANNEX that is preserved while the PREJACENT is negated

(32) [John]_F also attended the meeting.

- PRES.: Someone other than John attended the meeting. (ANNEX)
- ASS.: John attended the meeting. (PREJACENT)

(33) It is not true that [John]_F also attended the meeting.

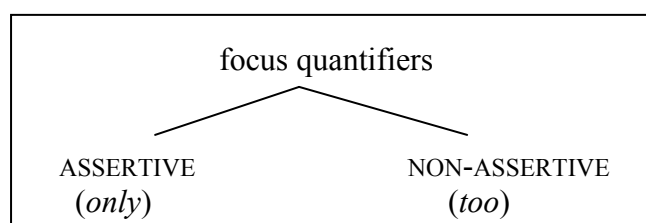
- PRES.: Someone other than John attended the meeting. (ANNEX)
- ASS.: John did not attend the meeting. (PREJACENT)

→ in sentences with *also* the PREJACENT is asserted while the ANNEX is presupposed

	<i>only</i>	<i>too</i>
ANNEX	asserted	presupposed
PREJACENT	presupposed	asserted

Table 1 Status of sentence components

- according to the status of the annex we can distinguish between ASSERTIVE (e.g. *only*) and NON-ASSERTIVE focus quantifiers (*also, even* etc.)



4.2 Scalar vs. non-scalar focus quantifiers

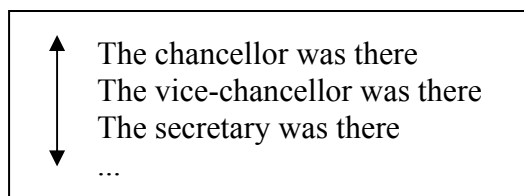
- focus quantifiers quantify over either ordered or unordered sets of alternatives

(34) The chancellor was there, too.

(35) Even the chancellor was there.

- (34): unordered set of alternative sentences:
{The chancellor was there, The secretary was there, The vice-chancellor was there ...}
- (35): the set of alternatives is ordered:
<The secretary was there, The vice-chancellor was there, The chancellor was there>

(36) represented as a scale:
(of likelihood)



- *even* marks its prejacent as the strongest statement from a set of ordered alternatives

(37) – Did he have five beers?

– I think he even had *six* beers.

- distinction between scalar and non-scalar focus quantifiers (*even* vs. *too*)
- some focus quantifiers have both scalar and non-scalar readings

(38) I only had FIVE beers. (...not six)

(scalar *only*)

I even had SIX beers (...not only five)

(*even*, always scalar)

I also had SIX beers (...not only five).

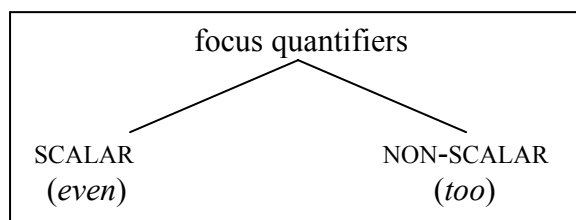
(no scalar use of *also*)

(39) I have only bought apples. (...but no pears)

(non-scalar *only*)

I have also bought apples. (...in addition to pears)

(*also*, always non-scalar)



5 Distributional parameters of variation

5.1 The position of the focus quantifier relative to the focus

- three major configurations:
 1. focus quantifier is adjacent to the focus
 2. position of FQ is fixed
 3. linear or hierarchical relationship between focus quantifier and focus
- FQ is adjacent to the focus: most (but not all!) affixal FQs and some focus particles

(40) **Türkisch** *de* ‘too’ (König 1991: 17)

a. Oraya [ben *de*] gittim.

there I too went

‘I went there too’

b. Ben [oraya *da*] gittim.

I there too went

‘I went there too (as well as elsewhere)’

c. Ben oraya [gittim *de*].

I there went too

‘I also went there.’

(41) **Hebrew** *gam*

gam mifalénu orez teenim

also our.factory packs pigs

‘Our factory, too, packs pigs.’

(42) mifalénu gam orez teenim
 our.factory also packs pigs
 ‘Our factory also PACKS pigs.’

(43) mifalénu orez gam teenim
 our.factory packs also pigs
 ‘Our factory also packs PIGS.’ (Glinert 1989: 248)

(44) **German** *selbst* ‘even’

a. Man kann selbst die größten Buchstaben kaum erkennen.
 one can even the biggest letters hardly recognize
 ‘Even the biggest letters are hardly visible.’

- focus quantifier occupies a fixed position in the clause (only stress identifies focus)

(45) **Mandarin** *zhǐ* ‘only’ (preverbal position)

a. Lǎo Wáng *zhǐ* hē chá.
 Lao Wang only drinks tea
 ‘Lao Wang drinks only [tea]_F / ... only [drinks tea]_F / ... only [drinks]_F tea.’

b. Wǒ yě xiě shū.
 I too write book
 ‘I also [write a book]_F / I also [write]_F a book / I also write a [book]_F.’

(46) **Tzotzil** *haʔ noʔoʃ* (second-position particles)

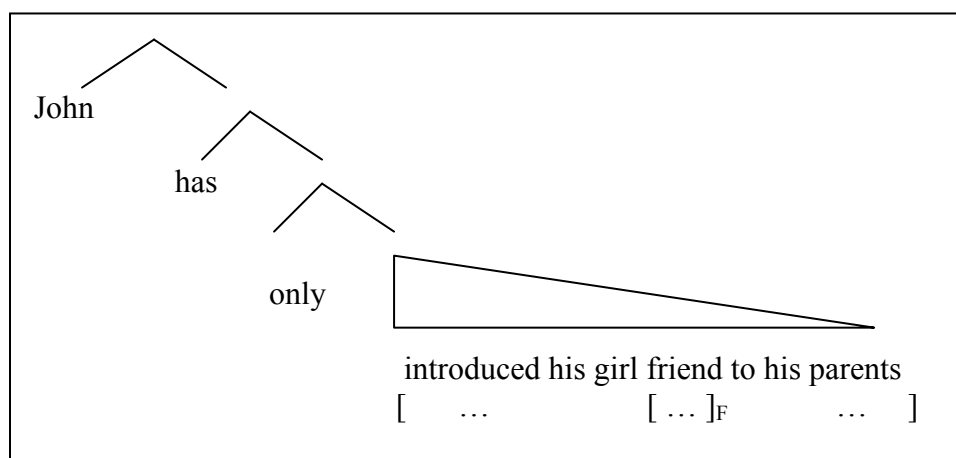
haʔ noʔoʃ čvabah li Šun-e.
 FOC only will.play DET John-CL
 ‘John will only [play]_F’ or ‘Only [John]_F will play’

(47) **Mixtec** *-ni* ‘only, merely, just’ (VP-internal enclitic)

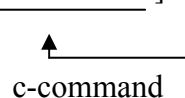
k^wítí kíʔĩ kee=ni=rí uù
 just go eat=REST=1 two
 ‘I’m just going to eat two.’
 Macaulay (1996: 132)

- hierarchical dependency: *only*

(48) English *only*: c-command



(49) One cannot undo a lifetime of damage and pain [[in three weeks] only].

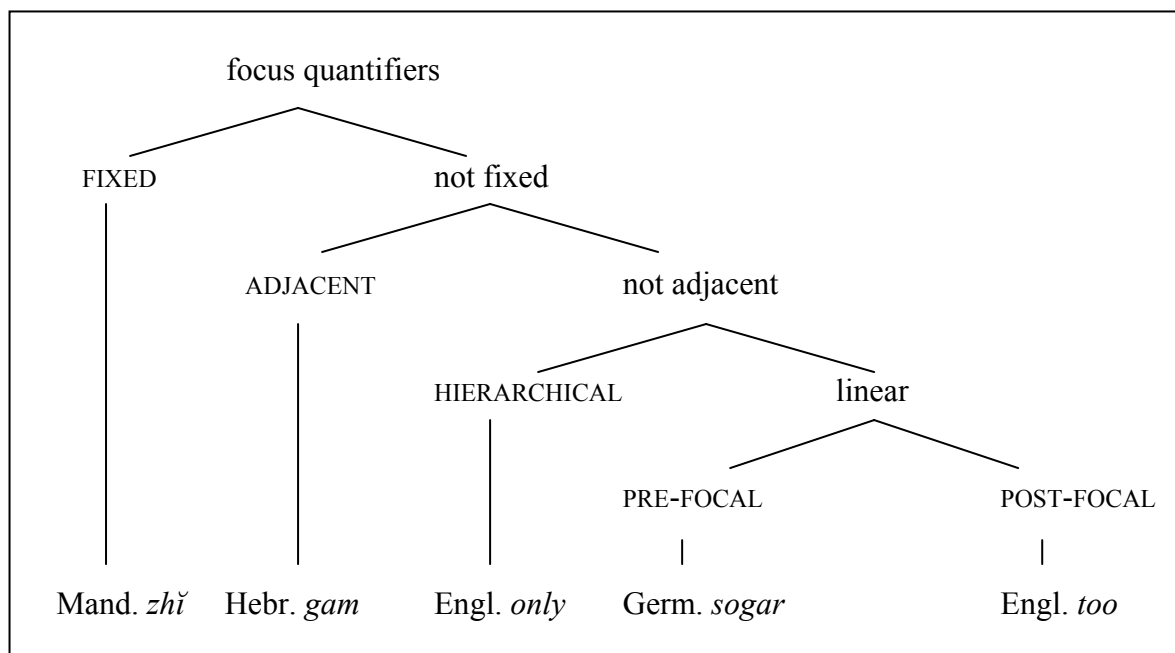


- linear patterns: *also*; interaction with stress; *also* either precedes the entire focus (unstressed), or it follows the focus (stressed); may not be contained in the focus

(50) I've also introduced my colleague to [my BROTHER]_F. (...as well as to my sister)

(51) I've also introduced [my COLLEAGUE]_F to my brother. (...not only my boss)

(52) [I]_F have ALSO introduced my colleague to my brother. (...just like you)



5.2 Interaction with negation

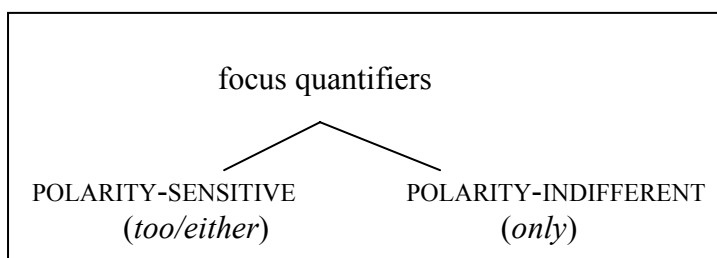
- additive focus quantifiers are often *polarity-sensitive*
- can be used in either asserted or negated sentences
- English *too* vs. *either*, Spanish *tambien* vs. *tampoco*, French, *aussi* vs. *non plus*

(53) I don't know him.
I don't know him either.
TOO [NOT [I know him]].

- polarity-sensitivity of scalar focus quantifiers: German *sogar* vs. *einmal* 'even'

(54) Ich habe sogar den Papst kennengelernt.
I have even the Pope met
'I have even met the Pope.'

(55) Ich habe nicht einmal Lothar de Maizière kennengelernt.
I have not even Lothar de Maizière met
'I haven't even met Lothar de Maizière.'



5.3 Restrictions on the type of the focus

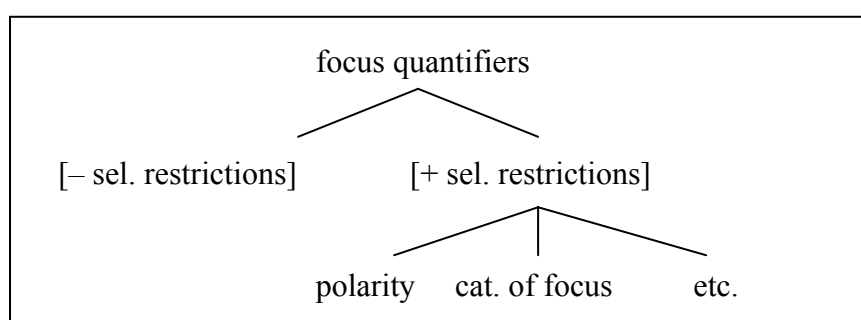
- German *selbst* is used only with nominal or clausal foci

(56) Sogar/selbst der PräsIDENT weiß das nicht.
 even the president knows that not
 ‘Even the president does not know that.’

(57) Er hat mich sogar/*selbst geSCHLAGen.
 he has me even hit
 ‘He even hit me.’

- Hebrew *aH*: only with verbs and adjectives

(58) isuk ze aH mevazbet et zmana
 activity DEM only wasted OM her.time
 ‘The activity only wasted her time.’ (Glinert 1989: 248)



6 Summary: Parameters of variation

PARAMETER	values	
MORPHOLOGICAL	(a) free vs. bound (b) monomorphic vs. polymorphic (c) continuous vs. discontinuous	
SEMANTIC/ PRAGMATIC	type of quantification	additive vs. exclusive
	scalar implication	scalar vs. non-scalar
	status of annex	assertive vs. non-assertive
SYNTACTIC/ DISTRIBUTIONAL	position relative to focus	(a) fixed vs. flexible (b) adjacent vs. non-adjacent (c) hierarchical vs. linear configurations
	co-occurrence restrictions	(a) interaction with polarity (b) restrictions on the category of the focus

7 Some hypotheses and an outlook

- correlations between parameters of variation
- EXCLUSIVE focus quantifiers tend to PRECEDE the focus while ADDITIVE ones often FOLLOW it
- AFFIXAL focus quantifiers are usually ADDITIVE, and if they are EXCLUSIVE, they seem to be always SCALAR

(59) roʔo žée=ní=ró
 you eat=RESTR=2
 ‘You’re just eating’ (Macaulay 1996: 132)

- ADDITIVE focus quantifiers seem to be always NON-ASSERTIVE, whereas EXCLUSIVE ones are generally ASSERTIVE
- DISCONTINUOUS focus quantifiers seem to be always EXCLUSIVE
- only ADDITIVE focus quantifiers seem to be POLARITY-SENSITIVE
- major patterns of correlations:

Type I	Type II
additive	exclusive
non-assertive	assertive
not discontinuous	sometimes discontinuous
often polarity-sensitive	not polarity-sensitive
often follow focus	typically precedes focus

- work programme: build a database of focus quantifiers, classified according to the dimensions pointed out above
- refine parameters of variation; can all focus quantifiers (distinctively) be classified in terms of these parameters?
- areal investigation: focus particles in Europe

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