Negated universal focus quantifiers in English, German and Spanish

1 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.
- affixal focus quantifiers

(1) Finnish -kin ‘too’, -kaan ‘either’
   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 got car-PART-either
      ‘I haven’t got a CAR, either.’
   d. minä-kään en ole hankkinut auto-a
      I-either NEG.1SG have got car-PART
      ‘Neither have I got a car.’

(2) Japanese –mo ‘too’

   Taroo-mo sakana-o tabemasu
   Taroo-too fish-ACC eats
   ‘Taro, too, eats fish.’

   König (1991: 18)

- phrasal focus quantifiers

(3) English as well, let alone, in particular; German geschweige denn;
Spanish no más, por lo menos

- discontinuous focus quantifiers

(4) Arabic (mā ... ãllā ‘not...but’)

   mā yuḥibbu ãllā nafṣahu
   NEG he.loves but SELF.ACC.3SG
   ‘He loves only himself.’

   Fischer & Jastrow (1996: 390)

(5) Hebrew (lo...éla)

   hem lo hisigu éla heskem ḫelki
   they not reached but agreement partial
   ‘They only reached a partial agreement.’

   Glinert (1989: 251)
• a typology of focus quantifiers

| focus quantifiers |  
|-------------------|---|
| free              | bound |
| monolexemic       | phrasal |
| continuous        | discontinuous |

E. only, too... E. as well Ar. mā... āllā Fin. -kin

Figure 1

2 Representing the meaning of focus quantifiers

• PREJACENT (host sentence) and ANNEX (quantificational statement)

(6) Only [JOHN]F attended the meeting.
(7) PJ(6) = [John]F attended the meeting.

• Rooth’s (1985) framework of ‘two-dimensional semantics’

(8) a. [ ]f: ordinary semantic value (= the common interpretation function)
   b. [ ]fc: focus semantic value (the set of propositions that differ from [ ]f in that the focus is replaced with some contextually salient alternative); p-sets

(9) [[PJ(6)]f] = {John attended the meeting, Fred a.t.m., Bill a.t.m. ...}
(10) [[PJ(6)]]fc = {w | John attended the meeting in w}
(11) [[(6)]]f = {w ∈ [[PJ(6)]]f | ¬∃π ∈ [[PJ(6)]]fc [π ≠ [[PJ(6)]]f ∧ w ∈ π]}

• an additional definition: the ‘focus complement’: [ ]fc

(12) [[α]]fc := {π | π ∈ [[α]]f ∧ π ≠ [[α]]fc}
(13) ¬∃π ∈ [[PJ(6)]]fc : π is true

3 Parameters of semantic classification

3.1 Additive and exclusive particles: existential and negated existential quantification

• EXCLUSIVE particles: NEGATED EXISTENTIAL QUANTIFICATION over the domain of alternative values

• ADDITIVE particles: EXISTENTIAL QUANTIFICATION

(14) John attended the meeting, too.
∃π ∈ [[PJ(14)]]fc : π is true

3.2 Assertive vs. non-assertive focus quantifiers

(15) Only John attended the meeting.
   a. pres.: John attended the meeting (PREJACENT)
   b. ass.: ¬∃π ∈ [[PJ(15)]]fc : π is true (ANNEX)

(16) Not only John attended the meeting.
   a. pres.: John attended the meeting.
   b. ass.: ¬[¬∃π ∈ [[PJ(15)]]fc : π is true] (⇐ ∃π ∈ [[PJ(15)]]fc : π is true)

(17) John attended the meeting, too.
   a. given: ∃π ∈ [[PJ(17)]]fc : π is true
   b. ass.: John did not attend the meeting.

(18) It is not true that John attended the meeting, too.
   a. given: ∃π ∈ [[PJ(17)]]fc : π is true
   b. ass.: John did not attend the meeting.
(19) John attended the meeting, too. (given: $\exists \pi \in [[\pi(17)]]^F : \pi$ is true)
(20) Not only John attended the meeting. (pres.: John attended the meeting.)
(21) If you attend the meeting, I will be there, too.
(22) Fred: I love you.
    Mary: I love you, too.
    • ‘focus suppositions’ (Büring to appear) and ‘presuppositions’
    
    \[
    \begin{array}{c|c|c}
    \text{GIVEN} & \text{true} & \text{potentially true} \\
    \text{PRESUPPOSITION} & \text{focus supposition} & \\
    \end{array}
    \]
    Figure 2

    • sub-classification of focus quantifiers according to the status of the \textit{annex}:
      $[\pm \text{ASS}]$ (annex is asserted or not); for $[-\text{ASS}]$: $[\pm \text{PRES}]$ (annex is presupposed or not)

<table>
<thead>
<tr>
<th>$\pm \text{ASS}$</th>
<th>$[\pm \text{PRES}]$</th>
<th>$[\pm \text{PRES}]$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREJACENT</strong></td>
<td>presupposed</td>
<td>asserted</td>
</tr>
<tr>
<td><strong>ANNEX</strong></td>
<td>asserted</td>
<td>presupposed</td>
</tr>
<tr>
<td>examples</td>
<td>Engl. \textit{only}</td>
<td>Germ. \textit{immerhin}</td>
</tr>
</tbody>
</table>

Table 1

3.3 Scalar vs. non-scalar focus quantifiers
(23) The chancellor was there, too.
(24) Even the chancellor was there.
(25) $[[\pi(23)]]^F = \{\text{The chancellor was there, The secretary was there, The vice-chancellor was there ...}\}$
(26) $[[\pi(24)]]^F = <\text{The secretary was there, The vice-chancellor was there, The chancellor was there}>$

• types of scales:
  scalar (SCAL)
  implicational (IMPL)
  evaluative (EVAL)
  probability (PROB)
  desirability (DESIR) etc.

3.4 Preliminary summary: classifying focus quantifiers

• type of (existential) quantification:
  $[\exists] / [-\exists]$
  assertive/non-assertive:
  $[-\text{ASS}]$ sub-classified into non-/presuppositional: $[\pm \text{ASS} \pm \text{PRES}]$
  scalar/non-scalar:
  with various sub-classes of $[+ \text{SCAL}]$

(27) some examples of focus quantifiers

\begin{align*}
\text{only:} & \quad [-\exists] \quad [\pm \text{SCAL}] \quad [+ \text{ASS}] \\
\text{too:} & \quad [\exists] \quad [- \text{SCAL}] \quad [- \text{ASS} [- \text{PRES}]] \\
\text{even:} & \quad [\exists] \quad [+ \text{SCAL} [+ \text{EVAL} [+ \text{PROB}]]) \quad [- \text{ASS} [- \text{PRES}]]
\end{align*}
4 An extension: are there other types of quantification expressed by focus quantifiers?

- jiù: negated universal quantification

(28) Oūzhōu rén dāng zhōng, [kě dà n rén] jiù zhāng-zhe hēi tóufa. Europe people among Italy people jiù grow-ASP black hair

(29) #Dōng-Yā rén dāng zhōng, [Rìběn rén] jiù zhāng-zhe hēi tóufa. East-Asia people among Japanese people jiù grow-ASP black hair

Hole (to appear: 8)

5 At least as a negated universal focus quantifier

- Kay (1992): three syntactically different uses of at least

(30) Mary received calls from [at least three] soldiers. (‘scalar’)
(31) At least [this one’s cooked]. (‘evaluative’)
(32) I see her every day, at least [when I’m in town]. (‘rhetorical’)

(33) That’s going to at least worry him if not make him utterly distraught. (only scalar)
(34) In that big trainwreck at least several people were saved. (scalar or evaluative)
(35) At least in that big trainwreck several people were saved. (only evaluative)

- evaluative at least as a negated universal focus quantifier

(36) (‘evaluative’) at least: ¬∀ [SCAL [+ EVAL [+ DESIR]]] [– ASS [– PRES]]

(37) At least the OLD woman tried to help me (though the YOUNG woman didn’t).
(38) At least the old WOMAN tried to help me (though the old MAN didn’t).
(39) At least the old woman TRIED to help me (though she didn’t succeed).
(40) At least the old woman tried to HELP me (though she didn’t offer to do it for me).
(41) At least the old woman tried to help ME (though she didn’t help you).

(42) At least the conference organisers covered 60 percent of my expenses.

(43) They didn’t cover all of my expenses, but at least they paid me 60 percent.

(44) [[PJ(42)]]f = <They covered 10 percent ... They covered 30 percent ... They covered 60 percent ... They covered 100 percent>

a. given: ¬∀π ∈ [[PJ(42)]]f : π is true
b. asserted: The conference organizers covered 60 percent of my expenses.

- restriction to scales of positive evaluation

(46) At least in that big trainwreck several people were saved.
(47) ## At least in that big trainwreck several people were killed.

- ‘rhetorical’ at least

(48) a. Mary is at home, at least John’s car is in the driveway.
   b. Mary is at home, at least I think so.
   c. Mary is at home, at least that’s what Sue said. (Kay 1992: 318)

(49) a. I know for sure that Mary is at home
   b. I think that Mary is at home because someone told me...
   c. I infer that Mary is at home because of some piece of evidence...
• ordering of alternative propositions: epistemic commitment

(50) a. <I infer that Mary is at home (because John’s car is in the driveway), I know that Mary is at home>
   b. <I think that Mary is at home, I know that Mary is at home>
   c. <I believe that Mary is at home because Sue told me, I know that Mary is at home>

6 Negated universal focus quantifiers in German: wenigstens, immerhin, zumindest

• wenigstens: parallel to at least

(51) ##Wenigstens wurden bei diesem großen Zugunglück viele Leute getötet.
   at least were in this big trainwreck many people killed
   ’##At least in that big trainwreck several people were killed.’

• immerhin and zumindest: not restricted to positive evaluation

(52) Immerhin wurden bei diesem großen Zugunglück viele Leute getötet.
(53) Zumindest wurden bei diesem großen Zugunglück viele Leute getötet.
(54) Es wurden nicht alle Leute getötet, aber immerhin/zumindest einige.

EXPL were not all people killed but IMMERHIN some

• immerhin: a non-assertive/presuppositional focus quantifier (annex is presupposed)

(55) Es wurden zumindest einige, möglicherweise sogar alle Leute getötet.
   ’ZUMINDEST some of the people died, possibly all.’
(56) ##Es wurden immerhin einige, möglicherweise sogar alle Leute getötet.
   ’IMMERHIN some of the people died, possibly all.’

(57) zumindest: [– ASS [– PRES]]
   immerhin: [– ASS [+ PRES]]

• rhetorical readings of wenigstens and zumindest

(59) ??Es sind nicht alle gestorben – immerhin glaube ich das.

(60) wenigstens: [–∀] [+ SCAL [+ EVAL [+ DESIR]]] [– ASS [– PRES]]
   immerhin: [–∀] [+ SCAL] [– ASS [+ PRES]]
   zumindest: [–∀] [+ SCAL] [– ASS [– PRES]]

7 Negated universal focus quantifiers in Spanish: por lo menos, aunque sea

• por lo menos, aunque sea: both associated with a positive evaluation

(61) Por lo menos los organisadores me pagaron el [seSENTa por CIENto]F.
   at least the organisers paid me DET sixty percent
   ’At least the organisers paid me 60 percent.’
(62) Por lo menos/aunque sea va a servir para [ALgo]F.
   at least to me will be useful for something
   ’At least I can use it for SOMETHING.’

• differentiation: por lo menos is non-presuppositional

(63) Por lo menos invitó [alGUNos]F de mis amigos, tal vez hasta los invitó a todos
   at least invited some of my friends perhaps even them invited all
(64) ##Aunque sea invitó algunos de mis amigos; tal vez hasta los invitó a todos.

(65) por lo menos: [–∀] [+ SCAL [+ EVAL [+ DESIR]]] [– ASS [– PRES]]
   aunque sea: [–∀] [+ SCAL [+ EVAL [+ DESIR]]] [– ASS [+ PRES]]
8 Conclusions and outlook

- parameterization of the meaning of focus quantifiers (decompositional analysis)
- cross-fertilization between the study of individual languages and language comparison (Mandarin Chinese)
- a number of open questions:
  - the types of scaling dimensions, relation between those
  - different types of presuppositions/GIVENness

References


