EVEN SUPERLATIVE MODIFIERS

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SUMMARY

We observe that certain combinations of focus particles and superlative modifiers — *at least* and *at most* — are systematically unacceptable. We claim that the infelicity of such sentences is due to the presupposition the focus particle triggers and an obligatory implicature triggered by the superlative modifier that are mutually incompatible. To obtain these results it is crucial to assume that the set of alternatives that focus particles operate on (*focus alternatives*) is identical to the set of alternatives for implicatures (*implicature alternatives*), as Fox & Katzir (2011) propose.

PUZZLE

When associating with a numeral, *even* means that the number is large.

Numerals with superlative modifiers (*at least*, *at most*) are unacceptable with focus particles like *even*.

(1)   James <u>even</u> speaks
$$\begin{cases} \text{a. } \#\textbf{at least 5} \\ \text{b. } \quad \textbf{more than 4} \end{cases}$$
languages.

(Broader focus makes (1a) acceptable)

It's not the case that superlative modifiers are incompatible with all focus particles:

(2)   James <u>only</u> speaks **at most 3**/**fewer than 4** languages.

Claim: The infelicity of (1a) is due to a conflict between:

► Obligatory Ignorance Implicature of *at least 5*:
The speaker does not know whether James speaks exactly 5 or more than 5 languages.

► Additive Presupposition of *even*:
The speaker knows that James speaks exactly 5 languages or they know that he speaks more than 5 languages.

IGNORANCE WITH SUPERLATIVE MODIFIERS

One of the crucial ingredients of our analysis is the obligatory ignorance implicature of superlative modifiers. (Krifka, 1999; Geurts and Nouwen, 2007)

(3)   A square has
$$\begin{cases} \text{a. } \#\textbf{at least 4} \\ \text{b. } \quad \textbf{more than 3} \end{cases}$$
sides.

The ignorance implicature of *P(at least n)* is that the speaker does not know whether *P(exactly n)* or *P(at least n + 1)*. (Mayr, 2013; Schwarz, 2016)

We assume the assertive meanings of *at least n* and *at most n* to be $\geq n$ and $\leq n$ with no ignorance implicature.

To derive the ignorance implicature, previous studies postulate particular sets of implicature alternatives for them. (Krifka, 1999; Büring, 2007; Mayr, 2013; Schwarz, 2016; Mendia, 2018)

We adopt the following idea (to be modified):

$Alt(\text{at least } n) = \{ \text{at least } n, \text{at least } n + 1, \text{exactly } n \}$
$Alt(\text{at most } n) = \{ \text{at most } n, \text{at most } n - 1, \text{exactly } n \}$

The stronger alternatives derive the ignorance implicature.

THE PRESUPPOSITIONS OF EVEN

(4)   <u>Even</u> **Marten** danced.
a.   Marten was unlikely to dance.
b.   Someone else danced as well.

'Even ϕ' presupposes:

► ϕ is relatively unlikely among $Alt(\phi)$ Scalar
► ψ is true, for some $\psi \in Alt(\phi)$ that is not entailed by ϕ Additive

(Karttunen and Peters, 1979; Rooth, 1985; Kay, 1990; Wilkinson, 1996; Crnič, 2011)

We crucially assume:

► Focus particles and implicatures refer to the same set of alternatives. (Fox and Katzir, 2011)
► The additive presupposition is not simply existential but is anaphoric about a particular non-weaker alternative. (cf. Kripke, 2009 on additive particles)

The scalar presupposition for (1)a can be satisfied by assuming weaker alternatives:

$$Alt(\text{at least } n) = \begin{cases} ..., \text{at least } n - 2, \text{at least } n - 1, \\ \text{at least } n, \text{at least } n + 1, \text{exactly } n \end{cases}$$

But the additive presupposition conflicts the ignorance implicature!

It is crucial for us that the additive presupposition is stronger than merely existential, i.e. $\exists \psi \in \text{NW-Alt}(\phi)$ such that $CG(\psi$ is true$)$.

SUMMARY AND PREDICTIONS

► Obligatory ignorance implicature of *at least/at most*
► Additive presupposition of *even*
► Stronger alternatives for *at least n* are *at least n + 1* and *exactly n*
► Focus particles and Implicatures make use of the same set of alternatives
► Additive presupposition is about a particular alternative

Predictions

► With no obligatory ignorance implicature, *even* will be fine.
► An obligatory scalar implicature should also give rise to infelicity.
(5)   Andy is giving 3 lectures at the summer school.
Patrick is <u>even</u> required to give
$$\begin{cases} \text{a. } \#\textbf{at least 4} \\ \text{b. } \quad \textbf{more than 3} \end{cases}.$$
► An additive focus particle *also* should also give rise to infelicity.
(6)   Daniele is allowed to smoke exactly 4 cigarettes today.
He is <u>also</u> allowed to smoke
$$\begin{cases} \text{a. } \#\textbf{at least 5} \\ \text{b. } \quad \textbf{more than 4} \end{cases}.$$

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