Hardwired, derived and absent evaluativity with *even*, *only* and *exh*

Yael Greenberg
Bar Ilan University

Abstract

Both *only* and *even* were shown in the literature to have 'evaluative' effects, leading to 'smallness'' and "largeness" inferences, respectively. We suggest, however, that two distinct mechanisms are involved in yielding these effects: Whereas *even* has a hardwired evaluativity presupposition, requiring a 'higher than the standard' degree for an entity in its prejacent and its alternatives, for *only* "smallness" is not encoded in the lexical entry but is rather derived. In light of this conclusion we discuss the fact that the covert version of *only*, i.e. *exh* (Chierchia et al (2011)) lacks the 'smallness' effects of overt *only*. Given our proposal for *only* we suggest that this fact should not be attributed to lack of 'evaluative' presupposition for *exh*. We examine two other potential differences between *only* and *exh* which may be helpful in explaining the presence vs. absence of evaluative effects, respectively.

1 Introduction and Synopsis

The focus sensitive particles *even* and *only* have been long observed to have parallel 'largeness' and 'smallness' inferences, respectively, see e.g. (1a,b):

(1) (How do you think John will do in the quiz?)
a. He won't do so well. I think he can only / #even solve [6]$_F$ problems ($\sim$6 is a small quantity
b. He will do great. I think he can #only / even solve [6]F problems ($\sim$6 is a large quantity)

Zeevat 2008 took these effects to involve expectation cancellation ("mirativity"), namely 'below expectations' for *only* and 'above expectations' for *even*, and suggested to capture them using (super)weak presuppositions and 'distinct' alternatives (cf. Beaver & Clark (2008), Winterstein (2011)). Other theories suggested an 'evaluative' analysis of such particles where the prejacent indicates a degree below a contextually supplied standard (cf. Klinedinst (2005), Alxatib (2013) for *only*) or above it (cf. Greenberg (2015, 2018) for *even*).

We attempt to make two contributions in this paper. First, we suggest that despite striking parallels as in (1a,b), there is reason to assume that *only* and *even* actually rely on two distinct mechanisms to yield the "largeness" vs. "smallness" effects: Whereas *even* indeed has a hardwired evaluativity presupposition, requiring a 'higher than the standard' degree (for both the prejacent and its alternatives), for *only* "smallness" is not encoded in the lexical entry but is rather derived. Second, we discuss the fact that the covert version of *only*, i.e. *exh* (Chierchia et al (2011)) lacks the 'smallness' effects of overt *only*. Given our proposal for overt *only* we suggest that this fact should not be attributed to lack of 'evaluative' presupposition for *exh*. We examine two other properties of *exh* which can lead to this lack of evaluative effects.

2 Background: Suggested 'hardwired evaluativity" presuppositions for both *only* and *even*

2.1 A suggested hardwired evaluativity for *only*

Consider the entry for only in (2) (cf. Kilinedinst (2005), Roberts (2011), Alxatib (2013)) presupposing the truth of the prejacent, *p*, and asserting the falsehood of stronger (in some versions non-weaker) alternatives *q* in *C* (the set of contextually supplied focus alternatives to *p*):

(2) $\|only\|^{g,c}= \lambda C.\lambda p.\lambda w : p(w) = 1.\forall q \in$

$$C[q \neq p \wedge q >_C p] \rightarrow q(w) = 0$$

To capture the 'smallness' effects of *only* mentioned above, several theories suggested to add to (2) an explicit presupposition (sometimes called 'the scalar presupposition of *only*") requiring *p* to express 'not so much / not a lot', to be lower than most / sufficiently many alternatives on the scale (Klinedinst (2004, 2005)), or to indicate a quantity or measure which is below the standard / norm on the relevant scale (Alxatib (2013)). Such standards are familiar from the research on gardable adjectives in the positive form, involving the covert degree modifier POS (cf. Kennedy & McNally (2005)), and can represent both the norm given a comparison class, or a degree which fits some implicit "interest or purpose that the interlocutors have in mind" (Alxatib (2013)). Thus, the "smallness" effect of *only* is not necessarily understood as "below what is normally expected", but can also give the effect of "below what is ought to be the case (given some goal)". Adding such an evaluative presupposition to (2) can indeed capture the "smallness" effect in (3), as well as infelicitous cases where *p* expresses a quantity / degree higher than the contextual standard as in (4):

(3) The average score on the exam was a C. Mary (#only) got an [A-]$_F$

(Klinedinst p. 4)

(4) John (#only) has [11]$_F$ kids (uttered in typical Western contexts where 11 kids is a lot)

2.2 A suggested hardwired evaluativity for *even* as well

The lexical entry for *even* is many times taken to be some version or other of (5) (cf. Horn (1969), Karttunen & Peters (1979), Rooth (1985, 1992)), presupposing that *p* is 'stronger' on the relevant scale than all distinct alternatives *q* in *C* and asserting that *p* is true (ignoring for now the debated additive presupposition):

(5) $\|even\|^{g,c} = \lambda C.\lambda p.\lambda w : \forall q \in C \ q \neq p \rightarrow p >_c q.p(w) = 1$

There are debates about how the "stronger than" relation, i.e. $p >_C q$, should be defined. A prominent approach defines it in terms of unlikelihood (so $p >_C q$ is taken to mean $p <_{likely} q$). Given various challenges to this view, though, other

theories suggested other characterizations based on e.g. correlation with a contextually supplied graded property (Rullmann (2007)). Inspired by this last suggestion, Greenberg (2015, 2018) proposes a 'gradability-based' characterization of the 'stronger than' relation in (5), requiring a higher degree on a contextually supplied gradable scale *G* to hold of a (non-focused) entity *x* in the accessible *p*-worlds, than the degree of this *x* in the *q-and-not-p* worlds. Crucially, this requirement is augmented with an 'evaluative' component as well, requiring the degree of *x* on the scale *G* to be higher than the standard on the scale *G* (in both the *p*-worlds and in the *q-and-not-p* worlds). This hardwired evaluative component is motivated by the effect of *even* on the interpretation of e.g. (6), and the felicity contrasts in (7):

(6) John is 1.70m tall and Bill is even 1.75 / and Bill is even taller
(Entails: both are tall)

(7) Context: The standard height in the basketball team is 1.90m. What's John's and Bill's heights?

Agent (a): John is 1.95m tall. Bill is (even) [2.10]$_F$ (both are suitable for the team)
Agent (b): John is 1.70m tall. Bill is (?? even) [1.75]$_F$. (neither are suitable for the team)
Agent (c): John is 1.75m tall. Bill is (?? even) [1.95]$_F$. (John isn't suitable, but Bill is).

3 Issues for the hardwired evaluativity of *only* (but not of *even*)

3.1 Evaluativity ('less than the standard') of *only* is cancellable

Hardwiring evaluativity for *only* is challenged by sentences like (8a,b), where *only* is felicitous although *p* indicates a degree higher than the contextually supplied standard:

(8) a. (The average score on the exam was C+ / One needs at least a C+ in the exam in order to pass)
John: Wow! I got an A+!
Bill: You succeeded more than me then! I only got an A. But this is still much more than the average /than I expected /than what I need. I am so happy!

b. (The standard height for men here is between 1.75m and 1.80m).
John is tall. He is 16 years old and already 1.85m tall. His 14 year old brother Bill is also tall, though a bit shorter – he is only 1.82m tall.

Notice that *only* is felicitous in (8a) not only if Bill is a wonderful student (so getting an A might be considered below his individual standard), but also if both he and John are average students, or if he is an average student and John is a great student, i.e. even if getting an A is clearly above his standard of success or what he needs to get in order to be accepted. A similar picture is seen in (8b), where Bill's degree of tallness is more than expected and higher both than the general standard, as well as given his age group and his family standard.

Further support for the cancellability of the 'below the standard' requirement for *only* comes from its interaction with *even*. In particular, notice that *only* in Bill's utterance in (8a) continues to be felicitous when we add *even* to the sentence before it, as in (9a). A similar observation is seen in (9b):

(9)   a.   Bill: <u>You even succeeded more than me, then!</u> I only got an A.
(entails: both of us succeeded).
b.   John is 1.85m tall. <u>He is even taller then me, then!</u> I am only 1.83m
(entails: both of us are tall)

This is important because of the "above the standard" presupposition of *even*, which holds not only for its prejacent *p*, but also for its contextually salient alternatives *q* (see above). Indeed, as can be seen in (9a,b), the presence of *even* leads to the entailment that although the degrees of Bill (in the prejacent of *only*) is lower than John's degree on the relevant scales (success/tallness), he is still considered successful/tall, i.e. his degree is still higher than the standard. If *only* indeed had a 'less than the standard' hardwired presupposition regarding its prejacent, we would wrongly predict it to be infelicitous in (9).

3.2   Evaluativity ("more than the standard") of *even* is not cancellable:

In contrast to the "lower than the standard" effect for *only*, the "largeness than the standard" effect does not seem to be cancellable for *even*, as the infelicity of *even* in (10a,b) shows (Cf. also (7) above):

(10)   a.   (The average score on the exam was B / To get accepted one has to get at least B in the exam)
John: Well, I got a C in the exam. . .
Bill: and I #(even) got a C+

b.   (The standard height for men here is between 1.75m and 1.80m):
John is short. He is 1.60m. And Bill is (#even) 1.65m.

4   Deriving evaluativity for *only*

We argued, then, that unlike *even*, *only* does not have hardwired evaluative presupposition (requiring that *p* indicates a 'below the standard' degree). If this is so, what explains its so common "small-ness" effects, seen in ' (1) and in (3)-(4) above?

We would like to examine a way to derive these effects from the interaction of (a) a semantics of *only* along the lines of Guerzoni (2003). and (b) a constraint on accommodating alternatives into *C*, inspired by ideas in Krifka (2000).

4.1   A scalar presupposition with universal force for *only*

Consider the entry for *only* a la Guerzoni (2003) in (11):

(11) $\|only\|^{g,c} = \lambda C.\ \lambda p.\ \lambda w : p(w) = 1 \wedge \forall q \in C\ q \neq p \to p <_C q.\ \forall q \in C\ q \neq p \to q(w) = 0$

Notice in (11) that the 'scalar presupposition' has universal quantification: it requires all distinct alternatives *q* in *C* to be stronger than *p* (cf. suggestions in Beaver & Clark (2008), Coppock & Beaver (2014)). This is a mirror image of the scalar presupposition for *even*, in (5) (requiring all distinct alternatives *q* in *C* to be weaker than *p*). These mirror imaged presuppositions are independently supported by the infelicity of *only* in sentences like (12a) (cf. Orenstein & Greenberg (2013), Orenstein (2016) for observing such infelicities) and of *even* in (12b):

(12)   (Context: How many papers did your faculty members write during the last 5 years?)
a. Let's see: Henry wrote 12, Tom wrote 11, Ted wrote 9, Ann wrote 9 as well, Ian wrote 4, and Bill (#only) wrote 5.
b. Let's see: Henry wrote 12, Tom wrote 10, Ted wrote 9, Sara wrote 9 as well, Ian

wrote 13, Ann wrote 15, and Bill (#even) wrote 14.

Notice that the infelicity of *even* in (12b) can be straightforwardly derived from the interaction between its scalar presupposition in (5) above, requiring p to be the strongest alternative in C and the assumption (e.g. Fox & Katzir (2011), Katzir (2014)) that discourse salient material is used to construct alternatives in C. This presupposition fails for *even* since C has a stronger alternative than p, namely *Bill wrote 15 papers*. The infelicity of *only* in (12a) can be now derived in a parallel way from the entry in (11). Here the scalar presupposition with universal force fails since C has a weaker alternative than p, namely *Bill wrote 4 papers*).

This constitutes an advantage of the entry of *only* in (11) over the one (2) above: Unlike (11), (2) cannot derive the infelicity of *only* in (12a) in a straightforward way: While it requires that all alternatives stronger than p in C are false, it does rule out the presence of some weaker alternatives in C. Notice also that in (12a) p is lower than most alternatives, and can clearly count as 'small', so the infelicity of *only* in it does not seem to be due to failure of a 'below the standard' presupposition, even if ones assumes that *only* triggers it.

Finally, notice that given this entry, the infelicity of *only* in Klinedinst's (2005) example in (3) above is ruled out in the same way as in (12a), i.e. because there is an alternative in C weaker than p, namely *Mary got a C*, constructed based on the salient material *The average is C*. Though in this case this salient alternative happens to represent the 'average', so p happens to be understood as 'small' relative to the average, (12a) shows that this does not have to be so.

4.2 Krifka (2000) on deriving 'mirative' inferences for *schon* (already) and *noch* (still)

Krifka (2000) considers the idea (in e.g. van der Auwera (1993)) that sentences with *schon* (*already*, as in *Lidia is already 3 months old*) and *noch* (*still*, as in *Lidia is still 3 months old*) have hardwired 'mirative' components requiring p to be greater and smaller than expected, respectively. Like others (e.g. Löbner (1999)), he objects to this view and suggests that these inferences are cancellable. Moreover, Krifka suggests to derive such effects from the fact that p indicates a point later

than all alternatives in C (for *already*) and earlier than it (for *still*), and from "a general pragmatic rule, a consequence of the maxim of relevance [namely that] the alternative propositions must be considered reasonable, or entertainable, at the current point in discourse (. . .) hence (*still* and *already*) express a deviation from expected values in a particular direction".

4.3 An application for *only*

In the paper we develop a similar explanation along the lines of Krifka (2000) for the "smallness" effects of *only* (cf. also Orenstein (2016), Liu (2017) for suggestions along these lines). The idea is that if indeed all alternatives to the prejacent of *only*, p, must be stronger than it (as in the entry in (11)), then accommodating such alternatives into C, p ends up being considered less than what is contextually reasonable / entertainable, i.e. "small". Moreover, when such an accommodation clashes with existing contextual assumptions about what is reasonable or entertainable, we end up with infelicity. For example in (4) above, the assumption that all accommodated alternatives, stronger than p (e.g. *John has 12 children*, *John has 13 children*, etc.) should be considered contextually entertainable / relevant, clashes with the common ground assumption regarding the number of kids in typical Western contexts.

4.4 Prediction

A prediction of this suggestion is that the "smallness" effects of *only* will not (necessarily) arise when there is existing discourse salient material before p which can be used to construct stronger alternatives in C (cf. again Katzir (2014)), even if p itself is considered "large" given contextual standards. In such cases the construction of relevant stronger alternatives does not depend on assumptions about the contextual reasonableness of the stronger alternatives given the common ground. Indeed, the prediction seems to be borne out: Cases where the "smallness" effects of *only* disappear are exactly those where explicit stronger material is present in the discourse, e.g. where only is felicitous although p is not "small" (as in (8a,b)). In the full paper we examine a formulation of such competitions between discourse salient material and common ground assumptions, relying on Beaver & Clark's (2008), Coppock & Beaver (2014) QUD-based approach, and on distinctions made in Wagner (2012) for capturing

which salient material is relevant for 'givenness' effects.

5 Evaluativity is absent for *exh*

The covert *exh* is usually argued to have a similar semantics as *only* (Chierchia et al (2011), but see Boccula (2018) for issues with this claim), namely some version of (2) above, besides its asserted (vs. presupposed) prejacent. Crnič (2012) suggested that in addition, *only*, but not *exh*, has the 'evaluative' presupposition that *p* is "small" (relative to sufficiently many alternatives, cf. Klinedinst (2005) / a salient standard, cf. Alxatib (2013)). Indeed, replacing *only* with *exh* in sentences like (13a,b) seems to wipe out the "smallness" effects:

(13)   a. John only/exh has 2 kids ('smallness' inference for *only*, not for *exh*)
       b. John ??only / exh has 11 kids

However, if the suggestions made in sections 2 and 3 above are on the right track, this does not seem to be the reason for the lack of "smallness" effects with *exh*, since we claimed that the "lower than the standard" presupposition is not hardwired for *only* to start with. Another difference between *only* and *exh* should be responsible for the differences in (13).

Given the suggestions above there are two possible candidates for this difference: A different semantics for *only* and *exh*, or different constraints on *C*, the set of alternatives.

First, perhaps *only* and *exh* have a different semantics. In particular, perhaps, unlike *only*, which has the Guerzoni style semantics in (11), *exh* has the semantics in (2), which does not require all alternatives in *C* to be stronger than *p*, and hence does not lead to *p* being considered "small" relative to all contextually relevant alternatives.

Second, perhaps *exh* and *only* have the same core semantics, i.e. some version or other of (11), but whereas *only* requires that the set of alternatives *C* contains contextually supplied alternatives, *exh* does not have such a requirement, and can use just the lexicon for constructing the set of alternatives it operates over. Given this hypothesis, the general algorithm for constructing alternatives (cf. fox & Katzir (2011), Katzir (2014)) should be constrained differently for *only* and *exh*.

Thus, for example, *exh* is felicitous in (13b) since stronger alternatives in *C* like *John has 12 kids* can be provided by the lexicon, without assuming that they are supplied by the context and

are thus contextually reasonable / entertainable. Hence no clash is created between having these alternatives in *C* and existing common ground assumptions regarding the contextually relevant number of kids.

We show that both hypotheses can be supported by the felicity contrast between *only* and *exh* in (14a,b), where there is salient material 'weaker' than that in *p* in the discourse:

(14)   a. John wrote 2 papers.
       Bill #only / exh wrote $[3]_F$

       b. John solved half of the problems. Harry solved all of them and Bill #only / exh solved $[most]_F$ of them.

In the full paper we provide some arguments in favor of the second hypothesis (based on cross linguistic data regarding other scalar particles with different constraints on *C*), and examine it in light of claims about the blindness of exh to context (cf. Magri (2009)).

6 Conclusions and Directions

We argued that an evaluativity presupposition, leading to a 'largeness' effect is hardwired in the lexical entry of *even*, but that a parallel presupposition leading to a 'smallness' effect, is not part of the semantics of *only*, despite claims to the contrary in the literature. Instead, we suggested a way to derive the 'smallness' effect of *only* from a semantics where *p* the weakest alternative in *C* (cf. Guerzoni (2003), Beaver & Clark (2008), Coppock & Beaver (2014)) and some general constraints on accommodating contextually relevant alternatives, following suggestions in Krifka (2000). An advantage of our suggestion is that it does not merely state that evaluativity of *only* ('smallness') is cancellable, but makes predictions as to when it tends to arise and when not. We then observed that evaluativity ('smallness') effects are absent for *exh* and raised two hypotheses as to what is the core difference between it and overt *only* which leads to this absence.

Directions: To the extent the suggestions above are on the right track we would like to examine questions like a. why evaluativity is hardwired for *even* but not for *only* b. How does *E*, the covert version of *even*, pattern with respect evaluativity effects and *C*. Whether our suggestion for deriving smallness for *only* can be applied to other con-

structions, e.g. *That's all* (discussed in Homer (2019)).

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