On *even* in presupposition denials

Naomi Francis (MIT)
nfrancis@mit.edu

I. Puzzle

- *Even* can be used in questions to challenge presuppositions (e.g., *Where even is that?*).[1]

- **A hitherto unnoticed fact:** *Even* can also be used in declaratives that deny presuppositions, but only if it appears below negation (1).

  (1) A: Did Kenji's wife go to the party?
  B: He isn't **even** married!
  B′: #He's **even** unmarried/a bachelor!

- This restriction is neither a general property of presupposition denial (2) nor of *even* (3).

  (2) A: Did Kenji's wife go to the party?
  B: (But/Hey wait a minute) He isn't married!
  B′: (But/Hey wait a minute) He's unmarried!

  (3) [Alex keeps falling for married men.]
  B′: I think Derek would be great for Alex. (He's really sweet, and) he's even unmarried!

- **Question: Why do declarative presupposition denials with *even* require negation?**

II. Background on *even*

- *Even* is a truth-conditionally vacuous focus operator that contributes two presuppositions:[2]

  (4) $[\![even]\!]^{g,w}(C)(p)$ is defined iff
  Scalar: p is less likely than any other alt in C
  Additive: there is a non-p alt in C that is true in w
  When defined, $[\![even]\!]^{g,w}(C)(p) = 1$ iff $p(w) = 1$

  - p = prejacent (proposition in the scope of *even*)
  - C = contextually salient subset of the focus alternatives for p (structures derivable from p by making substitutions of the appropriate type for the focused constituent)[3,4]

- Takes clausal scope; in negative sentences, takes scope above negation (scope theory).[2,5]

III. Proposal

- **In a nutshell: The additive presupposition of *even* is only satisfiable in negative presupposition denials.**

- **Step 1:** Alternatives contain the trigger for the presupposition that the prejacent denies.

  - Assume that the entire vP (including lower copy of subject) is focused (a constituent of type $<s,t>$).
  - Assume that the relevant alternatives are those built by substituting in the propositions made salient by Speaker A's discourse move for the focused constituent.
    * (*Did Kenji's wife go to the party?* = {Kenji's wife went to the party, Kenji's wife didn't go to the party})

  (5) He isn't even married!
  LF = even$_C$ [NEG [he is married]$_F$]
  C = {NEG [he is married], NEG [his wife went to the party], NEG [his wife didn't go to the party]}
  = {*He isn't married*, #*His wife didn't go to the party*, #*His wife went to the party*}

  (6) #He's even unmarried!
  LF = even$_C$ [he is unmarried]$_F$
  C = {he is unmarried, his wife went to the party, his wife didn't go to the party}
  = {*He is unmarried*, #*His wife went to the party*, #*His wife didn't go to the party*}

  - **Bad prediction:** both (5) and (6) suffer from a failure of *even*'s additive presupposition, because all non-prejacent alternatives are themselves presupposition failures when the prejacent is true.
  - **Needed:** A way of preventing alternatives from being presupposition failures in (5) but not (6).

- **Additional ingredient:** A local accommodation (meta-assertion) operator "A".[6]

  - Independently motivated in presupposition denials.[7,8]
  - Maps presupposition failures to false, as if presuppositions were asserted (cf. local accommodation[9]).
  - When inserted under negation, allows presuppositions to be negated instead of projected.

p	A(p)
T	T
F	F
#	F

Truth table for A

- **Step 2:** A parse is available that includes an A operator.

  - In (7), an A operator under negation allows unsatisfied presuppositions to be negated within the alternatives, yielding propositions that are true when the prejacent is true: **additive presupposition satisfied.**
  - In (8), where there is no higher negation, an A operator asserts unsatisfied presuppositions in the alternatives, yielding propositions that are false when the prejacent is true: **additive presupposition unsatisfied.**

  (7) He isn't even married!
  LF = even$_C$ [NEG [**A** [he is married]$_F$]]
  C = {NEG [A [he is married]], NEG [A [his wife went to the party]], NEG [A [his wife didn't go to the party]]}
  = {*It's not true that he is married*, $^{True!}$*It's not true that he has a wife and she went to the party*, $^{True!}$*It's not true that he has a wife and she didn't go to the party*}

  (8) #He's even unmarried!
  LF = even$_C$ [**A** [he is unmarried]$_F$]
  C = {A [he is unmarried], A [his wife went to the party], A [his wife didn't go to the party]}
  = {*It's true that he is unmarried*, $^{False!}$*It's true that he has a wife and she went to the party*, $^{False!}$*It's true that he has a wife and she didn't go to the party*}

- To derive this contrast, C must not include other propositions that could satisfy *even*'s presuppositions in (8).

  - C only contains alternatives that are relevant in the discourse context.[4,10]

IV. Additivity

- **Potential objection:** It has been claimed that *even*'s additive presupposition is not active when the alternatives are mutually exclusive.[11,12,13,14]

  (9) A: Mary won a bronze medal.
  B: No, she even won a SILVER medal. ([14], p.152)

  (10) [At yesterday's party, people stayed with their first choice of drink. Bill only drank WINE, Sue only drank BEER, and]
  John even$_1$ only$_2$ drank [WATER]$_{F1, F2}$. ([12], p. 22)

- **Response:** These data do not show what they are claimed to show.

  - Native speakers judge (9) to be infelicitous.
  - Alternatives in (10) are not mutually exclusive.
    * Context and prosody suggest a second focus:[5]

  (11) [JOHN]$_{F1}$ even$_1$ only$_2$ drank [[WATER]$_{F2}$]$_{F1}$.
  LF = even$_{C1}$ [only$_{C2}$ [[John]$_{F1}$ drank [[water]$_{F2}$]$_{F1}$]]
  C$_1$ = {John only drank water, Sue only drank beer, Bill only drank wine...}

- When the alternatives are mutually exclusive, the same string becomes infelicitous.

  (12) [At yesterday's party, John stayed with his first choice of drink. You'll never guess what it was.]
  #He even$_1$ only$_2$ drank [WATER]$_{F1, F2}$.
  LF = even$_{C1}$ [only$_{C2}$ [he drank [water]$_{F1,F2}$]]
  C$_1$ = {He only drank water, He only drank beer, He only drank wine...}

- **The data are exactly as we should predict if the additive presupposition of *even* is active.**

V. Crosslinguistic extensions

- The puzzling contrast in (1) is reproduced for items in German (*überhaupt*), Greek (*kan*), and Russian (*daže*).

(13) German
A: Did Kenji's wife go to the party?
B: Er ist **überhaupt** nicht verheiratet!
he is ÜBERHAUPT NEG married
'He isn't even married!'

B′: #Er ist **überhaupt** unverheiratet!
he is ÜBERHAUPT unmarried
Intended: 'He's even unmarried!'

(14) Greek
A: Did Kenji's wife go to the party?
B: Ma then ine **kan** pandremenos!
but NEG is KAN married
'But he isn't even married!'

B′: *Ma ine **kan** anipandros!
but is KAN unmarried
Intended: 'He's even unmarried!'

(15) Russian
A: Did K's wife go to the party?
B: ?Da on **daže** ne ženat!
DA he DAŽE NEG married
'He isn't even married!'

B′: #Da on **daže** xolostyak!
DA he DAŽE unmarried
Intend.: 'He's even unmarried!'

- All of these items have an *even*-like semantics,[1,15,16] plausibly including an additive component.

- **Prediction:** An item that is scalar but not additive will be acceptable in positive presupposition denials.

  - Hebrew *bixlal* has an *even*-like scalar component,[17,18] but appears to lack an additive component (16).
    * *Bixlal* is compatible with both positive and negative presupposition denials (17).

(16) [B is a journalist doing a feature on bronze medallists. A is suggesting people for B to interview.]
A: Mary won a bronze medal.
B: Lo! Hi **bixlal** zaxta be-medaljat [kesef]$_F$.
NEG she BIXLAL won in-medal silver
'No! She even won a silver medal.'
(cf. [17], p.141, [18], p. 3)

(17) A: Did Kenji's wife go to the party?
B: Hu **bixlal** lo nasuj.
he BIXLAL NEG married
'He isn't even married!'

B′: Hu **bixlal** ravak.
he BIXLAL bachelor
'He's even a bachelor!'

VI. Conclusions

1. The contrast between positive and negative presupposition denials with *even* and its crosslinguistic kin is due to their additive presupposition.

   - Alternatives with unsatisfied presuppositions cannot satisfy *even*'s additive presupposition; an A operator can solve this only under negation.

2. *Even* is additive even when its alternatives are mutually exclusive.

3. Presuppositions generated in focus alternatives can affect the acceptability of a sentence that does not itself contain the trigger.

References

[1] Iatridou & Tatevosov (2016). Our *even*. *L&P*. [2] Karttunen & Peters (1979). Conventional implicature. In *Syntax and semantics*, vol. 11: Presupposition. [3] Rooth (1985). *Association with focus*. Ph.D. diss. [4] Rooth (1992). A theory of focus interpretation. *NLS*. [5] Wilkinson (1996). The scope of *even*. *NLS*. [6] Bochvar (1939). On a three-valued logical calculus and its application to the analysis of the paradoxes of the classical extended functional calculus. *Matematičeskij Sbornik*. [7] Beaver (1997). Presupposition. In *Handbook of logic and language*. [8] Beaver & Krahmer (2001). A partial account of presupposition projection. *Journal of Logic, Language and Information*. [9] Heim (1983). On the projection problem for presuppositions. *WCCFL 2*. [10] Roberts (1996/2012). Information structure in discourse: Towards an integrated formal theory of pragmatics. *S&P*. [11] von Stechow (1991). Current issues in the theory of focus. In *Semantics: An international handbook of contemporary research*. [12] Krifka (1992). A compositional semantics for multiple focus constructions. In *Informationsstruktur und Grammatik*. [13] Rullmann (1997). *Even*, polarity, and scope. *Papers in experimental and theoretical linguistics*. [14] Crnič (2011). *Getting* even. Ph.D. diss. [15] Anderssen (2006). Generalized domain widening *überhaupt*. *WCCFL 25*. [16] Giannakidou (2007). The landscape of EVEN. *NLLT*. [17] Greenberg & Khrizman (2012). The Hebrew *bixlal*: A generalized strengthening operator. *IATL 27*. [18] Greenberg (2016). Operating over (internal) 'covert-based' alternatives with scalar focus-sensitive particles: Evidence from Modern Hebrew. *SuB 21*.