

On the local calculation of manner implicatures

Jessica Rett

rett@ucla.edu

University of Potsdam

May 28, 2021

overview

evaluativity: an
overview

manner
implicatures: an
overview

the equatives
problem

local manner
implicature

conclusions

- ▶ evaluativity – the requirement that a degree exceed a contextually-valued standard – arises as a conversational implicature across degree constructions
- ▶ in degree demonstratives (e.g. *Ai is that short too*) and equatives (e.g. *Ai is as short as Bo*) it arises as a manner implicature associated with the (marked) negative antonym
- ▶ but accounting for evaluativity in equative constructions requires an analysis in which manner implicatures can be calculated locally
- ▶ there is lots of additional evidence that manner implicatures can be calculated locally...
- ▶ ...which is a good reason to abandon a grammatical approach to local (quantity) implicatures

evaluativity

- ▶ evaluativity is the requirement that a degree exceed a contextually-valued standard
- ▶ a test for adjectival constructions is whether they entail the negation of their antonymic counterpart

- (1) a. Ai is tall. → Ai is not short.
b. Ai is short. → Ai is not tall.

- ▶ positive constructions like (1) are evaluative, but lots of other adjectival constructions are too...

- (2) a. Ai is as short as Bo. *negative equative*
b. Ai is this short. *negative demonstrative*
c. How short is Ai? *negative polar question*
d. Ai is taller than Bo is. *negative clausal comp.*
e. Ai is more tall than Bo. *optional analytic comp.*

- ▶ ...as well as non-adjectival constructions

- (3) a. Ai owns a number of plants.
b. He is of a certain age.

evaluativity as implicature

- ▶ in Rett (2015), I argue that evaluativity arises in all cases as a conversational implicature
 - ▶ in the case of positive constructions, as a non-scalar or uninformativity-based quantity implicature, like those associated with (other) tautologies
 - ▶ in the case of 'antonym-sensitive' evaluative constructions, like (2), as a manner implicature, associated with a marked form
- ▶ this explains the universal distribution of evaluativity, as well as the fact that it is never encoded overtly
- ▶ while there exist game-theoretic models of the evaluativity of positive constructions, and of manner implicatures, both need to be modified to capture the full spectrum of data in (1)-(3) (Bumford & Rett 2021)

properties of conversational implicature

conversational implicatures are:

- ▶ calculable: their content is determinable based on some combination of the context and the maxim flouted
- ▶ reinforceable (Horn 1972, Sadock 1978): reiterating a presupposition is infelicitous, but reiterating an implicature is not

- (4) a. #John is a bachelor and/but he is a man.
b. Some people left early and/but not everyone did.

- ▶ discourse-sensitive: an implicature that answers the QUD is not cancellable, while one that doesn't is cancellable (van Kuppevelt 1995, 1996)

- (5) A: Who bought some tickets?
B: Chris, in fact she bought all of them.

- (6) A: How many tickets did Chris buy?
B: #Some, in fact she bought all of them.

properties of manner implicatures

- ▶ calculable: marked phrasing reflects a marked situation
- ▶ reinforceable:

- (7) a. Jane caused the sheriff to die and/but she killed him indirectly.
b. Ai is as short as Bo and/but they're both short.

- ▶ discourse-sensitive:

(8) Jane caused the sheriff to die... #in fact she murdered him outright.

- (9) A: Who caused the sheriff to die?
B: Jane caused the sheriff to die... in fact she murdered him outright.

(10) A knows how short B is #in fact B is tall.

- (11) A: The coach knows how short the players are. She knows how short A is, how short B is, does she know how short C is?
B: Yes (she knows how short C is), although in fact C is tall.

an account of manner implicatures

► from Katzir (2007):

(12) Let ϕ be a parse tree. The set of **Q alternatives** for ϕ is defined as $A_{Qstr}(\phi) := \{\phi' : \phi' = \phi\}$

(13) THE Q PRINCIPLE: Do not use ϕ if there is another sentence $\phi' \in A_{Qstr}(\phi)$ such that both:

- $[[\phi']] \subset [[\phi]]$, and
- ϕ' is weakly assertable.

► from Rett (2015):

(14) Let ϕ denote a semantic object of type $\langle \omega, \tau \rangle$. The set of **R alternatives** for ϕ is defined as $A_{Mstr}(\phi) := \{\phi' : [[\phi']] = [[\phi]]\}$.

(15) THE R PRINCIPLE: Do not use ϕ if there is another sentence $\phi' \in A_{Mstr}(\phi)$ such that both:

- $\phi' \lesssim \phi$, and
- ϕ' is weakly assertable.

equatives are manner-evaluative

► the idea:

- $\llbracket \text{Ai is as tall as Bo} \rrbracket = \llbracket \text{Ai is as short as Bo} \rrbracket = \{d : \text{height}_+(ai,d)\} = \{d' : \text{height}_-(bo,d')\}$
- *short* is marked relative to *tall* (Heim 1997)
- therefore 'Ai is as short as Bo' carries a manner implicature: 'the situation associated with the marked term is abnormal' (evaluativity)

► the same is true for the following pairs, universally:

- (16) a. Ai is more tall than Bo. *evaluative, marked*
b. Ai is taller than Bo. *not evaluative*
- (17) a. Ai is taller than Bo is. *evaluative, marked*
b. Ai is taller than Bo. *not evaluative*
- (18) a. Trees can be as old as 400 years. *eval., marked*
b. Trees can be 400 years old. *not evaluative*

overview

evaluativity: an
overview

manner
implicatures: an
overview

the equatives
problem

local manner
implicature

conclusions

the equative problem

- ▶ the problem: equatives are actually ambiguous between an 'exactly' and an 'at least' interpretation

(19) Ai is as short as Bo...

- a. ... in fact, she's shorter. 'at least'
- b. ... so they're both 5'3". 'exactly'

- ▶ and they're generally thought of as denoting the former, with the 'exactly' reading arising as a scalar implicature due to competition with the comparative (Horn 1972)

- (20) a. $\llbracket \text{Ai is taller than Bo} \rrbracket = \{d : \text{height}_+(a, d)\} \supset \{d' : \text{height}_+(b, d')\}$
b. $\llbracket \text{Ai is as short as Bo} \rrbracket = \{d : \text{height}_-(a, d)\} \supseteq \{d' : \text{height}_-(b, d')\}$

Option 1: quantity before manner?

- ▶ Levinson (2000): quantity implicatures are calculated before manner implicatures, because the latter are less defeasible

“The relative priority of the Q-Principle over the [R]-Principle is presumably attributable to the relative importance of informational content over expression modulation.” (p161)

- ▶ this only helps in some cases, however:
 - ▶ equatives with ‘at least’ readings are still evaluative

(21) Ai is as short as Bo, in fact she’s shorter.

- ▶ and so are overtly ‘at least’-modified equatives

(22) Ai is at least as short as Bo.

Option 2: embedded manner implicature

- ▶ another option is that ‘at least’ equatives are evaluative because the evaluativity is calculated subsententially, on the embedded clause

$$(23) \quad \begin{array}{l} \text{a. } \llbracket \text{OP}_d \text{ Bo is } d\text{-tall} \rrbracket = \{d : \text{height}_+(\text{bo}, d)\} \\ \text{b. } \llbracket \text{OP}_d \text{ Bo is } d\text{-short} \rrbracket = \{d : \text{height}_-(\text{bo}, d)\} \end{array}$$

- ▶ if this is right, the embedded argument is evaluative via implicature, and the matrix argument via the equation relation, which checks out

$$(24) \quad \text{If } A_i \text{ is as short as } B_o, \text{ then she'll get the role.}$$

- ▶ it also means that manner implicatures can be calculated locally, and are necessarily calculated locally in equatives

other evidence of embedded manner implicature

- ▶ in evaluative equatives:

(25) Cam thinks Ai is as short as Bo.

- local: Cam believes they're both short
- global: Cam believes they're the same height, speaker knows it counts as short

- ▶ in evaluative degree questions:

(26) a. Everyone who knows how short Ai is knows she's sensitive about it.
b. Don't tell Cam how short Ai is, she won't want to hire her because of it.

- ▶ in periphrastic constructions:

(27) The judge believes Jane caused the sheriff to die.
a. local: the judge believes it was an accident
b. global: the judge thinks Jane is directly responsible, speaker knows it was an accident

evidence of degree morphology embedding

- ▶ it's not just that evaluativity and manner implicature writ large can be embedded under attitude verbs
- ▶ there's evidence that evaluativity can be embedded under degree morphology, too:

- (28) a. Ai is half as tall as Bo.
b. Ai is twice as tall as Bo.

- (29) a. Ai is half as short as Bo.
b. Ai is twice as short as Bo.

- ▶ in (28-a), Ai is shorter than Bo
- ▶ in (28-b), Ai is taller than Bo
- ▶ in both (29-a) and (29-b), Ai is shorter than Bo
- ▶ (when deemed interpretable, (29-a) and (28-a) are judged to be synonymous)
- ▶ one issue: a difference in optionality

conclusions

- ▶ evaluativity arises when information needs to be added to a degree construction (either because it's uninformative or marked)
- ▶ these effects are universal, and not specific to adjectival constructions: they apply to any construction about a degree or degree relation (e.g. *a number of shoes*)
- ▶ evaluativity arises as a manner implicature when a marked adjective is used in a construction for which the unmarked adjective would have been synonymous...
- ▶ ...and this competition seems to be able to happen locally, i.e. at non-matrix clausal boundaries
- ▶ in addition to accounting for the distribution of evaluativity, as I've suggested in Rett 2020, the observation that other types of implicature embed presents a strong consideration against grammatically-encoded (scalar) implicature