

Conversational implicature in degree semantics*

Jessica Rett
rett@ucla.edu

University of Arizona
October 14, 2016

0 Overview

Two ways of viewing this talk:

1. Using conversational implicature to explain a long-standing tension in degree semantics
 - What meaning should we assign an adjective that is associated with some property (evaluativity, a.k.a. norm-relatedness) in some constructions but not others?
 - How can we explain the distribution and behavior of evaluativity across contexts and languages?
2. Using degree-semantic phenomena to better study conversational implicature
 - Enough about scalar implicatures... how do Manner and non-scalar Quantity implicatures behave?
 - How does (non-syntactically-encoded) implicature interact with compositional semantics?

THM: Across languages, evaluativity arises where it does as the result of Manner implicature (in some constructions) or non-scalar Quantity implicature (in others). It is predictably part of the asserted content when it is at-issue, and projects when it is not-at-issue. And it varies in the extent to which it is conventionalized.

1 Introduction

- A traditional problem (see Cresswell, 1976; Klein, 1980):
 - (1) a. Adam is tall. *positive construction*
b. Adam is 5ft tall. *measure phrase (MP) construction*
- MP constructions like (1-b) make gradable adjectives seem like transitive counterparts to non-gradable adjectives, cf. **Adam is 100-spot freckled*.
 - (2) a. $\llbracket \text{freckled} \rrbracket = \lambda x. \text{freckled}(x)$
b. $\llbracket \text{tall} \rrbracket = \lambda d \lambda x. \text{tall}(x, d)$
- This account of the “degree argument” in (1-b) results in two problems with the compositional analysis for (1-a): we predict (1-a) doesn’t denote a proposition, and we fail to predict that it is evaluative.
 - (3) $\llbracket \text{tall}(\text{Adam}) \rrbracket = \lambda d. \text{tall}(a, d)$ *(with Curryng)*
 - (4) A sentence is **evaluative** with respect to a gradable adjective \mathcal{G} iff it entails that some individual instantiate \mathcal{G} to a significant degree.
 - (5) a. Adam is tall. \rightarrow Adam is not short.
b. Adam is 5ft tall. \rightarrow Adam is not short.

*Thanks to the audience at PhLiP 2016, and especially to Sam Cumming.

- The response (beginning with Bartsch and Vennemann, 1972; Cresswell, 1976): a null operator that simultaneously: 1) contributes evaluativity; and 2) binds (or values) the degree argument.

(6) $\text{POS} \rightarrow \lambda \mathcal{G}_{\langle d, \langle e, t \rangle \rangle} \lambda x \exists d [\mathcal{G}(x, d) \wedge d > s]$, for some contextually valued standard s

- Which, in turn, presents a compositionality problem.

“As far as I can tell, there is no independent justification for introducing POS; it is merely a device for fixing up the semantics.” (Klein, 1980, 3)

“The operator “positively,” call it POS, is invisible, which made E. Klein think that it doesn’t exist.” (von Stechow, 1984, 59)

- However, unlike other null operators (e.g. *pro*), no language has an overt counterpart of POS

“The failure of the putative operator POS to correspond to overt material in language after language – in stark contrast to [comparative markers] – could be taken as evidence that POS does not actually exist and hence that any approach in which [evaluativity] requires a special operator is misguided.” (Grano, 2012, 515)

- Worse, the POS account is wrong (Bierwisch, 1989; Rett, 2007, 2008): it incorrectly predicts evaluativity and overt degree-argument manipulation (valuation, binding) are in complementary distribution.

– constructions that comply with this prediction:¹

- | | | | |
|-----|----|---------------------------|---|
| (7) | a. | Adam is tall. | <i>positive construction</i> |
| | b. | Adam is 5ft tall. | <i>(standard) MP construction</i> |
| | c. | Adam is that tall (too). | <i>positive-antonym degree demonstrative</i> |
| | d. | How tall is Adam? | <i>positive-antonym degree question</i> |
| | e. | Adam is taller than Doug. | <i>(synthetic) positive-antonym comparative</i> |
| | f. | Adam is as tall as Doug. | <i>positive-antonym equative</i> |

– constructions that do not comply with this prediction:

- | | | | |
|-----|----|---------------------------|--|
| (8) | a. | Adam is that short (too). | <i>negative-antonym degree demonstrative</i> |
| | b. | How short is Adam? | <i>negative-antonym degree question</i> |
| | c. | Adam is as short as Doug. | <i>negative-antonym equative</i> |

– some other data worthwhile noting:

- | | | | |
|-----|----|---|---|
| (9) | a. | Adam is more tall than Doug. | <i>analytic comparative</i> ; Matushansky (2001) |
| | b. | Tennis balls are as heavy as 60g. | <i>MP equative</i> ; Rett (2014) |
| | c. | The soup cooled for/in an hour. | <i>degree achievement</i> ; Hay et al. (1999) |
| | d. | He has considerable money. | <i>evaluative DP</i> ; Bolinger (1972); Morzycki (2009) |
| | e. | He [cooks] _F , believe you me! | <i>evaluative VP</i> ; <i>ibid.</i> |

- a few unsatisfying responses:

- lexically encoding evaluativity in relative adjectives... opposite, and harder, problem
- a denial that the data in (7) and those in (8) exhibit the same phenomenon (various, p.c.)
- a different null operator, EVAL (Rett, 2007, 2008), which is somehow attracted to marked antonyms but only in constructions in which antonymic pairs are otherwise mutually entailing
- yet other null operator, SSM (‘Standard Shifting Morpheme’; Breakstone, 2012)
- a distinct, optional, verbal POS (for degree achievements; Piñón, 2005; Kennedy and Levin, 2008)
- a metaphysics-based analysis of evaluativity that focuses on antonymic pairs but does not speak towards the contrast between the data in (7) and those in (8) (Sassoon, 2011)

¹I will only discuss relative adjectives (e.g. *tall*, *short*) here; other adjectives (e.g. *gorgeous*, *ugly*) display different, less complicated patterns of evaluativity, which I will return to in §3.4.

2 A background on conversational implicature

2.1 Non-scalar conversational implicatures

- Conversational implicatures arise when interlocutors adhere to the Cooperative Principle (Grice, 1975):

1. **Quantity:** Make your contribution as informative as required, but not more;
2. **Quality:** Do not say false things or things for which you don't have adequate evidence;
3. **Relation:** Be relevant;
4. **Manner:** Avoid obscurity; avoid ambiguity; be brief; be orderly.

- Uninformativity-based Quantity implicatures (Grice, 1975; Geurts, 2011):

- (10) a. War is war.
b. Boys will be boys.

“[A]t the level of what is said, [...tautologies] are totally noninformative and so...cannot but infringe the first maxim of Quantity in any conversational context. ...[T]he hearer's identification of their informative content at this level [of implicature] is dependent on his ability to explain the speakers selection of this particular patent tautology” (Grice 1975: 52).

- Manner implicatures: (Horn, 1989, 1991; Levinson, 2000)

- (11) a. not uncommon, not infrequent *litotes*
b. He caused the sheriff to die. *periphrasis*

“[T]wo negatives...do not... cancel one another out...the longer expression is always weaker: *This is not unknown to me* or *I am not ignorant of this* means ‘I am to some extent aware of it,’ etc. The psychological reason for this is that the détour through the two mutually destructive negatives weakens the mental energy of the listener and implies...a hesitation which is absent from the blunt, outspoken *common* or *known*” (Jespersen, 1965, 332).

2.2 How non-scalar conversational implicatures behave

- Grice claimed that conversational implicatures are **cancellable** (e.g. (12)) and **detachable**...

- (12) Adam ate some of the pizza... in fact, he ate all of it.

- ...But, in fact, neither is a necessary property of all types of implicature (Hirschberg, 1991)

- Manner implicatures don't seem to be cancellable or detachable (“insofar as the manner of expression plays no role in the calculation, it will not be possible to find another way of saying the same thing, which simply lacks the implicature in question”; Grice 1975:58):

- (13) a. I am not ignorant of this... #in fact, I am unaware of it.
b. Adam caused the sheriff to die... #in fact, he killed him outright.

- Neither are uninformativity-based Quantity implicatures (Huitink and Spender, 2004):

- (14) a. War is war... #in fact, violence is avoidable in war.
b. Boys will be boys... #in fact, they often behave unpredictably.

- How, then, can we identify implicatures?

- Calculability: conversational implicatures have traditionally been distinguished from e.g. conventional implicatures in our ability to determine their meaning via pragmatic reasoning

- Traditional differentiation between conversational implicature and entailed content (e.g. presupposition) wrt reinforceability, with a conjunction (Horn, 1972) or something else (Sadock, 1978).
 - * Horn’s “Redundancy of Conjunction” differentiates presupposition and scalar implicature
 - (15) a. #John is a bachelor and he is a man.
 - b. Some people left early but not everybody did.
 - * This seems to be a property of uninformativity-based Quantity and Manner implicatures, too
 - (16) a. War is war... which is to say, violence is unavoidable in war.
 - b. Adam caused the sheriff to die... which is to say, he killed him indirectly.
- The semantic status of implicatures varies with their discourse status:
 - * At-issue content addresses the Question Under Discussion (QUD, Roberts, 1990), and doesn’t project (Simons et al., 2011);²
 - * Not-at-issue content does not address the QUD, and does project.
 - * If an implicature (even a scalar one) is at-issue, it isn’t cancellable (van Kuppevelt, 1995).
 - (17) A: Who passed some exams?
 - B: John. In fact, he passed all of them.
 - (18) A: How many exams did John pass?
 - B: Some. #In fact, he passed all of them.
 - * If an implicature (even a Manner one) has an ‘anaphoric link’, it is (van der Sandt, 1992).
 - (19) A: Adam looks quite shaken. Did he somehow cause the sheriff to die?
 - B: Yes (Adam caused the sheriff to die), in fact he murdered him.
- And different types of implicatures seem to differ in their ability to be interpreted locally
 - * Scalar implicatures are interpreted locally (Chierchia, 2004)
 - (20) John believes [_{CP} that some students are waiting for him.]
 - a. John believes that not every student is waiting for him. *local*
 - b. #It is not the case that John believes that every student is waiting for him. *global*
 - * Uninformativity-based Quantity implicatures, as well, must be interpreted locally:
 - (21) A: Adam seems unfazed by the fact that he is a victim of a pyramid scheme.
 - B: Well, you know, Adam has always believed that bankers will be bankers.
 - * In contrast, Manner implicatures are only optionally embeddable:
 - (22) The judge believes that Adam caused the sheriff to die.
 - a. Judge believes Adam was indirectly responsible for the sheriff’s death *local*
 - b. The speaker is being indirect for reasons of politeness or delicacy *global*

IMPLICATURE TYPE	cancellable?	detachable?	reinforceable?	embeddable?	QUD-sensitive?
scalar	✓	✓	✓	✓	✓
uninfo-bsd Quantity	x	x	✓	✓	✓
Manner	x	x	✓	(✓)	✓

Table 1: Properties of implicature

²Among these other properties, at-issue content can be identified in its ability to be directly denied in discourse.

3 Degree implicature

- Broad claim: evaluativity arises where it does, across languages, due to conversational implicature
 - In “degree tautologies” like the positive construction, it is an unformativity-based Q implicature.
 - When it is tied to marked forms – e.g. negative antonyms – it arises as a Manner implicature.
 - Evaluativity seems presuppositional in some cases and assertoric in others because of the way we interpret various constructions out-of-the-blue... but all instances of evaluativity are at-issue or not-at-issue depending on the QUD (which is what we would expect if it were an implicature).
 - Evaluativity varies across adjective classes based on the relationship between antonyms in a given pair in a given language.

3.1 Some formalism

- Horn (1984) recasts Grice’s maxims into a Q Principle (Make your contribution sufficient, say as much as you can) and an R Principle (Make your contribution necessary, say no more than you must). This “division of pragmatic labor” results in an equilibrium, namely:

(23) **Horn’s Principle of Least Effort** (Horn, 1984, 22)
 The use of a marked (relatively complex [...]) expression when a corresponding unmarked (simpler, less “effortful”) alternate expression is available tends to be interpreted as conveying a marked message (one which the unmarked alternative would not or could not have conveyed).

(24) **Quantity implicatures**
 a. involve Q scales, which hold fixed markedness and order elements wrt informativity
 b. are calculated relative to the Q principle

(25) **Manner implicatures**
 a. involve M scales, which hold fixed informativity and order elements wrt markedness
 b. are calculated relative to the R principle (when a marked form is used) or the Q Principle (when an unmarked form is used)

- Katzir (2007) defines Q-alternatives based on ‘parse trees’: effectively trees with explicit morphology; he redefines the Q Principle accordingly, with $<$, \sim denoting relations of structural complexity

(26) **Q-ALTERNATIVES** (Katzir, 2007, 679, modified slightly): Let ϕ be a parse tree. The set of **Q-alternatives** for ϕ , written as $A_Q(\phi)$, is defined as $A_Q(\phi) := \{\phi' : \phi' \sim \phi\}$.

(27) **THE Q PRINCIPLE**: Don’t use ϕ if there is another $\phi' \in A_Q(\phi)$ st. ϕ' is assertable and $\llbracket \phi' \rrbracket$ asymmetrically entails $\llbracket \phi \rrbracket$.

- We can define M-alternatives and the M Principle as effective duals of these, à la Horn:

(28) **M-ALTERNATIVES**: Let ϕ be a parse tree. The set of **M-alternatives** for ϕ , written as $A_M(\phi)$, is defined as $A_M(\phi) := \{\phi' : \llbracket \phi' \rrbracket \leftrightarrow \llbracket \phi \rrbracket\}$.

(29) **THE M PRINCIPLE**: Don’t use ϕ if there is another $\phi' \in A_M(\phi)$ st. ϕ' is assertable and $\phi' < \phi$.

- And formalize Horn’s Principle of Least Effort (“Marked forms are associated with marked meaning”):

(30) **The Marked Meaning Principle**: For parse trees ϕ, ϕ' such that $\phi' \in A_M(\phi)$ and $\phi' < \phi$: ϕ carries the Manner implicature: “ $\llbracket \phi \rrbracket$ is atypical”.

3.2 Evaluativity as implicature

- Three types of degree constructions with respect to evaluativity:

(31) **antonym-sensitive evaluativity**

- a. How short is Adam? *degree question*
- b. Adam is as short as Doug. *equative*
- c. Adam is that short too. *degree demonstrative*

(32) **antonym-insensitive evaluativity**

- a. Adam is tall/short. *positive construction*
- b. Is Adam tall/short? *polar degree questions*

(33) **non-evaluative**

- a. Adam is 5ft tall. *MP construction*
- b. Adam is taller/shorter than Doug. *comparative*

3.2.1 Antonym-sensitive evaluativity is a Manner implicature

- Lots of evidence negative antonyms are marked relative to positive ones (Lehrer, 1985; Heim, 2007)
- Degree demonstratives formed with negative (but not positive) antonyms are evaluative.

- (34) A: Adam's really tall.
 B: Doug's about that tall too.
 B': #Doug's about that short too.

- (35) A: Adam's really short.
 B: Doug's about that tall too.
 B': Doug's about that short too.

- Holding fixed the context of evaluation (in which *that* picks out Adam's height), and ignoring evaluativity, the two responses in (34) are synonymous.
- Because they qualify as M-alternatives, the marked construction (with the negative antonym) carries a Manner implicature... that Doug's height (in particular, his shortness) is atypical.

- Same for degree questions: aside from evaluativity, *How tall/short is Adam?* are synonymous.
 - Bonus prediction (see also Barker, 2002): the typically presuppositional evaluativity associated with degree questions becomes assertoric when we manipulate the QUD.

- (36) A: I'm a little worried about the actress playing me in the movie. Is she tall or short?
 B: *(to the casting agent)* How short is Susan again?
 A: That's fine, as long as she's short/#tall.

- (37) A: I'm a little worried about the actress playing me in the movie. Is she tall or short?
 B: *(to the casting agent)* How tall is Susan again?
 A: #That's fine, as long as she's short/tall.

- Equatives formed with negative antonyms are evaluative:

- (38) a. Adam is as tall as Doug. \rightarrow Adam is tall.
 b. Adam is as short as Doug. \rightarrow Adam is short.

- Equatives are thought to semantically encode the weak \geq ('at least') relation, but generally get strengthened to mean 'exactly' via scalar implicature, in competition with the comparative ($>$).

- This seems to happen locally, even when equatives are explicitly modified by *at least*, just as the scalar implicature for *some* is calculated before modification in *At least some students passed the test* (Levinson, 2000); it could also be the result of something like conventionalization.
 - A bonus prediction: coupled with a discussion of at-issueness, this account correctly predicts that only the internal argument of a negative-antonym equative is evaluative
- Like the Manner implicature in (22), the evaluativity here can but need not be embedded.

(39) a. (Robin’s really confused about everyone’s heights.) Robin thinks Doug is short, and she believes Adam is as short as Doug. *local*

b. (Robin thinks Adam and Doug are 5’0”, but she doesn’t know that counts as short in this context.) Robin believes Adam is as short as Doug. *global*
 - And also like other Manner implicatures, evaluativity in these constructions is reinforceable:

(40) a. Adam is as short as Doug, which is to say they’re both short.

b. Adam knows how short Doug is, which is to say he knows he’s short.

3.2.2 Antonym-insensitive evaluativity is an unformativity-based Quantity implicature

- Positive constructions (and e.g. *Is Adam tall/short?*) qualify as tautologies (‘degree tautologies’)
 - $\llbracket \text{Adam is tall} \rrbracket = \exists d[\text{tall}(\text{adam}, d)]$
 - Gradable adjectives carry a ‘positive extension presupposition’ (Kennedy, 1999): they can only be predicated of individuals who instantiate the property to some degree, e.g. **This sauce is curvy*
 - The positive construction asserts what it presupposes: it is trivially true, i.e. uninformative.
- Like other unformativity-based Quantity implicatures (but unlike Manner implicatures), evaluativity in the positive construction is calculated locally.

(41) a. It’s not always the case that war is war. Drones have complicated things immensely.

b. Adam isn’t tall.
- And, predictably, the evaluativity of positive constructions varies with the QUD.

(42) *In a lab full of typically smelly and colorful soap, two new varieties: one colorless and the other odorless; although the colorless one is significantly less smelly than the other soaps, and the odorless one is significantly more subdued in color.*

A: I can’t tell these new soaps apart. Is this the odorless one?

B: No, that one’s smelly.
- And like the implicature associated with other tautologies, the evaluativity associated with positive constructions is reinforceable, provided that the reinforcement helps disambiguate the intended reading.

(43) a. #War is war, which is to say that war is equivalent to war.

b. War is war, which is to say that violence is unavoidable in war. (16-a)

(44) a. #Adam is tall, which is to say he is tall.

b. Adam is tall, which is to say that he is taller than the average eighth-grader.

 - If this perspective on reinforceability is sound, we should reconsider the idea that reinforceability is a diagnostic for non-entailed content (one generalization that has been used to explain why presuppositions can’t be reinforced).

IMPLICATURE TYPE	cancellable?	detachable?	reinforceable?	embeddable?	QUD-sensitive?
scalar	✓	✓	✓	✓	✓
uninfo-bsd Quantity	x	x	✓	✓	✓
a-insensitive eval	x	x	(✓)	✓	✓
Manner	x	x	✓	(✓)	✓
a-sensitive eval	x	x	✓	(✓)	✓

Table 2: Properties of implicature, revised

3.2.3 Non-evaluative constructions

- MP constructions are not evaluative because a) they are not tautologous; and b) in English, they can only be formed with positive antonyms.
 - However, MP constructions can be formed with negative antonyms in Dutch (Doetjes, 2012)...

(45) het 20 cm diepe / ondiepe water
 the 20 cm deep / shallow water
 ‘the 20cm-deep water’ / ‘the 20cm-deep (which is shallow) water’
 - ...in which case they are evaluative. This would put MP constructions in Dutch in the ‘antonym-sensitive evaluativity’ category, making them similar to degree demonstratives in English.
- Synthetic comparatives are not evaluative because a) they are not tautologous; and b) antonymic pairs of comparatives are not synonymous, and therefore do not count as M-alternatives

3.3 Why evaluativity?

- I’ve predicted that evaluative constructions carry an implicature that the relevant property is atypical. Here I’ll argue that, in the case of a gradable predicate, atypicality amounts to evaluativity.
- *non-gradable predicates*: There are several potential ways someone can be an atypical e.g. student...
- *gradable predicates*: But there are really only two ways someone’s e.g. height can be atypical: she can be more tall than average (the evaluative meaning); or she can be less tall than average.
- There’s lots of evidence that natural language privileges intensification over diminutization (Kirchner, 1955; Bolinger, 1972; Morzycki, 2012):

(46) a. He frightened me so!
 b. What attempts they made!
 c. It’s a long, long way.
 d. She cried her heart out.
 e. He owns a very/*bit tight pants.
- The evaluative meaning is the stronger of the two; maybe something like Kennedy’s (2007) Interpretive Economy principle is at work (“Maximize the contribution of the conventional meanings of the elements of a sentence to the computation of its truth conditions,” p.36).

3.4 Other types of adjectives

- Extreme adjectives are evaluative in every construction: they lexicalize evaluativity (Morzycki, 2012).
- The other classes of adjectives (absolute, total, partial) behave differently wrt evaluativity than relative adjectives do (Bierwisch, 1989; Rett, 2008; Toledo and Sassoon, 2011; Brasoveanu and Rett, 2016).

	COMPARATIVE		EQUATIVE	
	<i>positive</i>	<i>negative</i>	<i>positive</i>	<i>negative</i>
relative adjectives	no	no	no	yes
total/partial adjectives	no	yes	no	yes
absolute adjectives	yes	yes	yes	yes

Table 3: Evaluativity across adjectival classes

- Evaluativity across adjectival classes can be accounted for by combining the theory of scale structure in Kennedy and McNally (2005) with Kennedy’s (2007) Principle of Interpretive Economy: informally, “It’s more economical to value a standard with a lexicalized bound than context.”
- But some relative adjectives differ from *tall/short* with respect to evaluativity (Sassoon, 2011).
 - The ones that behave like *tall/short* tend to be measure adjectives: antonym pairs for which the positive antonym can be modified by a measure phrase. Which adjectives count as measure adjectives is notoriously cross-linguistically variant (Schwarzschild, 2005).
 - Some scales are affiliated with more than two adjectives in English, e.g. *hot - warm - cool - cold*.
 - * it’s not clear that all of these behave like relative adjectives (cf. *This won’t get you completely warm but it will help*).
 - * It’s not clear how to define M-alternatives in non-binary situations (see also Lehrer, 1985).
 - Two benefits of the conversational implicature approach (contra a semantic or metaphysical one):
 1. Since languages differ in how they lexicalize scales, I predict that adjectives could vary in their evaluativity properties across languages. (Swedish litotes may be an example; Geurts 2011 observes such cross-linguistic differences for other non-scalar Quantity implicatures.)
 2. I predict interpersonal variation with respect to a) degree of conventionalization (Levinson, 2000) and b) identification of M-alternatives, e.g.: *Is Twiggy chubbier than Kate Moss?*

3.5 Other types of constructions

- Analytic comparatives (e.g. *Adam is more tall than Doug*) are marked relative to synthetic ones when both are possible; they are also, predictably, evaluative (Matushansky, 2001; Pancheva, 2006)
- The same is true for comparisons of deviation (e.g. *Adam is more tall than he is wide*); they are also, predictably, evaluative (cf. indirect comparatives, e.g. *Adam is taller than he is wide*; Bale, 2008))
- MP equatives (e.g. *The building is as tall as 5,000ft*) are marked wrt MP constructions (e.g. *The building is 5,000ft tall*), and are also, predictably, evaluative (Rett, 2014)
- Verbal constructions like degree achievements (e.g. *The soup cooled*) are optionally evaluative
 - Unlike positive constructions, they are not tautologous...
 - ...But they can be uninformative in some contexts. In these contexts, they carry an unformativity-based Quantity implicature.
 - *The soup cooled* is evaluative when it’s understood that there will be a temperature decrease, and non-evaluative in other contexts (e.g. the soup is placed in a chamber with some unknown gas).
- Evaluative DPs are the direct degree correlates of Grice’s example of unformativity-based Quantity implicatures: the nonspecific indefinite *a woman* in *X is meeting a woman this evening*.

(47) a. Doug owns a number of shoes.
 b. You’ve got some nerve.

 - Morzycki (2009) makes similar points, as does Sassoon (2011): “[*I*]t weighs conveys *It weighs a lot*, rather than *It weighs something* perhaps due to the triviality of the latter...” (p.543).

4 Summary

- Evaluativity is wide-spread! But it’s not everywhere. So we don’t want it lexically encoded in the meaning of adjectives.
- Some constructions tend not to be evaluative (e.g. comparatives with relative adjectives): these constructions are meaningful and not synonymous with their antonymic counterparts.
- Some constructions tend to be evaluative regardless of which antonym they’re formed with (e.g. the positive construction): these are degree tautologies, and thereby give rise to evaluativity as an unformativity-based Quantity implicature.
- Some constructions only tend to be evaluative when formed with a negative antonym or some additional morphemes: they give rise to evaluativity as a Manner implicature.
- Evaluativity behaves as predicted, given independent observations about the behavior of (non-scalar) conversational implicatures with respect to discourse-sensitivity, embeddability, and cancellability.
- We need a theory of the semantics/pragmatics interface that allows for the embeddability, etc., of (non-syntactically-encoded) implicature, like evaluativity, but also other Manner and Quantity implicatures.
- The arguments I’ve made here (and more!) are presented in much more detail in Rett (2015).

References

- Bale, A. (2008). A universal scale of comparison. *Linguistics and Philosophy*.
- Barker, C. (2002). The dynamics of vagueness. *Linguistics and Philosophy*, 25:1–36.
- Bartsch, R. and Vennemann, T. (1972). The grammar of relative adjectives and comparison. *Linguistische Berichte*, 20:19–32.
- Bierwisch, M. (1989). The semantics of gradation. In Bierwisch, M. and Lang, E., editors, *Dimensional Adjectives: Grammatical Structure and Conceptual Interpretation*, pages 71–237. Springer-Verlag.
- Bolinger, D. (1972). *Degree words*. Mouton, Paris.
- Brasoveanu, A. and Rett, J. (2016). Evaluativity across adjective and construction types: an experimental study. Ms., UC Santa Cruz and UCLA.
- Breakstone, M. (2012). Inherent evaluativity. In Aguilar, A., Chernilovskaya, A., and Nouwen, R., editors, *Proceedings of Sinn und Bedeutung 16*. MITWPL.
- Chierchia, G. (2004). Scalar implicatures, polarity phenomena and the syntax/pragmatic interface. In Beletti, A., editor, *Structures and Beyond*, pages 39–103. Oxford University Press.
- Cresswell, M. (1976). The semantics of degree. In Partee, B., editor, *Montague Grammar*, pages 261–292. Academic Press.
- Doetjes, J. (2012). On the (in)compatibility of non neutral adjectives and measure phrases. In Guevara, A., Chernilovskaya, A., and Nouwen, R., editors, *Proceedings of SuB 16*. MITWPL.
- Geurts, B. (2011). *Quantity implicatures*. Cambridge University Press.
- Grano, T. (2012). Mandarin *hen* and universal markedness in gradable adjectives. *Natural Language and Linguistic Theory*, 30:513–565.
- Grice, P. (1975). Logic and conversation. In Cole, P. and Morgan, J., editors, *Syntax and Semantics*, volume 3. Academic Press.
- Hay, J., Kennedy, C., and Levin, B. (1999). Scalar structure underlies telicity in “degree achievements”. In Matthews, T. and Strolovitch, D., editors, *Proceedings of SALT IX*, pages 127–144. CLC Publications.
- Heim, I. (2007). Little. In Gibson, M. and Howell, J., editors, *Proceedings of SALT XVI*. CLC Publications.
- Hirschberg, J. (1991). *A theory of scalar implicature*. Garland.
- Horn, L. (1972). *On the semantic properties of the logical operators in English*. PhD Thesis, UCLA.
- Horn, L. (1984). Toward a new taxonomy for pragmatic inference: Q- and R-based implicature. In Shiffrin, D., editor, *Meaning, form, and use in context*, pages 11–42. Georgetown University.
- Horn, L. (1989). *A natural history of negation*. University of Chicago.
- Horn, L. (1991). Duplex negatio affirmat... the economy of double negation. *Chicago Linguistics Society*, 27:80–106.
- Huitink, J. and Spenader, J. (2004). Cancellation resistant PCs. In van der Sandt, R. and Geurts, B., editors, *Proceedings of the ESSLLI 2004 Workshop on Implicature and Conversational Meaning*.

- Jespersen, O. (1965). *The Philosophy of Grammar*. W. W. Norton & Co. Originally published 1924, Allen & Unwin, London.
- Katzir, R. (2007). Structurally-defined alternatives. *Linguistics and Philosophy*, 30:669–690.
- Kennedy, C. (1999). *Projecting the adjective: The syntax and semantics of gradability and comparison*. Garland Press.
- Kennedy, C. (2007). Vagueness and grammar: The semantics of relative and absolute gradable predicates. *Linguistics and Philosophy*, 30:1–45.
- Kennedy, C. and Levin, B. (2008). Measure of change: the adjectival core of degree achievements. In McNally, L. and Kennedy, C., editors, *Adjectives and adverbs: syntax, semantics and discourse*. Oxford University Press.
- Kennedy, C. and McNally, L. (2005). Scale structure, degree modification and the semantic typology of gradable predicates. *Language*, 81(2):345–381.
- Kirchner, G. (1955). *Gradadverbien: Restriktiva und Verwandtes im heutigen Englisch*. Halle.
- Klein, E. (1980). A semantics for positive and comparative adjectives. *Linguistics and Philosophy*, 4:1–45.
- van Kuppevelt, J. (1995). Discourse structure, topicality and questioning. *Journal of Linguistics*, 31:109–147.
- Lehrer, A. (1985). Markedness and antonymy. *Journal of Linguistics*, 21:397–429.
- Levinson, S. (2000). *Presumptive meanings: the theory of generalized conversational implicature*. MIT Press.
- Matushansky, O. (2001). More of a good thing: Russian synthetic and analytic comparatives. In *Proceedings of FASL 10*. University of Michigan Press.
- Morzycki, M. (2009). Degree modification of gradable nouns: size adjectives and adnominal degree morphemes. *Natural Language Semantics*, 17:175–203.
- Morzycki, M. (2012). Adjectival extremeness: degree modification and contextually restricted scales. *Natural Language and Linguistic Theory*, 30:567–609.
- Pancheva, R. (2006). Phrasal and clausal comparatives in Slavic. In Lavine, J., Franks, S., Tasseva-Kurkchieva, M., and Filip, H., editors, *Formal Approaches to Slavic Linguistics 14: The Princeton Meeting*, pages 236–257.
- Piñón, C. (2005). Adverbs of completion in an event semantics. In Verkuyl, H., de Swart, H., and van Hout, A., editors, *Perspectives on Aspect*, pages 149–166. Springer.
- Rett, J. (2007). Antonymy and evaluativity. In Gibson, M. and Friedman, T., editors, *Proceedings of SALT XVII*, pages 210–227. CLC Publications.
- Rett, J. (2008). *Degree Modification in Natural Language*. PhD thesis, Rutgers University.
- Rett, J. (2014). Modified numerals and measure phrase equatives. *Journal of Semantics*, 32:425–475.
- Rett, J. (2015). *The semantics of evaluativity*. Oxford University Press.
- Roberts, C. (1990). *Modal subordination, anaphora, and distributivity*. Garland Press.
- Sadock, J. M. (1978). On testing for conversational implicature. In Cole, P., editor, *Pragmatics*, volume 9 of *Syntax and Semantics*, pages 281–298. Academic Press.
- van der Sandt, R. (1992). Presupposition projection as anaphora resolution. *Journal of Semantics*, 9:333–377.
- Sapir, E. (1944). On grading: A study in semantics. *Philosophy of Science*, 2:93–116. Reprinted in Sapir 1949.
- Sassoon, G. (2011). Be positive! Norm-related implications and beyond. In Reich, I., editor, *Proceedings of Sinn und Bedeutung 15*, pages 531–546. Universaar – Saarland University Press.
- Schwarzschild, R. (2005). Measure phrases as modifiers of adjectives. *Recherches Linguistiques de Vincennes*, 34:207–228.
- Simons, M., Tonhauser, J., Beaver, D., and Roberts, C. (2011). What projects and why. In Li, N. and Lutz, D., editors, *Proceedings of SALT XX*, pages 309–327. CLC Publications.
- von Stechow, A. (1984). Comparing semantic theories of comparison. *Journal of Semantics*, 3:1–77.
- Toledo, A. and Sassoon, G. (2011). Absolute vs. relative adjectives – variance within vs. between individuals. In *Proceedings of SALT 21*, pages 135–154. Cornell University.