Morzycki (2009), "Degree Modification of Extreme Adjectives"

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1 Introduction

We've seen degree modifiers before.

(1) a. completely open/closed
b. 100% dry/clean
c. very tall/short
d. a little bit dangerous/wet

Empirical observation in this paper: some degree modifiers only occur with adjectives that are "extreme" (in an intuitive sense).[1]

- Adjective like *gigantic* is lexically extremely. Combines with *downright* and *flat-out* pretty naturally.
- *Big* doesn't seem to have this flavor with it.

(2) Your shoes are downright/flat-out/positively/full-on
{ gigantic/gorgeous/fantastic
??big/??pretty/??OK } !!!

What is extremeness, semantically? What's special about modifiers like *flat-out* that makes them sensitive to whether an adjective is extreme?

[1] Note that this is an early version of a longer paper, Morzycki 2012.

Intuition:

- Scales have contextually salient areas.
- But, we can sometimes go above or below these contextually salient parts of scales.
- Similar to a speedometer in a car: your car doesn't immediately top out at the top speed on your speedometer, but for most practical purposes its the max speed of your car.

- But, in some cases, you might still exceed what the speedometer reads.

2 More data

More examples of extreme degree modifiers: *simply*, *just*, *positively*, *absolutely*, *flat-out*, *full-on*, *out- and-out*, *downright*, *outright*, *straight-up*, and *balls-out*.

(3) a. simply gigantic/??big
b. just gorgeous/??pretty
c. full-on crazy/??sane
d. flat-out excellent/??adequate

Not just about being able to have high degrees. Being able to have a high degree doesn't correlate with being able to have an extreme degree modifier.

(4) a. very ??excellent/??marvelous/??fantastic/good
b. very ??gigantic/big
c. very ??gorgeous/pretty

Extreme adjectives (EAs) seem to be a natural class, called by Cruse (1986) "implicit superlatives." Three properties of extreme adjectives that Cruse identifies.

First, they occur with the extreme degree modifier *absolutely*.

(5) absolutely huge/enormous/minute/*small/*large

Second, they allow intensification using prosodic prominence.

(6) a. That van is huuuuuuge/??biiiiiiiiiig!
b. This pizza is fantaaaaastic/??goooooood!

Third, they resist being put in the comparative and other degree constructions (though there's a little bit of speaker variability).

(7) a. ?Godzilla is more gigantic than Mothra.
b. ?Monkeys are less marvelous than ferrets.
c. ?Everything is more scrumptious than natto.

There are discourse effects to using EAs, too. First, they are especially good at objecting to something in the discourse. If someone says *Clyde isn't particularly wealthy*, it's possible to object with the EA as in (8).

(8) a. No, hes (outright) destitute.
b. ??Yes, hes (outright) destitute.

(9) a. ??No, hes very poor.
b. Yes, hes very poor.

Second, EAs also have a sense of indifference they convey, as demonstrated with the exchange in (10).

(10) Reginald: I just bought a helper monkey. He is gigantic.
Gladys: ?How big exactly?

Some EAs have all these properties in all contexts, what Morzycki calls "lexical EAs." Their extremeness is part of their lexical semantics. But, there are some that are extreme only in the context of their use, and so vary in context with whether they have all the properties of EAs. These are "contextual EAs."

(11) a. Lexical Extreme Adjectives
fantastic, wonderful, fabulous, gorgeous, resplendent, magnificent, glorious, spectacular, outstanding, tremendous, huge, gigantic, ginormous, mammoth, colossal, tremendous, minuscule, tiny, microscopic, minute, grotesque, delicious, idiotic, inane, destitute, penniless, terrified, obese, phenomenal, marvelous, superb, unflappable, excellent, terrific, monstrous, extraordinary, hideous
b. Contextual Extreme Adjectives
brilliant, certain, obvious, dangerous, reckless, infuriating, obscene, offensive, insulting, ridiculous, absurd, evil, contemptible, stupid, drunk, dead, ugly, dumb, rich, loaded, hopeless, calm, outrageous, incompetent

For instance, *calm* seems to be contextual, since modification by a extreme degree modifier is not always acceptable.

(12) a. Clyde didnt panic during the earthquake–he was flat-out calm.
b. ??In his transcendental meditation class, Clyde was flat-out calm.

Lexical EAs also resist comparatives, but contextual EAs do not. Contextual EAs also do not resist *very*.

(13) a. Clyde is richer/more offensive/more dangerous than Floyd.
b. Clyde is very rich/offensive/dangerous.

Lexical EAs also often have neutral counterparts to which they license entailments, but not always the case with contextual EAs.

(14) a. gigantic → big
b. excellent → good
c. gorgeous → pretty

3 What do EAs do?

Normally, we don't consider all possible individuals when making a claim, both with quantifiers and with degrees (imprecision or very high/low degrees). Contextual domain restrictions on quantifier domains (Westerståhl 1985, Von Fintel 1994).

(15) $[\![\textit{Everyone}_C \textit{ had a good time}]\!] = \forall x \in C[\textbf{person}(x) \rightarrow \textbf{had-a-good-time}(x)]$

Allow us to have a notion of indifference with respect to degrees: we don't care (normally) about degrees that are outside of the contextual domain restriction. Extreme adjectives involve degrees outside of the normal domain restriction, hence in a sense are off the scale.

For starters, assume usual POS denotation.[2]

(16) $[\![\text{POS}]\!] = \lambda a_{\langle e,dt\rangle} \lambda x \exists d[a(x)(d) \wedge d \geq \textbf{standard}(\textbf{scale}(d))]$

Adjectives express that the degree measured is in the context. This comes together with POS in the usual way.

(17) $[\![big_C]\!] = \lambda x \lambda d.d \in C \wedge x$ is d-big

[2] **scale** is a function from degrees to their scales, and **standard** is a function from a scale to a standard on that scale. This departs a little bit from how we've set things up before.

(18) $[\![\text{POS } big_C]\!] = \lambda x \exists d[d \in C \wedge x \text{ is } d\text{-big} \wedge d \geq \textbf{standard}(\textbf{scale}(d))]$

To capture the intuition that extreme adjectives are off the scale, need a slight modification. **max**(C) states the maximum degree on the relevant scale in C.

- Captures intuition to non-extreme adjectives.
- Extremeness is lexically encoded in the adjective.
- Indifference flavor may come from making reference to a degree not at issue in the discourse.
- Reflects intuition that EAs involve parts of the scale.
- That EAs are particularly good for objecting in a discourse may come from them drawing attention to less salient degrees.

(19) $[\![gigantic_C]\!] = \lambda x \lambda d.d > \textbf{max}(C) \wedge x \text{ is } d\text{-big}$

(20) $[\![\text{POS } gigantic_C]\!] = \lambda x \exists d[d > \textbf{max}(C) \wedge x \text{ is } d\text{-big} \wedge d \geq \textbf{standard}(\textbf{scale}(d))]$

Comparative said to be deviant due to comparing non-salient degrees with lexical EA.

(21) ?Godzilla is more gigantic$_C$ than Mothra ~~is gigantic$_C$.~~

Other comparatives are more obviously deviant:

(22) a. #Mothra is more gigantic than Godzilla is big.
b. #Mothra is bigger than Godzilla is gigantic.

These comparatives place conflicting demands on the their degrees. In the former, the *gigantic* degrees are always going to be larger than the *big* degrees, making the comparison tautological. In the second, the *bigger* degrees are always going to be smaller than the *gigantic* degrees, making the comparison contradictory.

4 Extreme degree modifiers and contextually extreme adjectives

How do contextually extreme adjectives work? They cannot have their lexical representations make reference to degrees outside of the context.

One way to think about this is in terms of how wide the domain of quantification is.

- *Everyone* is normally interpreted as "all relevant individuals in C".
- But, possible to expand the domain of quantification via *absolutely*.
- This includes more people that the universal quantifies over.

(23) a. Everyone had a good time.
b. Absolutely everyone had a good time.

Trying this out with lexical EAs, *absolutely* has an intensifying effect.

(24) a. Godzilla is absolutely gigantic.
b. Your monkey is absolutely gorgeous.

With contextual EAs, it has the effect of making the adjective extreme.[3]

(25) a. Clyde is absolutely dead.
b. Floyd is absolutely brilliant.

Basic idea:

- *Absolutely* expands the context associated with the adjective it modifies.
- But, it can't combine with the adjective directly. Type clash.
- In order to access the adjective's context, need to typeshift the adjective so as to make its context variable accessible.

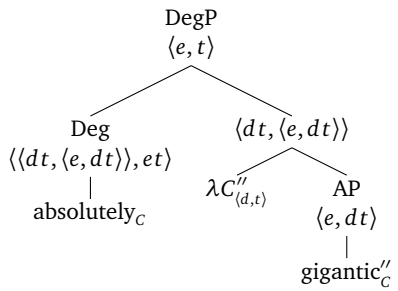
(26) $[\![absolutely_C]\!] = \lambda f_{\langle dt,\langle e,dt\rangle\rangle} \lambda x.\exists C' \exists d \left[\begin{array}{c} C' \supset C \wedge f(C')(x)(d) \wedge \\ d \geq \textbf{standard}(\textbf{scale}(d)) \end{array} \right]$

What happens with a lexical EA? We typeshift the adjective, and then feed this into *absolutely*. We expand the contextual domain upwards, having even larger, non-salient degrees of height.

(27) $[\![absolutely_C]\!]([\![\lambda C'' \; gigantic_{C''}]\!]) = \lambda x.\exists C' \exists d \left[\begin{array}{c} C' \supset C \wedge \\ d > \textbf{max}(C') \wedge x \text{ is } d\text{-big} \wedge \\ d \geq \textbf{standard}(\textbf{scale}(d)) \end{array} \right]$

[3] There's another sense of extremeness with *absolutely full* or *absolutely straight*, where *absolutely* requires more precision than usual. Morzycki sets this aside.

(28)



Somewhat different situation for contextual EAs.

- Expanding the domain upward gives us more degrees of being dead that are outside of the range of normal deadness degrees.
- But, since *dead* is a closed scale, this amounts to having more precise degrees of being dead.

(29) $[\![absolutely_C]\!]([\![\lambda C''\ dead_{C''}]\!]) = \lambda x.\exists C'\exists d\left[\begin{array}{c} C' \supset C \wedge d \in C' \wedge \\ x \text{ is } d\text{-dead} \wedge \\ d \geq \textbf{standard}(\textbf{scale}(d)) \end{array}\right]$

Adjectives that cannot be taken to be extreme or precise are weird with *absolutely*, as predicted. (More generally, seem to predict precisifying meanings with upper-closed scale adjectives.)

(30) a. ??absolutely big
b. ??absolutely pretty

Conclusion: contextual EAs are adjectives who have standards that are not expected to normally hold in a discourse (e.g., outside of the current context C).

5 Other EDMs?

Other EDMs besides *absolutely*. *Downright*, *positively*, and *full-on* seem to be oriented towards expanding the contextual domain upwards. *Downright* can be analyzed as saying that the new context has a higher maximum degree than the old one.

(31) $[\![downright_C]\!] = \lambda f_{\langle dt,\langle e,dt\rangle\rangle}\lambda x.\exists C'\exists d\left[\begin{array}{c} \textbf{max}(C') > \textbf{max}(C) \wedge f(C')(x)(d) \wedge \\ d \geq \textbf{standard}(\textbf{scale}(d)) \end{array}\right]$

Other possible relations in the lexical semantics of EDMs.

> This does not exhaust the effects of various EDMs, of course. There are other subtleties that merit attention. Among these are the *outright* and *out-and-out*, which seem to suggest something like overtness or obviousness; *straight-out* especially seems to suggest something like honesty; and *balls-out* seems to suggest something like recklessness or brazenness. The hope is that that some of these additional subtleties could be captured by elaborating on the approach to their extremeness-sensitivity reflected here. (Morzycki 2009: 12)

Is *very* an EDM? Some facts worth noting.

- *Very* seems to be a good follow-up to an EDM with a contextual EA.
- But, not a very good follow-up with a lexical EA.
- The first set of data seems to suggest that the *very* is stronger than an EA.
- However, the second set seems to show the opposite, that *very drunk* is weaker than an EA.

(32) a. Floyd got downright drunk—very drunk.
b. #Floyd got very drunk—downright drunk.

(33) a. #Floyd got wasted—very drunk, in fact.
b. Floyd got very drunk—wasted, in fact.

How to explain this?

- *Very* works with contextual domains already established.
- Degree high in the contextual domain C.

(34) $[\![very_C]\!] = \lambda a_{\langle e,dt\rangle}\lambda x.\,\textsc{most}(\lambda d'.d' \in C \wedge d' \geq \textbf{standard}(\textbf{scale}(d')))(\lambda d'.a(x)(d'))$

To be *very drunk*, one must be drunk to most salient degrees above the salient standard. But, this is weaker than a lexical EA, since lexical EAs exceed all salient degrees.

(35) $[\![very_C\ drunk]\!] = \lambda x.\,\textsc{most}\Big(\lambda d'\Big[\begin{array}{l} d' \in C \wedge \\ d' \geq \textbf{standard}(\textbf{scale}(d')) \end{array}\Big]\Big)\Big(\lambda d'\Big[\begin{array}{l} d' \in C \wedge \\ x \text{ is } d'\text{-drunk} \end{array}\Big]\Big)$

The deviancy of EAs with *very* (*??very gigantic*) can be explained by the logical structure of *very*. Putting in an EA asserts that most salient degrees that meet the standard also be ones that exceed the maximum salient degree. This is not possible.

(36) $[\![very_C\ gigantic]\!] = \lambda x.\,\textsc{most}\Big(\lambda d'\Big[\begin{array}{l} d' \in C \wedge \\ d' \geq \textbf{standard}(\textbf{scale}(d')) \end{array}\Big]\Big)\Big(\lambda d'\Big[\begin{array}{l} d' > \textbf{max}(C) \wedge \\ x \text{ is } d'\text{-big} \end{array}\Big]\Big)$

6 Other extreme adjectives? Extreme verbs?

Morzycki doesn't discuss whether there are extreme adjectives for low degrees, but maybe there are. A few examples:

(37) a. a minuscule chance/portion of food/amount of toothpaste
b. a microscopic speck of dust/amount of food
c. a teeny-tiny puppy/guitar/coffee mug

Some assorted comments:

- *Minuscule* is already interesting. Some cursory Google searching leads me to think it preferentially already combines with things that denote degrees or can be shifted to degrees.
- *Microscopic* is more clearly extreme, since it has a literal meaning ("something that can only be seen with a microscope") and an extreme meaning ("smaller than usually expected").
- I think *teeny-tiny* might also be extreme. (Thanks to Jan-Frederick to pointing out this example.)

Maybe there are extreme verbs, too, (in a sense). Can be modified prosodically or with EDMs.[4]

(38) a. Bees were swarming in the garden, but there weren't so many of them.
b. The garden was swarming with bees, #but there weren't so many of them.

(39) a. ??Bees were downright swarming in the garden.
b. The garden was downright swarming with bees.

Maybe also nouns (cf. Masià (2018))?

(40) a. complete idiot
b. total stranger

References

Cruse, D. A. 1986. *Lexical semantics*. Cambridge: Cambridge University Press.

Masià, Melania S. 2018. Extreme nouns and maximizers. In Uli Sauerland & Stephanie Solt (eds.), *Proceedings of Sinn und Bedeutung 22*, 143–161.

Morzycki, Marcin. 2009. Degree modification of extreme adjectives. In Ryan Bochnak, Nassira Nicola, Peter Klecha, Jasmin Urban, Alice Lemieux & Christina Weaver (eds.), *Proceedings from the Annual Meeting of the Chicago Linguistic Society (CLS) 45*, 471–485.

Morzycki, Marcin. 2012. Adjectival extremeness: Degree modification and contextually restricted scales. *Natural Language & Linguistic Theory* 30(2). 567–609.

Von Fintel, Kai. 1994. *Restrictions on quantifier domains*: University of Massachusetts at Amherst dissertation.

Westerståhl, Dag. 1985. Logical constants in quantifier languages. *Linguistics and Philosophy* 8(4). 387–413.

[4] Based on data from Katie Fraser & Daniel Hole, p.c./talks given at DGfS 40 in Stuttgart, TbiLLC 2017 & 2019, and the 2019 Event Semantics Workshop.