

Nouns, Scales, and Degrees

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1 Introduction

Overall theoretical issue: Do nouns have degree arguments?

Empirical issue: What's going on in (1)?:

- (1) a. real $\left\{ \begin{array}{l} \text{idiot} \\ \text{smoker} \\ \text{sportscar} \end{array} \right\}$
b. big $\left\{ \begin{array}{l} \text{idiot} \\ \text{smoker} \\ \text{\#sportscar} \end{array} \right\}$
c. utter $\left\{ \begin{array}{l} \text{idiot} \\ \text{\#smoker} \\ \text{\#sportscar} \end{array} \right\}$

Agenda:

- nouns resemble 'non-dimensional' adjectives such as *pretty* and *lazy* (Bierwisch 1988a,b, 1989),¹ and consequently (may) have no degree argument inherently
- distinguish 3(-ish) kinds of adnominal degree modifier, and 3 kinds of noun
- certain modifiers simulate the effect of a nominal degree argument via prototypicality
- others do so indirectly by accessing the dimensions associated with a noun

¹Bierwisch called these 'evaluative adjectives'. I will avoid the term.

2 Nominal Gradability and Non-Dimensionality

2.1 Grading nouns

Why would one even suspect nouns of having degree arguments, or of being gradable at all?

A priori: Nouns are vague (*heap, genius, giant, lunatic*). Gradability and vagueness are deeply connected.

Various means of grading nouns:

- (2) Clyde is more phonologist than phonetician.
(3) a. Clyde is more of an idiot than Floyd.
b. Clyde is a bigger idiot than Floyd.

- (4) Clyde is a(n) $\left\{ \begin{array}{l} \text{big} \\ \text{slight} \\ \text{outright} \\ \text{flat-out} \\ \text{absolute} \end{array} \right\}$ idiot

But, nouns aren't as naturally gradable as adjectives. So what's the difference?

2.2 Non-dimensional adjectives

Bierwisch (1988a,b, 1989): Adjectives come in two flavors:

- dimensional adjectives: *tall, heavy, hot*
- non-dimensional ('evaluative') adjectives: *stupid, ugly, lazy*

The crucial intuition: non-dimensional adjectives are 'less clearly delimited and less systematically structured' (Bierwisch 1988a).

Dimensional adjectives have antonyms that use the same scale:

- a short person has some degree of tallness
- a light object has some degree of heaviness
- a cold object has some degree of hotness

Bierwisch says that non-dimensional adjectives lack antonyms on the same scale:

- a stupid person does not have some degree of intelligence
- a ugly person does not have some degree of beauty
- a lazy person does not have some degree of industriousness

Not actually obvious?

More clear-cut: non-dimensional adjectives generally have minimal standards (in the Kennedy & McNally 2005 sense):²

- (5) a. Clyde is taller than Floyd. \nVdash Clyde is tall.
 b. This board is longer than that one. \nVdash This board is long.
- (6) a. Clyde is stupider than Floyd. \models Clyde is stupid.
 b. Clyde is lazier than Floyd. \models Clyde is lazy.

Compatible with *slightly* (a diagnostic for minimal standards; Rotstein & Winter 2001):

- (7) a. #Clyde is slightly tall.
 b. #This board is slightly long.
- (8) a. Clyde is slightly stupid.
 b. Clyde is slightly lazy.

Dimensional adjectives come in positive-negative antonym pairs:

- (9) a. tall \longleftrightarrow short
 b. heavy \longleftrightarrow light
 c. hot \longleftrightarrow cold

Non-dimensional ones come in clusters at each pole:

- (10) a. brave, bold, courageous \longleftrightarrow cowardly, timid, fearful
 b. clever, bright, shrewd, intelligent, brilliant \longleftrightarrow stupid, idiotic, foolish, bone-headed

²I'm reformulating Bierwisch substantially here. Also, the entailments in (6a) and (6b) reflect a convergence in what Bierwisch and Neeleman et al. (2004), Rett (2008a) and Rett (2008b) mean by 'evaluative'.

- c. pretty, beautiful, gorgeous, attractive, handsome \longleftrightarrow ugly, unattractive, hideous, repellant, grotesque
 d. lazy, indolent, unproductive \longleftrightarrow hard-working, industrious, workaholic

Some, on the other hand, may not have any clear-cut antonyms:

- (11) a. shy \longleftrightarrow ?
 b. jolly \longleftrightarrow ?

I suspect (10) and (11) are the same fact.

Bierwisch's conclusion: non-dimensional adjectives are essentially not gradable. No degree argument.

Immediately worrying, due to e.g. (12):

- (12) a. Clyde is $\left\{ \begin{array}{l} \text{uglier} \\ \text{stupider} \\ \text{braver} \\ \text{lazier} \end{array} \right\}$ than Floyd.
- b. Clyde is very $\left\{ \begin{array}{l} \text{ugly} \\ \text{stupid} \\ \text{brave} \\ \text{lazy} \end{array} \right\}$.

To address this, Bierwisch suggests a type-shifting operation exploiting orderings already in the domain.

2.3 Back to nouns

Maybe nouns are like non-dimensional adjectives? Therefore:

- No degree argument.
- Not directly gradable.
- But gradable indirectly.

Like non-dimensional adjectives, nouns have antonyms that may (plausibly?) be on different scales:

- an idiot does not have some degree of genius
- a jerk does not have some degree of courteousness

- a mistake does not have some degree of deliberateness (or advised-ness)
- bullshit does not have some degree of... uh, sincerity? value?

Like them, nouns seem to have minimal standards:

(13) Clyde is $\left\{ \begin{array}{l} \text{a bigger idiot} \\ \text{more of an idiot} \end{array} \right\}$ than Floyd. \models Clyde is an idiot.

(14) Clyde is $\left\{ \begin{array}{l} \text{a bigger jerk} \\ \text{more of an jerk} \end{array} \right\}$ than Floyd. \models Clyde is a jerk.

(15) This is (even) bigger bullshit than that is. \models This is bullshit.

Compatible with *slight* (which might be like *slightly*):

- (16) a. Clyde is a slight $\left\{ \begin{array}{l} \text{idiot} \\ \text{jerk} \end{array} \right\}$.
- b. There was some slight bullshit on page 12, but overall this paper is pretty reasonable.

Clusters at each pole rather than single antonyms:

- (17) a. idiot, moron, cretin, halfwit, imbecile \longleftrightarrow genius, prodigy, mastermind
- b. jerk, asshole, bastard, prick \longleftrightarrow mensch, gentleman, good egg
- c. bullshit, horseshit, crap, garbage \longleftrightarrow truth, insight, pearl of wisdom, brilliance, sincerity

Straining at one pole? But: the other property of non-dimensional adjectives was lacking clear-cut antonyms.

This all provides an answer to the question of why it is adjectives that are most suited to expressing scalar notions:

- some adjectives are dimensional and have degree arguments
- no nouns are, so no nouns do

2.4 Main points so far

- nouns are gradable
- they resemble Bierwisch's non-dimensional adjectives
- let's assume Bierwisch is right about these adjectives lacking degree arguments and extend this to nouns

3 Varieties of adnominal degree modification

3.1 Degree words in DP

The modifiers in (18) are not actually adjectives:

(18) $\left\{ \begin{array}{l} \text{true} \\ \text{real} \\ \text{slight} \\ \text{total} \\ \text{utter} \\ \text{absolute} \\ \text{outright} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{magic} \\ \text{bullshit} \end{array} \right\}$

Not the same meaning as homophonous adjectives:

- *true bullshit* would, on the usual meaning of *true*, border on being a contradiction (also *true lies*)
- Daniel Dennett³: *real magic* is the kind that isn't real, and *fake magic* is the kind that is
- *total idiot* but not *#partial idiot*

These are bad predicatively, on the relevant reading:

(19) $\# \text{That} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{magic} \\ \text{bullshit} \end{array} \right\} \text{ is } \left\{ \begin{array}{l} \text{true} \\ \text{real} \\ \text{slight} \\ \text{total} \\ \text{utter} \\ \text{absolute} \\ \text{outright} \end{array} \right\}.$

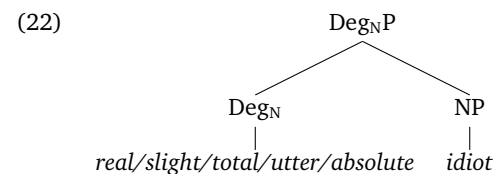
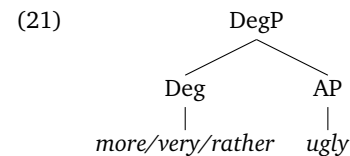
³In a TED talk at http://www.ted.com/talks/dan_dennett_on_our_consciousness.html.

They can't in general support their own degree modification, on the relevant reading:

- (20) #some $\left\{ \begin{array}{l} \text{absolutely true} \\ \text{completely real} \\ \text{rather slight} \\ \text{rather total} \\ \text{very utter} \\ \text{quite absolute} \\ \text{fully outright} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{magic} \\ \text{bullshit} \end{array} \right\}$

So, these are actually members of a distinct syntactic category, directly analogous to Deg in AP.

Assuming a syntax in the style of Kennedy (1997), Abney (1987), Corver (1990), Grimshaw (1991) and others (cf. Bresnan 1973, Heim 2000, Bhatt & Pancheva 2004), extended AP as in (21), and extended NP as in (22):



Consequently, nominal degree words are heads and cannot support their own degree modifiers.

Often, adnominal degree words have clear ad-adjectival degree word cognates:

- (23) a. true: truly
 b. real: really
 c. utter: utterly
 d. slight: slightly
 e. veritable: very
 f. outright: outright (e.g., *outright dead*)

This would clarify an avenue for historical change:

- (24) ordinary adjective →
 adnominal degree word →
 (ad-adjectival) degree word.

3.2 A crude taxonomy

Caveats:

- lots of subtleties with particular modifiers I don't understand (help?)
- fair bit of variation among speakers
- not always clear what should count as a degree reading

Real and *true* occur relatively freely:

- (25) $\left\{ \begin{array}{l} \text{real} \\ \text{true} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{bullshit} \\ \text{idiot} \\ \text{smoker} \\ \text{basketball fan} \\ \text{American} \\ \text{sportscar} \end{array} \right\}$

More of a has a similarly free distribution:⁴

- (26) This is more of a $\left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{smoker} \\ \text{basketball fan} \\ \text{American} \\ \text{sportscar} \end{array} \right\}$.

Not all adnominal degree modifiers are so free, however:⁵

⁴I omit **more of a bullshit* because the problem there is presumably an independent syntactic issue.

⁵I will treat *big* and other size adjectives with degree readings as adnominal degree words here. They are, however, phrasal (*very big idiot*), and have a slightly different grammar (Morzycki 2009a). I will set these complications aside here.

$$(27) \quad \left\{ \begin{array}{l} \text{big} \\ \text{huge} \\ \text{major} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{smoker} \\ \text{basketball fan} \\ \# \text{American} \\ \# \text{sportscar} \end{array} \right\}.$$

Many are more restricted still:⁶

$$(28) \quad \left\{ \begin{array}{l} \text{utter} \\ \text{complete} \\ \text{absolute} \\ \text{incredible} \\ \text{astonishing} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \# \text{smoker} \\ \# \text{basketball fan} \\ \# \text{American} \\ \# \text{sportscar} \end{array} \right\}.$$

There are at least three classes of degree modifier here (probably more):

- the *real* class: occur freely with various kinds of NP
- the *big* class: occur with nouns such as *smoker* and *basketball fan* but not *American* or *sportscar*
- the *utter* class: are incompatible even with *smoker* and *basketball fan*

This is also a taxonomy of nouns, with three natural classes determined by which degree modifiers they co-occur with.

What might this reveal about the semantics of these degree modifiers, and of the nouns themselves?

4 The *real* class

4.1 Prototypicality

The most unrestricted adnominal degree words seem to be *real*, *true*, and *more of a*.

What they might be doing: indicating prototypicality.

⁶I'm not actually sure *incredible* and *astonishing* are not actually just the ordinary adjectives here. (?*That idiot is astonishing.*)

Not completely shocking. Kamp & Partee (1995), Sassoon (2007): prototypes are probably important not just psychologically but also for compositional semantics.

This is true(/real/prototypical) prototypicality, not the kind associated with class membership:

- one notion of prototypicality: basically about membership in classes with fuzzy boundaries—vagueness as to who is an idiot and what is a mistake
- other notion of prototypicality: genuinely about resemblance to a prototype—an ostrich and a penguin are unambiguously birds, but not prototypical ones

These two notions often wind up identical (Kamp & Partee 1995). This is the case for *idiot*, for example: The closer one is to the idiot prototype, the more unambiguously one is an idiot.⁷

- (29) a. Clyde is a $\left\{ \begin{array}{l} \text{real} \\ \text{true} \end{array} \right\}$ idiot.
 b. This is $\left\{ \begin{array}{l} \text{real} \\ \text{true} \end{array} \right\}$ bullshit.
 c. This is a $\left\{ \begin{array}{l} \text{real} \\ \text{true} \end{array} \right\}$ disaster.

What (29a) conveys (more or less): that Clyde is very like a prototypical idiot. This also means that wherever one draws the boundaries for idiocy, Clyde is more likely to fall within them than if he were just an ordinary idiot.

Perhaps *smoker* and *basketball fan* work similarly:

$$(30) \quad \text{Clyde is a } \left\{ \begin{array}{l} \text{real} \\ \text{true} \end{array} \right\} \left\{ \begin{array}{l} \text{smoker} \\ \text{basketball fan} \end{array} \right\}.$$

American and *sportscar* probably don't, since here prototypicality and class membership seems diverge:

⁷The fact that the notion I need is proper prototypicality and not class-membership means that the formalization K&P propose, which uses supervaluations and partial models to account for nominal vagueness, can't just be directly imported.

- (31) a. Clyde is a $\left\{ \begin{smallmatrix} \text{real} \\ \text{true} \end{smallmatrix} \right\}$ American.
 b. This is a $\left\{ \begin{smallmatrix} \text{real} \\ \text{true} \end{smallmatrix} \right\}$ sportscar.

The nouns in (30) and (31) have in common, however, that different contexts provide different ways of measuring closeness to the prototype:

- (32) a. Floyd is a smoker, but only an occasional one. Clyde, on the other hand, is a *real* smoker—he smokes constantly.
 b. Clyde smokes constantly, but he’s not that into it. Floyd, on the other hand, is a *real* smoker—he won’t shut up about his damn cigars.
- (33) a. Floyd’s car looks pretty snazzy. Under the hood, though, it’s basically a Honda Civic. Clyde’s car, on the other hand, is a *real* sportscar. You wouldn’t know it from looking at it, but it drives like a Lamborghini.
 b. Clyde’s car may drive pretty well, sure, but it looks like a Honda Civic. Floyd’s car, though, is really sleek and snazzy... It’s a *real* sportscar.

Whatever the level of prototypicality involved, *real* and *true* entail that the nominal predicate holds absolutely:

- (34) Clyde is a $\left\{ \begin{smallmatrix} \text{real} \\ \text{true} \end{smallmatrix} \right\}$ idiot. \models Clyde is an idiot.

So, what *real* requires is that the nominal predicate hold, and that the degree to which the individual resembles the prototype (given the context) be large:⁸

⁸I’ve formulated this with slightly more moving parts than may actually be necessary. This is for the purpose of using a *d* in the denotation explicitly to better reflect how this related to degree modification. I assume that degrees are real numbers in $[0, 1]$ and higher degrees represent greater similarity, so that in every context *c*, $x \approx_{1,c} x$ and $\{x : x \approx_{0,c} y\}$ is identical to the domain of individuals (for all *x*, *y*). The predicate *large* is of course itself vague and in that sense context-sensitive.

- (35) a. $\llbracket \text{real} \rrbracket^c = \lambda f_{\langle e, t \rangle} \lambda x . f(x) \wedge \text{large}_c(\max\{d : x \approx_{d,c} \text{prototype}(f)\})$
 b. $\llbracket \text{Clyde is a real idiot} \rrbracket^c = \text{idiot}(\text{Clyde}) \wedge \text{large}_c(\max\{d : \text{Clyde} \approx_{d,c} \text{prototype}(\text{idiot})\})$

There is a degree argument at play here, but it is not at play *compositionally*.

Absence of predicative uses follows from their syntax and from their type.

4.2 Halos?

A similar alternative approach: modulation of pragmatic slack (Lasersohn (1999).

- the pragmatic halo of a predicate is a set of related meanings that, for the purposes of the discourse, are sufficiently similar to it
- a way to a model of imprecision (and not necessarily just scalar vagueness)
- the halo around *six feet tall*, for example, might be $\{\llbracket 5.8 \text{ feet tall} \rrbracket, \llbracket 5.9 \text{ feet tall} \rrbracket, \llbracket 6.0 \text{ feet tall} \rrbracket, \llbracket 6.1 \text{ feet tall} \rrbracket\}$

On this kind of view, *real* would reduce the amount of pragmatic slack afforded in judging an expression true:

- a real idiot is someone who is an idiot even if we interpret *idiot* more restrictively or precisely than we otherwise would (wrt less pragmatic slack)
- a real sportscar is one that is a sportscar if we interpret *sportscar* more restrictively in a way consistent with the context

Real might mean that the degree of resemblance to a nominal predicate required to find one that holds of an individual be large:⁹

- (36) a. $\llbracket \text{real} \rrbracket^c = \lambda f_{\langle e, t \rangle} \lambda x . \text{large}_c \left(\max \left\{ d : \exists f' \left[\begin{smallmatrix} f'(x) \wedge \\ f' \approx_{d,c} f \end{smallmatrix} \right] \right\} \right)$

⁹I’ll represent halos very differently from Lasersohn, in part to maximize the resemblance to (35). But the intention is the same.

$$\begin{aligned} \text{b. } \llbracket \text{Clyde is a real idiot} \rrbracket^c \\ = \text{large}_c \left(\max \left\{ d : \exists f' \left[\begin{matrix} f'(Clyde) \wedge \\ f' \approx_{d,C} \text{idiot} \end{matrix} \right] \right\} \right) \end{aligned}$$

How to distinguish the two approaches?

Nouns with (probably) no prototypes, such as *male nurse* (Kamp & Partee 1995) or *nonsmoker*:

- (37) a. #?Floyd is a $\left\{ \begin{matrix} \text{real} \\ \text{true} \end{matrix} \right\}$ male nurse.
b. #?Floyd is a $\left\{ \begin{matrix} \text{real} \\ \text{true} \end{matrix} \right\}$ nonsmoker.

This suggests that the prototype approach is preferable. But:

- (38) a. Floyd is more of a male nurse than Clyde.
b. Floyd is more of a nonsmoker than Clyde.

Maybe *real* and *true* are about prototypes, but *more of a* is about halos?¹⁰

5 The *big* class

5.1 Dimensions

Repeating (27):

$$(39) \quad \left\{ \begin{matrix} \text{big} \\ \text{huge} \\ \text{major} \end{matrix} \right\} \left\{ \begin{matrix} \text{disaster} \\ \text{idiot} \\ \text{smoker} \\ \text{basketball fan} \\ \text{\#American} \\ \text{\#sportscar} \end{matrix} \right\}.$$

What's the relevant distinction among these nouns?

Some adjectives are indeterminate wrt which dimension they use:

¹⁰*More of a* comparatives may actually be a form of metalinguistic comparative, which may generally regulate imprecision in this way (Morzycki 2009b). Giannakidou & Yoon (2009) provide some significant arguments against such an approach.

- (40) a. The US is bigger than Canada. (population)
b. Canada is bigger than the US. (area)

At a minimum, *big* must in some sense make these multiple dimensions available. To represent this, a predicate *dimensions*:

$$(41) \quad \text{dimensions}(\text{big}) = \{\text{big-by-population}, \text{big-by-area}, \dots\}$$

Sassoon (2007) provides a highly articulated theory of how this might work.

To be *big*, it is sufficient to exceed the standard on just one dimension in (41), as (40) reflects. One might achieve this result by assigning to the positive degree morpheme POS (von Stechow 1984, Kennedy 1997, others) not a normal denotation as in (42), but rather (43):¹¹

$$(42) \quad \llbracket \text{POS} \rrbracket = \lambda g_{\langle d, et \rangle} \lambda x . \exists d [g(d)(x) \wedge d \geq \text{standard}(g)]$$

$$\begin{aligned} (43) \quad \text{a. } \llbracket \text{POS} \rrbracket &= \lambda g_{\langle d, et \rangle} \lambda x . \exists D \left[\begin{matrix} D \in \text{dimensions}(g) \wedge \\ \mu(D)(x) \geq \text{standard}(D) \end{matrix} \right] \\ \text{b. } \llbracket \text{Canada is POS big} \rrbracket \\ &= \exists D \left[\begin{matrix} D \in \text{dimensions}(\text{big}) \wedge \\ \mu(D)(\text{Canada}) \geq \text{standard}(D) \end{matrix} \right] \end{aligned}$$

This requires that there be a dimension among the dimensions of the adjective along which the measure of an individual exceeds the standard. Thus (43b) is true iff there is a dimension of bigness along which Canada exceeds the standard.

Exceeding the standard along a dimension is a sufficient condition for satisfying a predicate. A means of representing indeterminacy.

For a noun like *chair*...

- there are many distinct qualities an object must have to be a chair
- some of these qualities may be gradable, and in that sense 'dimensions'

¹¹I will use $\mu(D)$ to represent the measure function associated with a dimension D .

- but there is no dimension such that exceeding its standard is sufficient to satisfy the predicate¹²

In light of this, because *dimensions* represents sufficient conditions, *dimensions(chair)* is undefined.¹³

Not all nouns work this way. *Smoker* and *basketball fan* are indeterminate (as is *big*). So perhaps:

- (44) a. $\text{dimensions}(\text{smoker}) = \{\text{frequency-of-smoking}, \text{enthusiasm-for-smoking}\}$
 b. $\text{dimensions}(\text{basketball-fan}) = \left\{ \begin{array}{l} \text{attention-devoted-to-basketball}, \\ \text{enthusiasm-for-basketball}, \\ \text{knowledge-about-basketball} \end{array} \right\}$

This differs from the prototype business above at least in that these constitute membership criteria.¹⁴

5.2 What these modifiers do

The intuition: *big*-class modifiers require that a noun that has indeterminacy dimensions of this sort. Beyond that, it simply predicates bigness of an associated degree:

- (45) a. $\llbracket \text{big} \rrbracket = \lambda f_{\langle e, t \rangle} \lambda x . \exists D \left[\begin{array}{l} D \in \text{dimensions}(f) \wedge \\ \text{big}_c(\mu(D)(x)) \end{array} \right]$
 b. $\llbracket \text{Clyde is a big smoker} \rrbracket = \exists D \left[\begin{array}{l} D \in \text{dimensions}(\text{smoker}) \wedge \\ \text{big}_c(\mu(D)(\text{Clyde})) \end{array} \right]$

Clyde is a big smoker iff there is a dimension of smoker-hood along which Clyde is mapped to a big degree.

¹²This adapts/simplifies/mangles a distinction Sassoon makes between ‘conjunctive’ and ‘disjunctive’ predicates.

¹³Or the empty set. Taking the former route will prove more convenient.

¹⁴The divergence between the two would be especially clear for *big*, where presumably there is no prototypical big thing. It’s worth noting here as well that, given this representation, one might imagine nouns are just like adjectives except that they have the denotation of POS above ‘built in’ lexically.

Idiot is not indeterminate in the way that *smoker* is:

$$(46) \quad \text{dimensions}(\text{idiot}) = \{\text{idioty}\}$$

Clyde is a big idiot will come out meaning (47):

$$(47) \quad \llbracket \text{Clyde is a big idiot} \rrbracket = \exists D [D \in \text{dimensions}(\text{idiot}) \wedge \text{big}_c(\mu(D)(\text{Clyde}))] = \text{big}_c(\mu(\text{idioty})(\text{Clyde}))$$

American and *sportscar* are like *chair*, however. For them, *dimensions* is undefined. As a consequence, *#Clyde is a big American* is ill-formed.

Potential sticky points:

- it’s crucial here that dimensions be individuated in a particular way
- what goes wrong in *#big bullshit*? given the above, it should be no worse than *big idiot*¹⁵

6 The utter class

Repeating (28):

$$(48) \quad \left\{ \begin{array}{l} \text{utter} \\ \text{complete} \\ \text{absolute} \\ \text{incredible} \\ \text{astonishing} \end{array} \right\} \left\{ \begin{array}{l} \text{disaster} \\ \text{idiot} \\ \text{\#smoker} \\ \text{\#basketball fan} \\ \text{\#American} \\ \text{\#sportscar} \end{array} \right\}.$$

What’s special about this class of nouns? Not sure what’s going on here.

DIMENSIONS AGAIN Maybe *utter* is like *big*, but it requires that a noun be both scalar and indeterminate—that it have exactly one member of *dimensions*:

$$(49) \quad \llbracket \text{utter} \rrbracket = \lambda f_{\langle e, t \rangle} \lambda x . \text{large}_c(\mu(\iota D [D \in \text{dimensions}(f)])(x))$$

¹⁵If, on the other hand, *big* were simply the ordinary non-degree adjective *big* in this example, the ungrammaticality would be expected. One reason might be the monotonicity properties explored in Schwarzschild (2005).

This would rule out *#utter smoker*. But: what goes wrong in *?utter heap*, then?

SCALE STRUCTURE Many of the modifiers of this class are cognate with (ad-adjektiv) degree words that (arguably) require upper-closed scales:

- (50) a. $\left\{ \begin{array}{l} \text{utterly} \\ \text{completely} \\ \text{totally} \\ \text{absolutely} \end{array} \right\} \left\{ \begin{array}{l} \text{full} \\ \text{transparent} \\ \text{clean} \\ \text{straight} \end{array} \right\}$
- b. *#* $\left\{ \begin{array}{l} \text{utterly} \\ \text{completely} \\ \text{totally} \\ \text{absolutely} \end{array} \right\} \left\{ \begin{array}{l} \text{tall} \\ \text{open} \end{array} \right\}$

But do we really want to have to say there is an upper bound on idiocy?

EXTREMENESS There is a class of cross-categorial modifiers such as *outright*, *downright* and *flat-out* that occur with ‘extreme adjectives’.¹⁶

- (51) Your shoes are $\left\{ \begin{array}{l} \text{downright} \\ \text{flat-out} \\ \text{positively} \\ \text{full-on} \\ \text{balls-out} \end{array} \right\} \left\{ \begin{array}{l} \text{gigantic} \\ \text{gorgeous} \\ \text{fantastic} \\ \text{??big} \\ \text{??pretty} \\ \text{??OK} \end{array} \right\} !!!$

- (52) Floyd is a $\left\{ \begin{array}{l} \text{downright} \\ \text{flat-out} \\ \text{positively} \\ \text{full-on} \\ \text{balls-out} \end{array} \right\} \left\{ \begin{array}{l} \text{idiot} \\ \text{jerk} \end{array} \right\}.$

In their adnominal use, these seem to fall into the *utterly* class. Perhaps this class requires ‘extreme nouns’?

¹⁶I (attempt to) provide an account of the adjectival use in Morzycki (to appear). Extreme adjectives themselves are discussed in Cruse (1986), Paradis (1997) and Rett (2008b).

7 Final remarks

Summary:

- nouns not only robustly support degree modification, but have a rich and varied array of degree modifiers
- there are at least three classes of adnominal degree modifiers, and three classes of nouns they are compatible with
- nouns resemble Bierwisch’s non-dimensional adjectives, so maybe they don’t have degree arguments
- nominal degree modification is possible because degrees can be ‘retrieved’ in various ways: among them, via prototypicality and via access to lexically-provided dimensions

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