

M-modifiers and varieties of degree modification

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Adjectival degree modifiers have been the subject of extensive research in formal semantics. A broad subclass that has however received relatively little attention are those we call **M(oderate)-degree modifiers** (Bolinger’s 1972 compromisers; Quirk et al.’s 1985 moderators). Members of the class include the English items in (1) and their cross-linguistic counterparts, e.g. German *ziemlich* (van Os 1989), and Dutch *nogal*, *aardig* (Nouwen 2013).

(1) The question is **fairly/pretty/somewhat/quite/rather/kind of/sort of** important.

This paper investigates the semantics of M-modifiers as a route to investigating modes of degree modification available in natural language. The seven M-modifiers above are similar in their truth conditional contribution: all of the variants of (1) could describe a question with a moderately high level of importance. The class is also united in that all M-modifiers are positive polarity items, unlike e.g. *very* (here we put aside a separate use of *quite* in negative contexts). Yet they exhibit distributional and interpretive differences that suggest that they achieve these effects via different compositional means. Corpus data from COCA (Davies 2008-) summarized in Table 1 show: **i) Comparatives:** *somewhat* and to a lesser extent *rather* can modify adjectival comparatives, while *fairly/pretty* cannot (*somewhat/*fairly/*pretty taller; rather/*fairly/*pretty more important*). **ii) Pre-determiner use:** *quite* and *rather* can precede a determiner in a noun phrase containing a gradable adjective or scalar noun (*rather/quite/*fairly/*pretty a stupid man/an idiot*). **iii) Non-adjectival use:** *fairly* and *pretty* are restricted to modifying gradable adjectives; *quite*, *rather* and *somewhat* occur with certain gradable verbs (*I rather/quite like the proposal; the river widened somewhat*); and *sort of/kind of* have the broadest distribution, modifying a range of syntactic categories including both gradable and non-gradable expressions (cf. Anderson 2016). **iv) Adjective class:** As seen in Table 2, *quite* and *kind of / sort of* occur with non-gradable as well as gradable adjectives (*quite free/dead/etc.*); more subtly, we see effects of adjectival scale structure, e.g. *fairly* is rarely found with adjectives with a lower-closed scale (minimum standard adjectives). Furthermore, there are interpretive differences relating to semantic strength (*pretty* > *fairly*; *quite* > *rather*), and the tendency towards attenuation (hedging) vs. understatement (Israel 2006).

We take these patterns to indicate that there are multiple routes to (apparent) degree modification in the adjectival domain. Formally, we take gradable adjectives to express relations between individuals and degrees, with the unmodified form involving a null *EVAL* morpheme (Rett 2008) which introduces a standard of comparison that depends on the structure of the scale lexicalized by the adjective (Kennedy & McNally 2005). We follow Krifka (1995) in assuming a parameter of interpretation *i* that determines the extensions of underspecified items of language, including *EVAL*. We then explain the above patterns as follows: *fairly* and *pretty* take gradable adjectives as arguments, hence their narrow distribution compared to other M-modifiers; *fairly* for example loosens the interpretation of an adjective by introducing a standard equivalent to *EVAL* at the most relaxed contextually available index *i* (see Fig. 1a). The broader distribution of *somewhat* suggests it is a degree quantifier, allowing it to compose with both positive and comparative adjectives as well as verbs with a degree argument (Fig. 1b). It introduces existential quantification: to be *somewhat dirty* is to be dirty to some extent. Finally, following Anderson (2016) we analyze *sort of / kind of* with reference to pragmatic halos (Lasnik 1999), allowing them to compose also with non-gradable expressions; *sort of free* obtains at *i* if a predicate in the halo of *free* at *i* obtains. In all of these cases, the ‘moderate-degree’ meaning is derived via implicature. For example, *Ann is fairly tall* says she is tall on a loose interpretation, implicating she is not tall on other possible (stricter) interpretations.

In the talk, we extend the investigation to *rather / quite*, which are more complex both distributionally and in interpretation. We furthermore propose an account of the PPI status of M-modifiers based on competition with the simpler positive form and other degree modifiers (cf. Solt 2018), and discuss broader implications for the semantics of degree modification.

Table 1: Type of expression modified (Source: COCA)

| | | | | | | |
|--|---------------|---------------|---------------|--------------|-----------------|--------------------------|
| | <i>pretty</i> | <i>fairly</i> | <i>rather</i> | <i>quite</i> | <i>somewhat</i> | <i>sort of / kind of</i> |
|--|---------------|---------------|---------------|--------------|-----------------|--------------------------|

| | | | | | | |
|------------------------|------|------|------------|------------|---------------|-----|
| Gradable Adjective | YES | YES | YES | YES | YES | YES |
| Adjectival Comparative | NO | NO | Rare | Rare | YES | YES |
| Non-Gradable Adjective | Rare | NO | NO | YES | Rare | YES |
| Verb | NO | Rare | Restricted | Restricted | Restricted | YES |
| Spatial Preposition | NO | NO | NO | NO | YES | YES |
| Noun | NO | NO | NO | NO | NO | YES |
| Determiner NP | NO | NO | YES | YES | YES (with of) | YES |

Table 2: Distribution by adjective class (Source: COCA)

| Co-occurrence index (where 1.00 indicates average co-occurrence) | | | | | | |
|--|---------------|---------------|---------------|--------------|-----------------|--------------------------|
| Adjective class | <i>pretty</i> | <i>fairly</i> | <i>rather</i> | <i>quite</i> | <i>somewhat</i> | <i>sort of / kind of</i> |
| OPEN | 1.01 | 0.99 | 1.25 | 0.98 | 0.76 | 0.50 |
| LC | 1.30 | 0.18 | 0.57 | 0.87 | 2.79 | 2.75 |
| UC | 0.93 | 1.60 | 0.37 | 0.98 | 0.80 | 0.86 |
| TC | 0.83 | 0.63 | 0.59 | 1.25 | 2.09 | 3.35 |
| NG | 0.46 | 0.42 | 0.30 | 1.79 | 1.24 | 6.35 |

OPEN (open scale) = {*big, deep, expensive, fat, large, long, rich, strong, tall, thick, wide, cheap, inexpensive, narrow, poor, shallow, short, small, thin, weak*} LC (lower closed scale) = {*bent, bumpy, crooked, dangerous, dirty, impure, incomplete, rough, uncertain, wet*} UC (upper closed scale) = {*certain, clean, complete, dry, flat, pure, safe, smooth, straight*} TC (totally closed scale) = {*open, closed, full, empty, opaque, transparent*} NG (non-gradable) = {*dead, alive, existing, extinct, pregnant, free, priceless, male, female*}

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|--|
| $\llbracket \text{tall} \rrbracket = \lambda d \lambda x. \text{HEIGHT}(x) \geq d \quad \llbracket \text{EVAL} \rrbracket^i = \lambda P \lambda d \lambda x. P(x)(d) \ \& \ \text{std}_i(P)(d)$ <p>a) Fairly: $\llbracket \text{fairly} \rrbracket^i = \lambda P_{\langle d, \text{et} \rangle} \lambda d \lambda x. \text{EVAL}_{i'}(P)(x)(d)$ $= \lambda P_{\langle d, \text{et} \rangle} \lambda d \lambda x. [P(x)(d) \ \& \ \text{std}_{i'}(P)(d)],$ where i' is the loosest contextually available index</p> <p><i>Anna is fairly tall.</i> $\exists d[\text{HEIGHT}(\text{anna}) \geq d \ \& \ \text{std}_{i'}(\text{tall})(d)]$ (i' the loosest index)</p> |
| <p>b) Somewhat: $\llbracket \text{somewhat} \rrbracket^i = \lambda D_{\langle \text{dt} \rangle}. \exists D' \neq \emptyset [D' \subset D]$</p> <p><i>The room is somewhat dirty.</i> $\llbracket \text{somewhat} \rrbracket^i(\lambda d. \text{the room is } d\text{-EVAL } \text{dirty})$ $\exists D' \neq \emptyset [D' \subset \lambda d. \text{DIRTY}(\text{room}) \geq d \ \& \ \text{std}_i(\text{dirty})(d)]$</p> <p><i>Anna is somewhat taller than Zoe.</i> $\exists D' \neq \emptyset [D' \subset \lambda d. \text{HEIGHT}(\text{anna}) > \text{HEIGHT}(\text{zoe}) + d]$</p> |

Figure 1: Formal semantics

REFERENCES: Anderson, C. 2016. Intensification and attenuation across categories. U. Michigan PhD dissertation. Bolinger, D. 1972. Degree words. The Hague: Mouton. Israel, M. 2006. Saying less and meaning less. In: Drawing the boundaries of meaning, ed. B. Birner & G. Ward, 143-162. John Benjamins. Davies, M. 2008-. The Corpus of Contemporary American English (COCA). Kennedy, C., & L. McNally. 2005. Scale structure, degree modification and the semantics of gradable predicates. *Language* 81:345-381. Krifka, M. 1995. The semantics and pragmatics of polarity items. *Linguistic Analysis* 25:1{49. Lasersohn, P. 1999. Pragmatic halos. *Language* 25:522-551. Nouwen, R. 2013. Best nogal aardige middenmoters: de semantiek van graadadverbia van het middenbereik. *Nederlandse Taalkunde* 18:204-214. Rett, J. 2008. Degree modification in natural language. Rutgers PhD dissertation. Quirk, R. et al. 1985. A comprehensive grammar of the English language. Longman. Solt, S. 2018. Approximators as a case study of attenuating polarity items. *NELS48*. van Os, C. 1989. Aspekte der Intensivierung im Deutschen. Gunter Narr Verlag.