Gradable adjectives and direct modification

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In the syntactic literature, a distinction has been made between direct (DM) and indirect (IDM) modification of nouns within the extended NP. Among other properties, DM adjectives are associated with non-intersective, non-restrictive, strictly individual level interpretations (Sproat & Shih [6], Cinque [1, 2] a.o.). Surprisingly little attention has been payed to the interaction of degree semantics with this split in the extended NP. In this talk I present evidence that gradable adjectives in DM configurations do not have access to the abstract degree structures that are referenced by those same adjectives when they are used as predicates or in IDM configurations. DM adjectives combine with only a very limited range of adverbs, and disallow both measure-phrase modification of the bare form and relative readings of the superlative form. I therefore propose a degree-less semantics for DM gradable adjectives.

Evidence for the degree-less-ness of DM adjectives comes from two languages that distinguish between direct and indirect modification with overt morphology: Persian and Bosnian/Croatian/Serbian (BCS). Cinque [2] and Stanković [7] argue that short-form adjectival inflection corresponds to IDM in BCS. For those gradable adjectives, I observe that only the short IDM form can be preceded by a measure phrase (1). In Persian, indirect modification is marked by the linker ezafe between the NP and each modifier. Crucially, as observed by Kahnemuyipour [4] for the examples in (2), there are several degree modifiers that can combine with the ezafe-marked adjectives in (2b), but only one, *xeyli* 'very', that is compatible with the direct modification structure in (2a).

An approach like Klein's [5] can model intensifiers such as *very* and *xeyli* without reference to degrees. But there is also need for such a semantics for superlatives, as examples of these in unambiguously DM positions are easy to find. In DM contexts only 'absolute' readings are available. The Persian example (3b) may have a relative reading, asserting only that John climbed taller mountains than any relevant person did. But the DM superlative in (3a) can only refer to Mount Everest.

Proposal Gradable adjectives are fundamentally ambiguous between individual-based denotations and degree-based denotations. The former make use of our basic cognitive ability to directly compare individuals with respect to various properties. $[tall_{DM}]$ in (4a) introduces an ordering on individuals with respect to their height. In its bare form, this combines with an individual-based POS morpheme (4b). I propose that, like the superlative, POS has a comparison class (C) argument valued as a subset of its sister's denotation. Here, C consists of men of various heights. A partial derivation of *A tall man slept* is given in (5). [POS-C] QRs to sentence level where it's first argument is saturated by a contextually supplied set of average-height men (c.f. von Stechow [?]). It then combines with the property in (5b) by FA, yielding a proposition which is true just in case P_{NEUT} is a subset of those men who are ranked less tall than some man who slept.

The DM superlative is based on the familiar formalism of Heim [3], with the degree-predicate argument (type $\langle d\langle e, t\rangle\rangle$) replaced by one of the DM-adjective type $\langle e\langle e, t\rangle\rangle$. C is constrained by the NP to include only mountains rankable by $\succ_{high}$. The superlative picks out the unique mountain that ranks higher than all the others on that ordering.

This approach is derived by paring back formal mechanisms that have been developed in the degree semantics literature to function in contexts where degrees are not needed and, I argue, not available. This backwards derivation of the model from more complex

cases to the simpler ones may also be imagined in reverse–shedding light on the ontological status of degrees themselves as a kind of abstract individuals.

(1) došao   je   dva metra visok/*visok-i   čovek
     come.PAST CL two meter tall-SFMASC.SG/tall-LFMASC.SG man
     'a/the two-meter tall man arrived'

(2) a. ketab (%xeyli) bozorg siah=i
         book (very)   big   black=DEF
         'the very big black book'   direct modification
     b. ketab=e   (xeyli/ziyaadi/besyaar) bozorg=e siah
         book=EZ (very/too/extremely)   big=EZ   black
         'a/the (very/too/extremely) big black book'   indirect modification

(3) a. boland-tarin gholeh(-ha) ra   John fath-kard
         tall-sup   summit-pl RA John conquer-did
         'John climbed the highest mountain(s)'   Absolute only
     b. boland-tarin-e gholeh-ha ra   John fath-kard
         tall-sup-EZ   summit-pl RA John conquer-did
         'John climbed the highest mountains'   Relative possible

(4) a. $[\![tall_{DM}]\!] = \lambda y \lambda x.x \succ_{tall} y$
     b. $[\![POS_{DM}\text{-}C]\!] = \lambda P_{et} \lambda Q_{et} : P \subseteq C \wedge Q \subseteq C.P \subseteq Q$

(5) a. [POS-C]1[[a 1[t_1-tall man]] slept]
     b. $[\![a\ t\text{-}tall_{DM}\ man\ slept]\!] = \exists x.x \succ_{tall} t_1 \wedge \mathbf{man}(x) \wedge \mathbf{slept}(x)$
     c. $[\![POS_{DM}\text{-}C]\!](P_{NEUT}) = \lambda Q_{et} : P_{NEUT} \subseteq C \wedge Q \subseteq C.P_{NEUT} \subseteq Q$ (Where C is valued as a subset of the set of men who are rankable by $\succ_{tall}$, and P_{NEUT} is the contextually-supplied set of those men who are neither tall nor short for the context)

(6) $[\![SUP_{DM}\text{-}C]\!] = \lambda R_{eet} \lambda x_e : x \in C \wedge \forall y \in C \exists z R(y)(z).\exists z R(x)(z) \wedge \forall y \in C[y \neq x \rightarrow \neg R(y)(z)]$

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