

The last take on intensional superlatives

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This work provides a new solution to the debate whether superlative adjectives can reconstruct within relative clauses containing an intensional predicate as in (1) (Bhatt 2002, Heycock 2005, Bhatt & Sharvit 2005, Hulsey & Sauerland 2006, Sharvit 2007, Heycock 2019, i.a.).

(1) The longest book [John said Tolstoy had written] was *Anna Karenina*.

I hypothesize that the bracketed clause in (1) is ambiguous between a restrictive relative clause and a superlative clause. Beyond this debate, assuming the existence of superlative clauses (akin to comparative clauses) has far-reaching consequences for the syntax/semantics of superlatives.

The issue: how to derive the so-called low reading in (1) – Bhatt (2002) argues that the existence of two readings in (1) is an argument for the raising analysis of relative clauses: under the ‘low’ (vs. ‘high’) reading, *longest* is interpreted in the scope of *say*. According to Bhatt (2002) and Bhatt & Sharvit (2005), this hypothesis is supported by the observation that the two readings are disambiguated in the presence of NPIs as shown in (2). Hulsey & Sauerland (2006) further strengthen the case by showing that other adjectives exhibit the same ambiguity as superlatives.

(2) a. The longest book John said Tolstoy had ever written was *Anna Karenina*. [✓low; ✗ high]

b. The longest book John ever said Tolstoy had written was *Anna Karenina*. [✗ low; ✓high]

But Heycock (2005, 2019) observes that *ever* in (2a) is blocked by universal quantifiers above the purported reconstructed position of the licenser *longest* (e.g. if *John* is replaced by *everyone*) and the low reading in (1) is blocked by intervening elements such as negations, adverbs and factives (see e.g. 3): the only environments that license a low reading are those that support neg-raising:

(3) The longest book John denied Tolstoy had written was *Anna Karenina*. [✗ low; ✓high]

Instead of assuming reconstruction, she thus proposes that the “low” reading arises because of the excluded middle presupposition carried by neg-raising predicates (*John does not believe P* entails that *he believes not-P* if John is opinionated about P) given that superlatives generate a negative entailment (\approx the other books are not that long). This further explains the NPI facts in (2) since *ever* blocks neg-raising. Furthermore, Sharvit (2007) shows that assuming reconstruction of the superlative over- or under-generates readings under any semantics of the superlative morpheme.

But Bhatt & Sharvit (2006) prove Heycock’s generalization incorrect: the low reading can arise with verbs that are not neg-raising, such as *say* (in 1, leading Heycock to treat *say* as an evidential), *hope* or *agree*; conversely, neg-raising predicates like *likely* or *should* do not support low readings.

The solution: superlative clauses – I propose that the low reading can arise when the clause is interpreted as a superlative clause (argument of the superlative morpheme *-est*) instead of a restrictive clause. The low reading thus derives from split scope of *-est* (high) and *d-long* (low):

(4) The *-est d-long* book that John said Tolstoy wrote ~~d-long~~ book was *Anna Karenina*.

Possible scenario: John said: “Tolstoy wrote *War and Peace*, which is 1000 p. long, *Anna Karenina*, which is 1500 p. long, and some other shorter books.” *War and Peace* is actually longer. The superlative seems to be interpreted below *say* in (1) because the degree *d* (of book length) has been relativized. John must thus have talked about book lengths (and may have been mistaken about them, cf. Sharvit 2007, i.a.). The morpheme *-est*, however, remains outside the clause. It may seem that John compared book lengths in (1) (cf. Bhatt 2002, i.a.) simply because the scenario in (4) implies that John said that *Anna Karenina* is the longest book Tolstoy wrote. This hypothesis is supported by the fact that a similar (low) reading can arise with a comparative clause:

(5) John said Tolstoy wrote a longer book in 1877 than (he said he wrote) a ~~d-long~~ book in 1865.

By contrast, the high reading can arise when the clause is interpreted as a restrictive relative clause modifying *book* as in (6). John need not have talked or known about book lengths under this reading.

[Other readings arising due to interpreting *book* below or above *say* are irrelevant here.]

(6) The *-est* d-long book that John said Tolstoy wrote ~~book~~ was *War and Peace*.

Possible scenario: John said: “Tolstoy wrote *War and Peace*, *Anna Karenina*, and *the Kreutzer Sonata*.” *War and Peace* is the longest of these books. (cf. Bhatt & Sharvit 2005, i.a.)

Second, this hypothesis explains why the low reading is subject to intervention effects as observed by Heycock (2005, 2019): degree relativization is subject to the same blocking effects as amount quantification (thus explaining Bhatt’s 2002 observation regarding negative islands):

(7) How many books did John {a. say / b. # deny} that Tolstoy wrote?

Third, this hypothesis accounts for the NPI facts in (2). As comparative clauses are known to license NPIs (Heim 1985, i.a.), superlative clauses are expected to license NPIs (cf. Howard 2014). The grammaticality of (2a-b) is thus correctly predicted under the superlative clause construal in (5). Given that (5) gives rise to the low reading, it remains to explain why (2b) seems to exhibit a high reading (Bhatt 2002, i.a.). I propose that the high reading in (2b) is in fact different from the high reading in (6), as evidenced by the availability of a similar reading with comparative clauses:

(8) John said Tolstoy wrote a longer book yesterday than (he said he wrote) a ~~d-long book~~ today
In (2b) (vs. 6), John has to have talked about book lengths. But the reading seems high because we can’t imply (vs. in 2a or 5) he compared the lengths as he talked about them in different occasions:

(9) Possible scenario for (2b): John said last year: “Tolstoy wrote *War and Peace*, which is 1000 p. long.” John said last week: “Tolstoy wrote *Anna Karenina*, which is 1500 p. long.”

Like Howard (2014), I thus hypothesize that the superlative clause corresponds to the domain of comparison (often assumed to be provided by focus alternatives, Heim 1999, i.a.), and NPIs can be licensed there because they are in the restrictor of *-est*. But unlike Howard (2014), I assume that superlative clauses are not restricted to comparative readings of superlatives (e.g. *JOHN sang the loudest (than anyone sang)*), but can also appear in absolute readings (2ab) if we assume that they denote sets of properties of degree-individual pairs (vs. sets of degree properties, Howard 2014):

(10) $[[-est]] (C_{\langle\langle d,et \rangle, \langle d,et \rangle \rangle})(R_{\langle d,et \rangle})(x_e) = 1$ iff $\exists d / R(d)(x)=1$ & $\forall Q \in C, \forall y \neq x, Q(d)(y)=0$
defined if $\exists d / [R(d)(x)=1$ & $\exists Q \in C / Q(d)(x)=1]$

The set is created in (1) through quantification over times (explicit with *ever*; cf. *anyone* in Howard 2014):

(11) $[[\text{that John said Tolstoy (ever) wrote}]] = \{ \lambda d. \lambda x. \text{John said Tolstoy wrote } d\text{-long } x \text{ in } t \}$

Superlative clauses thus resemble amount relatives (Herdan 2008), as evidenced by the fact that they cannot be introduced by *which* (vs. *that*): only the highest reading (see 6) is licensed in (12):

(12) The longest book which John said Tolstoy had written was *War and Peace*.

Extensions: compositional analysis of comparative readings of superlatives – First, the superlative clause analysis can extend to (also previously discussed) cases involving *first* and *only* instead of *longest*: *first* can be assimilated to a superlative whose degree type is fixed by the context (Herdan & Sharvit 2006, i.a.) and *only* can be considered to take a domain of comparison although it may not involve degrees, but only individuals (cf. Charnavel 2015 on *same/different*).

Second, the superlative clause analysis can also solve the issue of the so-called upstairs *de dicto* reading (Heim 1999, Sharvit & Stateva 2002, Bumford & Sharvit 2020, i.a.) illustrated in (13):

(13) John wants to climb the highest mountain. (his mountain-climbing height desire exceeds others’)

I propose that a superlative clause is elided here (cf. Romero 2013 about modal superlatives) using Fox’s 2002 solution to antecedent containment deletion as sketched in (14). The individual variable *x* in the superlative clause (\approx *anyone*) is obtained because John is focused in the antecedent.

(14) *-est* d-high mountain (that *x* wants to climb d-high mountain) John_F wants to climb d-high mountain.

More generally, this hypothesis can derive comparative readings of superlatives and explain the island effects in them (Heim 1985, Szabolcsi 1986, i.a.) without postulating *-est* movement.

Selected references: Bhatt 2002: The raising analysis of relative clauses, *NLS*; Heim 1999: Notes on superlatives; Heycock 2005: On the interaction of adjectival modifiers and relative clauses, *NLS*; Howard 2014: Superlative degree clauses, MIT MA; Hulsey & Sauerland 2006: Sorting out relative clauses, *NLS*; Romero 2013: Modal superlatives: a compositional analysis, *NLS*; Sharvit 2007: Two reconstruction puzzles.