Superlative *More*

There is an old intuition that the superlative construction is very similar to the comparative construction. Without any loss in the intended meaning, the superlative construction can be replaced by a comparative with a universal quantifier (or a definite plural) in the restrictive clause:

(1) **a.** The chess set is the most expensive. **b.** The chess set is more expensive than every toy.

In a situation where every toy has the same price there is an exact difference between the chess and the toys with respect to "expensiveness". Interestingly, a measure phrase (MP) can be added to the comparative in (2b), but not to the superlative in (2a):

(2) **a.** *The chess set is (the) 5 dollars most expensive.

b. The chess set is 5 dollars more expensive than every toy.

The contrast in (2) is puzzling from the point of view of existing theories of superlatives. Assuming Kennedy's (1999) framework, *'The chess set is more expensive than the Barbie doll'* will be predicted to be true when the relation greater than holds between a "reference value" (the degree that corresponds to the chess set on the scale introduced by *expensive*) and the "standard value" (the degree that corresponds to the Barbie doll on the same scale). Consequently, *'The chess set is 5 dollars more expensive than the Barbie doll.'* will be true if the reference value equals the sum of the standard value and the measure phrase. Farkas & Kiss's (2001) semantics for superlatives, a direct extension of Kennedy's theory of comparatives, assigns the same status to *–est* as Kennedy to *–er*: *-est* provides the relation greater than that holds between a reference and a standard value:

(3) $[[est]] := \lambda G{:}G \in D_{<e,d>}.[\lambda P{:}P \in D_{<e,t>}.[\lambda x{:}\ x \in D.\ G(x) > \max(\lambda d.\exists z \neq x[z \in P \ \&\ d = G(z)])]]$,

where G is a gradable adjective, P is a comparison set;

$G(x)$ corresponds to the standard value and $\max(\lambda d.\exists z \neq x[z \in P \ \&\ d = G(z)])$ to the reference value. By analogy with the comparative construction then, (2a) should be asserting that the reference value (the price of the chess set) equals the sum of the standard value (the price of any of the equally priced toys) and 5 dollars. Surprisingly, in English, as in many other languages, sentences like 2(a) are bad. Note that alternative theories of superlatives (cf. Heim 1999, 2000) face the same problem given that they too are direct extensions of corresponding theories of comparatives.

Equally mysterious is a contrast between the comparative and the superlative construction in their ability to license the surface anaphor *so*. The ellipsis construction involving *so* is possible in (4):

(4) a. John is really industrious. But Bill seems **more** *so*. (Corver 1997)

b. The police searched the big room carefully, but the small room **less** *so*.

While *so* can be licensed in the comparative construction, it is unacceptable in the superlative:

(5) a. *John and Scott are really industrious. But Bill seems (the) **most** *so*.

b. cf. John and Scott are industrious. Bill seems the most industrious.

We aim to account for these differences by proposing a new semantic analysis of the superlative construction. In a nutshell, the proposal is that universally, the head of the superlative DegP is not the superlative degree word but rather a comparative 'operator' which in languages like English is phonologically null. The superlative degree word functions as an MP (it has the syntactic distribution and semantic properties of an MP) (see (8) below).

The proposal is motivated by new data from Slavic and Baltic languages: Old Bulgarian, Russian, Serbo-Croatian and Latvian. The superlative construction in each of these languages requires both a superlative and a comparative degree word, as seen in (6):

(6) a. Ivan **nai**bolee/ **nai**menee vydajuščijsja (Russian)
Ivan most-more/most-less outstanding 'Ivan is the most/the least outstanding.'

b. *Ivan **nai**vydajuščijsja ucenyj.
Ivan most-outstanding scholar

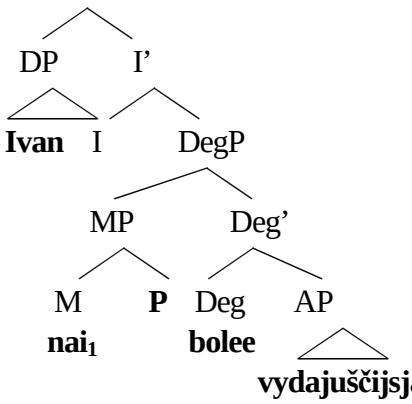
c. Ivan bolee/menee vydajuščijsja čem Oleg
Ivan more/less outstanding than Oleg 'Ivan is a more outstanding than Oleg.'

There are two conceivable ways of accommodating Russian-type languages into a semantic theory of superlatives. The first one is to assume that the presence of the comparative degree word has no effect on the meaning of the construction. But then we will be missing a generalization given that many languages show this pattern. The second is to revise the view about the semantics of the superlative element (*nai-*) and use the contribution of the comparative operator. We will argue for the latter since that will also allow us to explain the two puzzles we started with. Our proposal is couched in terms of Kennedy's (1999) theory of gradable adjectives as measure functions. The head of the superlative expression *naibolee vydajuščijsja* is the comparative 'operator' *bolee* which provides a degree relation between the reference value (the degree corresponding to the individual of which the property of being outstanding is ascribed, on the scale provided by the gradable adjective *vydajuščijsja*) and the standard value. The latter is partially contextually determined because the superlative degree word, which provides its value contains an index. Unlike Russian-type languages, English-type languages use a null counterpart of *-er*, call it ER, to head the superlative phrase. A sample derivation, illustrating the proposal, and the relevant lexical entries are given in (8) and (7):

(7) a. $[[\text{bolee/ER}]] := \lambda G{:}G \in D_{<e,d>}.[\lambda d{:}d \in D_d.[\lambda x{:}\underline{\exists d_1[G(x) = d_1]}.\ G(x) > d]]$, *G is a gradable adjective*

b. $[[\text{naj/most}_1]]^g := \lambda P{:}P \in D_{<e,t>}.\max(\lambda d{:}d \in D_d.\exists z[z \in P \ \&\ d = g(1)(z)])$ where P is a comparison set

(8)



$[[AP]] = \lambda x.$*vydajuščijsja*(x)
$[[Deg]] = \lambda G.[\lambda d.[\lambda y.G(y) > d]]$
$[[Deg']] = \lambda d.[\lambda y.$*vydajuščijsja* $(y) > d]$
$[[nai_1]]^g = \lambda P.\max(\lambda d.\exists z[z \in P \ \&\ d = g(1)(z)])$
$g(1) = \lambda x.$*vydajuščijsja*(x)
$[[MP]] = \max(\lambda d.\exists z[z \in P \ \&\ d =$ *vydajuščijsja*$(z)])$
$[[DegP]] = \lambda y.$*vydajuščijsja* $(y) >$ $\max(\lambda d.\exists z[z \in P \ \&\ d =$ *vydajuščijsja*$(z)])$
[[Ivan naibolee vydajuščijsja]] = 1 iff
vydajuščijsja(Ivan) > $\max(\lambda d.\exists z[z \in P \& d =$ *vydajuščijsja*$(z)])$
$P = \{x{:}x$ is a relevant person $\neq$ Ivan$\}$

Under this proposal the contrast in the distribution of MPs in comparative and superlative constructions is no longer a mystery: the [Spec,DegP] position which accommodates an MP is never free in the superlative construction (cf.2a), but available in principle in the comparative (cf.2b).

The proposal also predicts the ungrammaticality of (5a). Recall that ER is a null element in English. Ormazabal (1995) argues that all null heads are affix-like: they need a phonological host. Even though *so* can replace an AP, it is not an appropriate phonological host for the comparative head as (9) shows:

(9) **a.***Bill is tall. But John is even so-**er.** **b.** Bill is tall. But John is even **more** so.

Since *ER* is an affix, dependent on the adjective to satisfy its phonological requirements, we expect (5a) to be ungrammatical: there is no appropriate phonological host for ER in (5a). Our account makes a prediction: in languages, in which the head of the superlative construction is not an affix, similar ellipsis phenomena should be possible with superlatives. The prediction is borne out.

(9) ?Ivan je najmalje pametan, a Petar je najviše (Serbo-Croatian)
Ivan is most-less smart but Peter is most-more

To summarize, we propose a new semantics for superlatives which, unlike existing theories, accounts for crosslingusitic variation. Our proposal also explains two puzzling facts about MPs and ellipsis in comparison constructions.