POSTNOMINAL MANY superi IN ROMANIAN AND THE THEORY OF MOST 1

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• Description

- (1) The absolute reading of MANY_{superl} is possible in postnominal positions in Romanian
 - Syntactically constrained (blocked in the prenominal position)
 - Depends on context for interpretability: only possible if the context supplies a partition

• Main theoretical conclusions

- (2) a. MANY_{superl} allows for the absolute reading
 - b. Proportional MOST (MANY superl) is not an absolute reading (contra Hackl 2009).

1. The postnominal MANY_{sup}

1.1 Previous accounts

- Teodorescu (2009): postnominal MANY superl is ruled out
- **Dobrovie-Sorin & Giurgea (2015)**: (3) presupposes the existence of a set of contextually-predefined groups of various cardinalities (e.g. 2 or 3 groups of swans swimming together in different parts of a lake).
- (3) Lebedele [cele mai multe] sunt negre. swans-the [SUP more many] are black 'The largest group of swans are black'
- •Nicolae&Scontras (2022): postnominal MANY_{superl} involves Double Definiteness, see *Appendix*

Our new observations:

- a. Examples of the type in (3) instantiate the absolute reading of MANY superl.
 b. The postnominal MANY superl. also allows for relative superlative readings.
- 1.2 Revising previous generalizations regarding the absolute reading of MANY superl

(4)a goes against the previous views on the absolute reading of MANY_{superl}:

a. MANY_{superl} does not allow the absolute reading (crosslinguistically).
 (Szabolcsi 1986, Gawron 1995)
 b. The absolute reading of MANY_{superl} = the majority/proportional reading of MOST (Hackl 2009)

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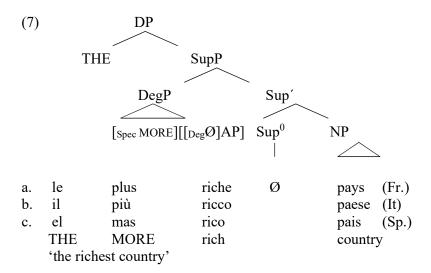
2. The syntax of prenominal superlatives across Romance languages

(6) Quantity superlatives have a syntax different from that of quality superlatives

2.1 Prenominal superlatives in Romance languages other than Romanian

2.1.1 Quality superlatives

- Comparative form of Adj in a **dedicated prenominal position** (Loccioni 2018, Cinque 2020), for which we will use the label Sup
- D° must be filled with THE



Evidence that THE is not part of the DegP, but instead sits under D°:

Generalization for Romance languages:

(9) Quality comparatives sitting in Spec, Sup and embedded inside a definite DP get a superlative reading.

2.1.2 The superlative reading of MANY_{compar} in Italian (and Ibero-Romance)

- (10) Quantity comparatives **cannot** get a superl. reading by being embedded inside a definite DP. (in contrast to quality superlatives, see (9)).
- (11) * Maria ha [[D°i] [xppiù libri]] Maria has the more books
- THE is suppressed in (11) => comparative reading

- (12) Quantity comparatives can get a relative superl. reading when embedded inside a definite relative clause (same licensing conditions as adverbial and predicative superlatives)
- (13) Maria è quella che ha (*i) più soldi (It.)

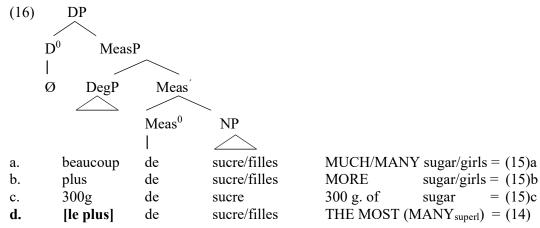
 Maria is the-one that has (the) more money

 'Maria is the one that has the most/more money.'

 'the richest country'

2.1.3 MANY_{superl} in French

- Le plus 'the more' can occur in a prenominal position:
- (14) le plus de filles/sucre THE more of girls/sugar
- Given (10), the (simplified) structure in (14)' is unlikely:
- $(14)' \# [[D^{\circ}le] [XPplus de filles]]$
- Alternative: [le plus] is a constituent that occupies the same position as that occupied by beaucoup 'much, many', the compar. plus 'more' and measure phrases, e.g., 300 g:
- (15) a. beaucoup de filles much of girls
 b. plus de filles more of girls
 c. 300 grammes de sucre 300 grams of sugar
- position dedicated to Measure Phrases (and more generally Quantitatives), which has been labelled Spec, Mon(otonicity) by Schwarzschild (2006) and relabelled Spec, Meas by Solt (2009).
- D° is filled with a weak indefinite null Det²



² This is an alternative to Schwarzschild's (2006) representation (103) on p. 96, according to which pseudo-partitives are just MonP's (with no D-level above them).

- Motivation for the structure in (16)d, proposed in Dobrovie-Sorin (2021):
- (17) The *le* that precedes *plus* is a DegP-internal superl. marker.
- Other configurations in which *le* is a superl. marker in French: postnominal quality superlatives, adverbial and predicative superlatives (compare Italian, where THE must be absent):
- (18) a. la fille la plus jeune b. la ragazza (*la) più giovane

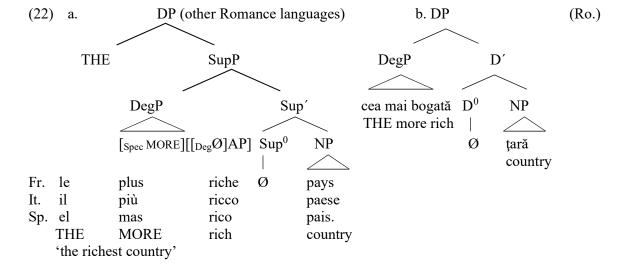
2.2 Prenominal Superlatives in Romanian

2.2.1 Quality Superlatives

- Superficially, prenominal superlatives in Romanian look similar to those in the other Romance languages: *cel/cea/cei/cele + mai* 'more' ADJ/ADV
- (19) cea mai bogată țară
 THE MORE rich country
 'the richest country'
- CEL is homonymous with the strong form of the def. art. (e.g. cei doi copii 'the.MP two children'):
- (20) [D°cei] doi copii the.MP two children

However:

(21) Crosslinguistic variation among Romance languages wrt prenominal superlatives a. all lang's other than Romanian: [DoTHE] [XPMORE Adj NP], see (7), repeated in (22)a b. Romanian: [DPTHE MORE Adj][DoO][NP]], see



Evidence in favor of (22)a and against (22)b:

- (i) When used with superl-ly interpreted comparatives, CEL never sits in D⁰, not even in DP-initial position (Giurgea 2013, 2023, Dobrovie-Sorin & Giurgea 2021).
- (23) a. [(mult) mai] importantu] proiect much more important-the project 'the (much) more important project'
- CEL is a superl. marker

def. article suffixes on comparative Adj's

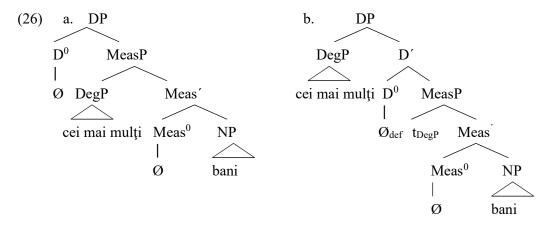
b. [cel mai important] [DO+def] project SUP more important project 'the most important project'

=> CEL immediately preceding *mai* 'more' Adj/Adv-ER = 'superl. marker' (Giurgea 2013, 2023, Dobrovie-Sorin & Giurgea 2021, Dobrovie-Sorin 2021, 2023)

- (ii) position of CEL wrt cardinals (unlike in French and Italian, ex. (8), it cannot be separated from MORE; normally the CEL+MORE+AP constituent occurs before the cardinal, but it can also occur after the cardinal, clearly showing that CEL is not a D)
- (24) [cele mai bogate] două țări / cele două cele mai bogate] țări (Ro.) SUP more rich two countries the two SUP more rich countries 'the two richest countries'

2.2.2 MANY_{superl}

- (25) [cei mai mulți] studenți THE more many students 'the most students'
- The surface morphosyntax of (25) is compatible with the following two configurations



- (26)a is the same structure as the one adopted above for the French *le plus* (see (16)). D° is filled with a null indefinite D that selects MeasP (Dobrovie-Sorin 2021)
- The motivation for (26)a is similar as that for French: MANY superl (cei mai mulți) occupies the same position as MANY itself, namely Spec,Meas.

- (26)b, on the other hand, is the same structure as that of the Romanian prenominal quality superlatives.
- (27) a. Cel mai bun vin *(l-)a adus Mihai SUP more good wine ((CL.3MS.ACC-)has brought Mihai b. Cei mai mulţi bani câştigă Mihai.
 SUP more many money earns Mihai 'It's Mihai who earns the most money.'
- The obligatory clitic doubling in (27)a indicates that a DP that embeds a prenominal quality superlative is necessarily definite (because Clitic doubling is obligatory with definite left dislocated objects), despite its having a 'relative' superlative reading. For an account of the puzzling definiteness of relative superlatives, see (42) in §4.1 below and Dobrovie-Sorin & Giurgea (2023).
- The lack of clitic in (27)b indicates that DPs built with prenominal quantity superlatives are not definite.

2.3 Conclusions regarding the Syntax of prenominal MANY superl

- (28) a. **MANY**_{superl} is in Spec, Meas b. D° is filled by a null weak Det.
- In addition to Italian and French, (28)b is supported by
 - **mainland Scandinavian**: THE is banned with MANYsup (see *flest* in Swedish) but optional (and preferred) with quality superlatives, even on their relative reading (Coppock & Josefson 2015, Coppock 2019).
 - **Basque:** the general article is banned with MANYsup but obligatory with quality superlatives
 - **Bulgarian** (Pancheva 2015)

3. The semantics of prenominal MANY_{superl}

In all Romance languages (as well as Germanic or Slavic)

- (29) a. The relative superlative reading is allowed for all those languages that use a dedicated Sup marker with MANY
 - b. The absolute superlative reading is ruled out

NB: The proportional reading is allowed only in some (relatively few) languages (among which, Germanic, Romanian, Hungarian, Greek and Basque). This constitutes simple but compelling evidence that the proportional MOST is a grammaticalized form (see Dobrovie-Sorin & Giurgea 2021 for a crosslinguistic overview of majority quantification)

3.1 The semantic composition of the relative reading of the prenominal MANY sup

(30) a. Maria a citit cele mai multe cărți
Maria has read [ESTTHE MORE]³ many books

³ The notation [ESTTHE MORE] indicates that we assume THE MORE to be a phrasal constituent corresponding to EST in English (see Dobrovie-Sorin 2021, 2023)

- 'Maria read the most books'.4
- b. Maria a lu le plus de livres Maria has read [[ESTTHE ER] many]]⁵ books 'Maria read the most books'
- Heim's (1999) raising analysis: EST raises just below the position to which the correlate of the superlative (see *Maria* in our example) raises:
- (31) Maria EST [t_{Maria} [v_Pread t_{EST} many books]
- (32) $\mathbb{E}ST$ = $\lambda R.\lambda x. \exists d[R(d)(x) \land \forall y [[\exists d'R(d')(y) \land y \neq x] \rightarrow \neg R(d)(y)]]$
- For the example in (30) the relation R in (32) is obtained by abstracting over the d-argument of MANY and over the position from which *Maria* has raised. By saturating (32) with *Maria* and *read d-many books*, we end up with (33) as the truth-condition for (30):
- (33) $\exists d[Mary read d-many books \land \forall y [\exists d' (y read d'-many books \land y \neq Mary) \rightarrow \neg (y read d-many books)]$
- Because there is no [D° THE] in DPs built with prenominal MANY_{sup}, nothing stays in the way of raising EST out of the DP.
- See § 4.1 on the relative readings of quality superlatives, which (in run-of-the-mill contexts) correlate with an overt definite Det.

3.2 On the impossibility of the absolute reading

(34) [Cele mai multe] lebede sunt negre.

[SUP more many] swans are black. Only possible reading: 'Most swans are black'

Explanation of the impossibility of the absolute reading will rely on the assumption in (35):

- (35) Absolute readings of superlatives rely on EST raising to a DP-internal scope position that is lower than Spec,Meas.
- Heim (1999): the absolute reading of superlatives relies on a DP-internal QR of EST.
- (35), which is our own refinement, is supported by the following examples:
- (36) a. *the oldest many cities were in Mesopotamia b. ?? the many oldest cities were in Mesopotamia

⁴ The analysis of English is out of the scope of the present paper. But the reader may wonder what we have to say about the obligatory (!!) presence of THE with *most* (which is already formed with EST). Given (24) our only option is to assume that the THE preceding *most* is expletive (invisible at LF). Note that the presence of THE with relative superlatives is problematic for most versions of the raising analysis of quality superlatives. But see Dobrovie-Sorin & Giurgea (2023), briefly summarized in § 4.1 below.

⁵ Plus is a suppletive form for the comparative of beaucoup 'many'. To keep the glosses as readable as possible we have decomposed the suppletive form into the comparative morpheme (ER) and the root ('many')

- ≠ the oldest group of many cities were in Mesopotamia
- c. We need many best students in order to compete at the national level.
- (36)a is impossible and (36)b does not have a reading with covert QR of EST above many
- When *many* and EST co-occur, as in (36)c, the scope is always *many*>EST, (which has the type of interpretation discussed in Herdan & Sharvit 2006)
- Impossibility of the absolute reading of prenominal MANY_{sup}: conflict between the scope-requirement in (35) and the syntactic position of MANY_{sup} that we have established in § 2.2.2:
- (37) The prenominal position of MANY_{sup} is Spec,Meas (see (26))
- Because the scope position of EST is lower than Spec,Meas (where the prenominal MANY_{sup} sits) EST would need to lower. But:
- (38) Lowering is banned from the syntax-LF interface.
- 4. The semantics of the postnominal MANY_{sup}

4.1 The relative reading

Although it had gone unnoticed in the previous literature, the relative reading is indeed possible for the postnominal MANY_{superl} (the pattern is well attested on the Internet; some attested examples are given in (39)b-d)⁶:

(39) a. I-am trimis **Mariei** studenții cei mai mulți. CL.3S.DAT-have.1 sent Maria.DAT students-the SUP more many

'I sent Mary more students that I sent to any other person' (relative reading)

b. familiile au depus cereri și au fost alese cele cu families-the have submitted requests and have been chosen the.FP with copiii cei mai mulți

children-the SUP more many

'The families submitted applications and those with the most children were chosen'

(https://www.ziuaconstanta.ro/stiri/deschidere-editie/traseul-donatiilor-catre-saracii-ce-se-vor-la-taraf-tv-ce-face-mazare-cu-banii-egipteanului-sawiris-galerie-foto-30791-340896.html)

c. Mergem acolo unde sunt banii cei mai mulţi go.1P there where are money(P)-the SUP more many

'We're going where there's the most money'

(https://www.capital.ro/mark-mobius-mergem-acolo-sunt-banii-cei-mai-multi-146605.html)

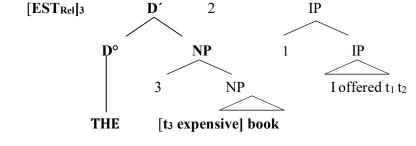
d. De acolo însă bondarii scot mierea cea mai multă from there but bumblebees-the get honey-the SUP more much 'But that's where bumblebees get the most money from'

(Corola-publishinghouse/Science/1983 a 3308)

⁶ Ex. (39)d is from the Corola corpus, available at https://korap.racai.ro/ (see Barbu Mititelu et al. 2018).

(39)a says that the speaker has randomly sent students to various professors and then compares the cardinalities of the sums sent to various people and concludes that the one sent to Mary is the largest.

- No meaning difference between prenominal and postnominal MANY superl
- (40) familiile cu cei mai mulţi copii / cu copiii cei mai mulţi families-the with SUP more many children / with children-the SUP more many
- Even Heim's (1999) upstairs de dicto reading (where, in her analysis, the comparison is *de re* but the DP is *de dicto*) is possible in both positions:
- (41) Ion vrea să urce munții cei mai mulți / cei mai mulți munți Ion wants SBJV climbs mountains-the SUP more many SUP more many mountains Possible readings: 'There is an n such that Ion wants to climb n-many mountains (no matter which mountains) and for any n' such that somebody else wants to climb n'-mountains, n is greater than n' '
- The relative reading of postnominal MANY_{superl} is achieved like for quality superlatives
- Dobrovie-Sorin & Giurgea (2023):



$$\begin{aligned} \text{(43)} \quad & \text{[[EST_{Rel}]]} = \lambda P_{\langle d,et \rangle}.\lambda R_{\langle e,et \rangle}.\lambda y. \; \exists x \; \exists d \; [R(y,x) \land P(d)(x) \; \land \\ & \forall x',y',d' \; [[P(d')(x') \land x' \neq x \land R(y',x')] \; \rightarrow d \geq d']] \end{aligned}$$

- In (42) EST does not raise out of the DP
- Rather: (i) raising of EST to SpecDP + (ii) raising of the entire DP (This analysis was envisaged in passing by Szabolcsi 1986, but not formalized).

Since postnominal MANY behaves like a quality adjective, the same analysis should apply to postnominal MANY superl.

4.2 The absolute reading of MANY_{sup} is necessarily context-dependent

- (44) Context-independent absolute readings of MANY_{sup} are semantically ruled out.
- (44) has not been previously stated as such.
- Our explanation of (44):
- (45) The universal quantifier in the definition of EST cannot apply to domains ordered by part-whole relations.
- Kratzer (1995:169):
- (46) 'Quantification seems to require that the domain of quantification is set up in such a way that its elements are truly distinct'.
- From the examples Kratzer provides, it can be inferred that 'truly distinct' means 'not related to each other by the part-whole relation'.
- The impossibility of quantifying over sets of elements ordered by part-whole relations predicts that the absolute reading of MANY_{sup} cannot be computed in run-of-the-mill contexts.
- Q: What about the acceptability of the absolute reading of the postnominal MANY_{sup}?
- Ans: The semantic computation is made possible by a pragmatic context that supplies a partition of the maximal plurality in the join semi-lattice denoted by the NP.

The notion of partition, initially defined for sets, can be defined for entities by using the part-whole relation instead of set membership) (cf. Schwarzschild 1996):

- (47) A set P is a partition of an entity x iff
 - (i) The sum of all the elements of P equals x: $\sigma(P) = x$
 - (ii) The elements of P do not overlap: $\forall y, z((y\neq z \land y \in P \land z \in P) \rightarrow \neg y \circ z)$
- Let Π a function that takes a set of pluralities and turns it into a (contextual) partition (of the maximal sum in the set, the supremum)
- In order to apply -EST DP-internally to a constituent of the form [NP MANY], we need to turn [NP], which denotes a domain set with overlapping elements, into a partition of the maximal sum in that domain. This can be achieved by resorting to this function P the partitioning function Π :
- (48) $[D [[NP swans] [-EST many]]] \rightarrow [D [P \Pi [NP swans] [-EST many]]]$
- (49) [-EST [1 [Π [NP swans] [d₁-many]]]] = λx . -EST (λd . λx . Π (σy .*swan(y))(x) \wedge d-many(x)) 'the property of being a cell in a contextually supplied partition of the swans whose cardinality exceeds the cardinalities of the other cells in that partition'
- The absolute reading is costly: it depends on supplying a partition operator, which is inserted by coercion
- The partitioning needs to be contextually supported: we need a context that supplies individualized groups of entities of different cardinalities.
- Compare the relative reading, which is easily available because the main predicate together with

the correlate provides a way of identifying the sums (e.g. in (39)a each sum is associated to a different professor).

• Hackl (2009)

- (50) a. Proportional MOST is a particular guise of the absolute reading.
 - b. **stipulated modification of the definition of EST**: instead of comparing x (the plural entity that will satisfy the superlative property) with all pluralities of N distinct from x, we compare x with all pluralities of N that do not overlap with x.
 - c. The stipulated modification yields the proportional (majority) reading, which is predicted to always be available for $MANY_{sup}$ with a DP-internally interpreted EST.

This prediction is invalidated by the Romanian postnominal MANY_{sup}, which allows an absolute reading but does not have a proportional reading: in particular (3) cannot mean 'Most swans are black.'

Conclusions:

- (51) a. The semantics of EST should not be modified (contra Hackl)
 - b. The semantics of EST explains why (when possible, i.e., in postnominal positions) the absolute reading of MANY superl is necessarily context-dependent.
 - c. The contrast between the (im)possibility of the proportional reading depending on the pre- vs postnominal positions constitutes evidence in favor of the traditional quantificational analysis of proportional MOST (quantificational elements normally occupy DP-initial positions). for other arguments, see Dobrovie-Sorin & Giurgea (2021).
- These general results were obtained by examining a language Romanian where MANY and its superlative have a twofold behavior, occurring either in a special prenominal position dedicated to quantity, SpecMeasP, or (more rarely) as postnominal adjectives, in the latter case being treated on a par with quality adjectives.

Appendix: Nicolae & Scontras (2022)

Postnominal MANY_{superl} instantiates Double Definiteness (DD):

(52) Ion a examinat-o pe fata (cea) înaltă. Ion has examined-CL.3FS.ACC DOM girl-the (the.FS) tall 'Ion examined the tall girl.'

(53) Problems:

- a. **the def. article is obligatory with superlatives** (including postnominal MANY_{superl}) but **optional** (see the brackets in (52)) with other postnominal modifiers
- b. *cel* functions as a superlative marker (§2).
- c. N&S suggest that the necessity of a predefined set of groups is due to the 'familiarity' triggered by the demonstrative-like nature of the *cel* of DDs. This is invalidated by the fact that the postnominal MANY_{superl} allows for relative readings (see ex. (39) in §4.1 above). The predefined-groups reading only arises

• DD may at best be viewed as the origin of the grammaticalization process that led to the emergence of a special superlative marker.

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