Accounting for Russian superlatives with Nanosyntax

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Intro: In Russian, there are three ways to build a superlative: using a periphrastic marker *samyj* 'the most', using suffix *-ajsh-/-ejsh-* and using prefix *nai-* together with *-ajsh-/-ejsh-*. Take, for example, *krasiv-yj* 'handsome' with comparative *krasiv-ee* and superlative *krasiv-ej-shyj*. Note that we made an analytical choice of considering *-aj-/-ej-* to be the comparative morphology, leaving *-sh-* as the superlative marker.
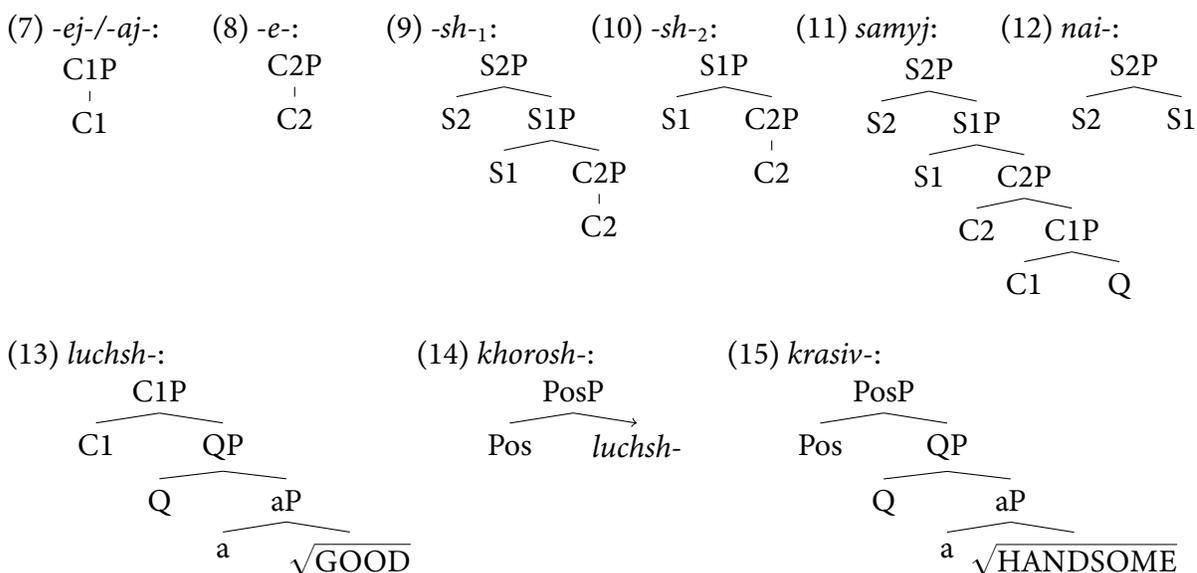
(1) *samyj krasiv-yj*
    'most handsome'

(2) *krasiv-ejsh-yj*
    'most handsome'

(3) *nai-krasiv-ejsh-yj*
    'most handsome'

When we take a suppletive adjective, such as *horoshyj* 'good', a pattern emerges: it is possible to combine *luchshyj* 'the best' with *samyj* and *nai-*, but not those two together. It appears that *samyj* and *nai-* are in complementary distribution, while *nai-* and *-ajsh-/-ejsh-* clearly aren't, putting them into different baskets.

(4) *samyj luchsh-yj*
    'the best'

(5) *nai-luchsh-yj*
    'the best'

(6) **samyj nai-luchsh-yj*
    'the best'

Another puzzle that with superlatives is the distribution of *samyj*. As (1) and (4) show, sometimes it composes with a positive form (*samyj krasivyj*; **samyj krasiv-ejsh-yj*) and sometimes with what appears to be superlative (**samyj khorosh-yj*; *samyj luchsh-yj*). Moreover, the optionality and interchangability of *-sh-*, *nai-X-sh-* and *samyj* should be analysed. This abstract aims to account for Russian superlative morphology syntactically, building on the split structure for degree morphology of De Clercq et al. (2022) and the framework of Nanosyntax (Starke 2010).

Proposal: We suggest following L-trees (phrasal lexical entries) for *-ej-/-aj-*, *-e*, *samyj*, *-sh-*, *nai-*, *luchsh-*, *khorosh-*, and *krasiv-* in Russian. Following distinction of suffixes and prefixes by Starke (2018), *-sh-*'s are created during the spell-out of result of Merge-F, while *samyj* and *nai-* are created as result of Merge-XP. Two *-sh-*s are needed since while the first one accounts for *-sh-* creating a true superlative, it is impossible to Merge-XP *nai-* with *-sh-$_1$* due to them spelling out the same part of structure (S2 head).

(7) *-ej-/-aj-*:
  C1P
  |
  C1

(8) *-e-*:
  C2P
  |
  C2

(9) *-sh-$_1$*:
  S2P
 S2 S1P
   S1 C2P
      |
      C2

(10) *-sh-$_2$*:
  S1P
 S1 C2P
    |
    C2

(11) *samyj*:
  S2P
 S2 S1P
   S1 C2P
     C2 C1P
       C1 Q

(12) *nai-*:
  S2P
 S2 S1

(13) *luchsh-*:
    C1P
 C1   QP
   Q   aP
    a √GOOD

(14) *khorosh-*:
   PosP
 Pos *luchsh-*

(15) *krasiv-*:
   PosP
 Pos   QP
   Q   aP
    a √HANDSOME

Partial motivations for L-trees: L-tree in (7) mirrors L-tree for Czech comparative *-ej-* in Caha

et al. (2019). L-tree in (8) looks so in order to have the *-ee-*(*-ej-e-*) form to act as a comparative. L-trees in (9-10) include C2P in order to combine with (7) to exclude *-e-* of (8) in the morphological form. L-tree in (12) looks so in order to combine with *-sh-*$_2$ (10) in a prefixal fashion. L-tree for *samyj* in (11) looks so in order to combine with a [Q [a ROOT]] structure, which (for most adjectives) is matched with an L-tree for positive form, exemplified in (15). L-tree in (13) looks so in order to combine with *-e* (to derive *luchsh-e*, comparative form without *-ej-*). L-tree in (14) is based upon the structure for positive degrees of Vanden Wyngaerd et al. (2020).

First puzzle: So, it is clear why *samyj+luchshyj* is grammatical, while *samyj+nai-luchshyj* is ungrammatical: *samjy* and *nai-* spell-out the same part of structure (S2 head). There is an additional reason to consider *samyj+nai-luchshyj* ungrammatical: we propose that *nai-luchshyj* should be analysed as *nai-luchsh-sh-yj* (this follows from L-trees for *-sh-*$_2$ and *luchsh-*). Thus, *-sh-* will spell out the S1 and C2 layers of *samyj*, making *samyj nai-luchsh-sh-yj* even less viable. This move may be supported by another suppletive adjective (16-18), where addition of *-sh-* in the superlative is more visible.

(16) *plokh-oj*   (17) *khuzh-e* (*/khud-e/*)   (18) *(nai-)khud-sh-yj*
     'bad'   'worse'   'the worst'

It should be noted that there is a form *samyj khud-sh-yj* 'the worst', which may be used as counterevidence against the current proposal. However, I would suggest that the existence of this form is due to analogy with *samyj luchshyj*: in older Russian texts, the form *samyj khud-yj* (the exact one we're predicting) is found.

Second puzzle: Moreover, the proposal derives the grammaticality of *samyj krasivyj* and *samyj luchsyj* and ungrammaticality of **samyj krasiv-ej-e/ krasiv-ej-sh-yj* and **samyj khoroshyj*. Structure for *samyj* (11) should combine with a [Q [a ROOT]] structure. None of the L-trees in (13-15) match this structure perfectly. Via the Superset Principle (13) and (15) are matched as structures containing the desired one, generating the pattern. For this to work, the difference between (14) and (15) is crucial. Should (14) be parallel to (15), we would get unattested *samyj khoroshyj*. However, since (14) contains a *pointer* to *luchsh-* (à la Vanden Wyngaerd et al. 2020), the desired matching of (13) to [Q [a ROOT]] structure is achieved. The *pointer* in (14) is, moreover, diachronically valid, since *luchsh-* used to be a comparative/superlative stem for another positive form.

Optionality: The structures in (9-12) suggest a more principled way of describing the three patterns of Russian superlatives. It appears that the lack/inapplicabiltiy of *-sh-*$_1$ triggers the *nai-X-sh-* pattern, which involves *-sh-*$_2$. And the lack/inapplicability of *-sh-*$_2$ triggers the *samyj*+QP pattern. Thus, it is possible to describe the Russian superlative system by only appealing to the changing nature of *-sh-*. Importantly, it cannot be described as emergence of *nai-* and *samyj* with subsequent matching of L-tree in (9) to subset structures due to Merge-XP being more costly than Merge-F (Starke 2018).

Conclusion: In this work, we suggest a nanosyntactic treatment of patterns in Russian degree morphology. The optionality of Russian superlative system is neatly described as the loss of *-sh-*.

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