Russian declension without declension features and without contextual allomorphy

Pavel Caha
Masarykova univerzita Brno

Introduction. This paper presents an analysis of the Russian declension in Nanosyntax (Starke 2009, 2018). The analysis has two theoretically important features.
(i) It makes no reference to language-particular declension features. This allows us to maintain the idea that morphosyntactic features are drawn from a set provided by the UG, i.e., language invariant. On the other hand, using language-particular declension features entails a grammar where morphosyntactic features arise on the basis of linguistic data. Whatever the ultimate answer to this issue, the question of whether we can account for declension phenomena without declension features is a theoretically relevant issue.
(ii) The analysis also does not use contextual rules. In order to correctly pair the right ending with a particular root, the analysis only relies on specifying each marker for the features it spells out. The correct pairing of roots and affixes falls out from such a specification and the Nanosyntax model of spellout. In contrast, contextual rules resemble surface-level 'assembly instructions' with no analytical depth. If such 'assembly instructions' can be eliminated, a simpler (and more explanatory) theory emerges.
Data. I focus on the singular with classes delineated as in (1) (Timberlake2004; cf. Corbett 1982). Each declension is mostly occupied by nouns of a particular gender (as indicated in (1)). One gender, however, can belong to two declensions (FEM in II and III).

(1) Russian declension, singular

	factory I_A (MASC)	place I_B (NEUT)	lip II (FEM)	notebook, III (FEM)
NOM	zavód-Ø	mést-o	gub-á	tetráď-Ø
ACC	zavód-Ø	mést-o	gub-ú	tetráď-Ø
GEN	zavód-a	mést-a	gub-ý	tetráď-i
LOC	zavód-e	mést-e	gub-é	tetráď-i
DAT	zavód-u	mést-u	gub-é	tetráď-i
INS	zavód-om	mést-om	gub-ój	tetráď-ju

(2)a. [K [IND [CLASS [REF xNP]]]]
mést
b. [K [IND [CLASS [REF xNP]]]]
zavód
c. [K [IND [FEM [CLASS [REF xNP]]]]]
gub
d. [K [IND [FEM [CLASS [REF xNP]]]]]
tetráď

The treatment of exceptions (mostly animate Ns) will rely on the idea that with these nouns, agreement is based on semantics. The only inanimate exceptions are found in Class III, where we have a lonely MASC noun (*puť* 'journey') and about a dozen neuters. However, the neuters do not pattern like *tetrád'* in the plural. I address this in the talk.
Analysis. I model the combinations of roots and endings as a simple function of the features they spell out. The features I use to this goal can be split in two parts (for convenience). The first type of features are case features. I use the privative decomposition proposed in Caha (2009), where the number of features monotonically grows in the order of cases given in (1) top down. (NOM is [F1], ACC [F1, F2], GEN is [F1, F2, F3], etc.)
Below case features (abbreviated as K in (2)) are number/gender features, but crucially no declension features. The number feature I use is the IND(IVIDUATION) feature of Harely&Ritter (2002), with singular as the default interpretation. For gender, I use two features located below IND. Masculine and neuter nouns will have the feature CLASS (see

(2a,b)), which is further specified as FEM in nouns of the feminine gender (2c,d), again following Harley Ritter (2002). Below CLASS is RefP (nouns are referential) and the xNP, which hosts additional features such as animate etc. In sum, the masculines/neuters have the *fseq* as in (2a,b), the feminines have an *fseq* as in (2c,d).

In Table (1), there are two non-feminine declensions (I_A, I_B). These two declensions have the same *fseq*, the one in (2a,b). The difference between them is modeled as a difference in the lexical specification of the root, as depicted by the rectangles in (2). The root *zavod* in (2b) spells out all features including K (in NOM, ACC), lacking overt marking in these cases. So the fact that *zavód* does not combine with, e.g., *-o*, is encoded without contextual rules. The root *mést* spells out only REFP, see (2a). The various endings of *mést-* spell out the remaining features: class, number and case. The strategy is such that the root plus the endings must spell out all the features, see the upper part of the table (3). Note that the endings *-o, -a*, etc. cannot be inserted with nouns that have FEM in their *fseq* (because of the Superset Principle). So again, the fact that feminines do not combine with these endings is encoded without contextual rules. The lower part of (3) shows that the noun *zavód* spells out all features in NOM/ACC. To spell out the genitive F3, it needs an ending. As a consequence, the root must backtrack to the size of REFP.

(3) xNP REF CLASS IND F1 F2 F3 F4 F5 F6

NOM	mést	o
ACC	mést	o
GEN	mést	a
LOC	mést	e
DAT	mést	u
INS	mést	om
NOM	zavód	
ACC	zavód	
GEN	zavód	a
LOC	zavód	e
DAT	zavód	u
INS	zavód	om

(4) xNP REF CLASS FEM IND F1 F2 F3 F4 F5 F6

NOM	tetráď	
ACC	tetráď	
GEN	tetráď	i
LOC	tetráď	i
DAT	tetráď	i
INS	tetráď	ju
NOM	žen	a
ACC	žen	u
GEN	žen	y
LOC	žen	e
DAT	žen	e
INS	žen	oj

Within the two feminine declensions (II and III) we have a similar contrast in root size, see (2c,d). Nouns of Declension III (*tetrad'*) spell out all the features in NOM/ACC, see (4). In oblique cases, they backtrack below the foot of *-i*, which spells out FEM, and is therefore gender specific (it cannot combine with nouns that lack FEM). The root *žen-* of Declension II has a root of the size REFP, and the endings spell out the remaining features. Note that the endings of the 3rd declension are inapplicable here, as that would leave the CLASS feature without spellout.

Conclusions. The analysis removes from the grammar any reference to language-particular objects (declensions), and replaces them by a set of universally available features, namely those uncovered by the cross-linguistic study of pronominal systems (Harley Ritter 2002). The correct combinations of roots and endings falls out from the sequence of heads and lexical specifications of the roots and endings. There is no need to hard-code context specification of the endings, whether by reference to declension features or by specifying the set of roots they combine with.

REFERENCES. **Caha 2009**. *Nanosyntax of Case.* **Caha, DeClercq, Wyngaerd 2019**. Fine structure of comparative. *Studia Linguistica.* **Corbett 1982.** Gender in Russian. *Russian linguistics*. **Harley Ritter 2002**. Person Number in Pronouns, *Language*. **Starke 2009**. Nanosyntax. *Nordlyd*. **Starke 2018.** Complex left branches. In *Exploring nanosyntax*. **Timberlake 2004.** Grammar of Russian.