

## On number and number-neutrality in languages with and without article

Most of the literature on the contrast between languages with and without articles has been concerned with the expression of reference in these two types of languages; in this paper, we focus on the expression of number in the two types of languages. For languages with articles it has long been argued that the functional architecture must be enriched to include a functional projection associated with number/quantity (cf. Ritter 1991, 1992, Borer 2004, among others). In this paper, we will argue that a similar functional projection is necessary for languages without articles such as Russian and Armenian. Our analysis differs crucially from the analysis proposed by Ritter (1991) and its later spin-offs in that for us Num<sup>o</sup> is the locus of a number feature and not of the actual number-marking morpheme, which allows us to account for **number-neutral nominals**.

Several recently proposed accounts of number-neutrality developed on the base of languages with articles (mostly English) directly relate morphological number to semantic number, specifically by assigning morphologically plural nouns an inclusive (“one or more”) rather than an exclusive (“more than one”) interpretation. The “inclusive plural” reading is said to come to the fore in either downward-entailing (Sauerland et al. 2005) or generic (Grimm 2010) contexts resulting in the coherence of a dialog like *Do you have children? – Yes, I have one.*

In this paper, we consider number-neutral nominals in **four languages**: two with articles (English and Norwegian) and two without (Russian and Armenian). The constructions we focus on are: Russian complements of intensive reflexives in (1) (cf. Tatevosov 2006, Kagan and Pereltsvaig 2010) and the so-called *v prezidenty* construction in Russian in (2) (cf. Bailyn 2002, Pereltsvaig 2006); and bare singulars in Norwegian in (3) (cf. Kalulli 1997, Borthen 2003) and Armenian in (4) (cf. Bale et al. 2010).

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| (1) | Lena najelas’<br>Lena <i>na-ate-sja</i><br>‘Lena ate her fill of burgers.’ | <b>kotlet.</b><br>burgers.GEN.PL                       | Russian                                    |
| (2) | Putin soglasen<br>Putin.NOM agrees   | ballotirovat’sja<br>to-run                             | v <b>prezidenty.</b><br>into presidents.PL |
| (3) | Per har hatt <b>hund</b> i ti år.<br>Per has had dog in ten years.         | Alle har vært svært snille.<br>all have been very kind | Norwegian                                  |
| (4) | John-ə yev<br>John-DEF and   | Brad-ə <b>dəgha</b> en.<br>Brad-DEF boy are            | Armenian                                   |

We show that the accounts directly relating morphological and semantic number run into a number of **problems**, all resolved by our alternative proposal. First, downward entailing and generic contexts are not the only ones where number-neutral nominals are found cross-linguistically. Second, we show that there is the link between semantic number-neutrality and certain **syntactic properties**, which are symptomatic of these nominals being **bare NPs** (cf. Pereltsvaig 2006). Specifically, these nominals disallow DP-level elements such as demonstratives, expressions of quantity (such as numerals, measure/container nouns, etc.), and even evaluative adjectival modifiers that are argued to be merged too high, outside the NP (Svenonius 2008, Beauseroy and Knittel 2008). Third, we predict the existence of “inclusive singulars” on a par with “inclusive plurals” and the parallelism between languages with and without articles in this respect; indeed, “inclusive

plurals” are found in English and Russian, whereas “inclusive singulars” – in Norwegian and Armenian.

Our **analysis** of number-neutrality is as follows. We propose that morphological number and semantic number are related via the intermediary of syntactic number. In other words, both morphological and semantic number are interface interpretations of the syntactic number feature projected in the functional projection NumP (specifically, its head Num<sup>o</sup>). The nominals in the constructions considered here are bare NPs (i.e., lacking the NumP); hence, syntactic number feature is absent. The lack of the number feature results in the number-neutral interpretation in semantics; in the morphology, the absence of the number feature can be spelled out as either singular or plural form, resulting in the possibility of both “inclusive singulars” and “inclusive plurals”. Which morphological number serves as the default spell-out of number-less-ness is a parameter, set differently in English/Russian vs. Norwegian/Armenian.

One of the **welcome consequences** of our analysis is that the dissociation between morphological form and the syntactic number feature can be used to account for the Russian data involving the form of paucal and non-paucal quantified noun phrases, as in (5). We argue (contra Ionin and Matushansky 2004, 2006) that numerals in Russian are not nouns. Furthermore, we agree with Pesetsky (2010) that nouns in quantified noun phrases do not contribute syntactic number specification, which comes instead from the numerals merged in NumP; the nouns agree with the numeral in number (and case). However, our analysis differs from Pesetsky’s in an important way: for him, singular morphology in (5a-b) (vs. the plural morphology in (5c-f)) is the morphological default realization of syntactic number-less-ness. For us, syntactic number-less-ness in Russian is realized morphologically as plural, cf. (1), (2)). The apparent singular form in (5a-b) is the realization of the paucal number in Russian: the syncretism of the genitive singular and the nominative paucal is achieved via Lexical Insertion rules (and results from a historical development which applied to nouns in nominal declensions but not in adjectival declensions; hence, the exceptionality of (5c) vs. (5a-b)). Further support for our analysis is drawn from processing studies.

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| (5) | a. | tri stol-a<br>three table(MASC)-GEN.SG<br>‘three tables’     | d. | pjat’ stol-ov<br>five table(MASC)-GEN.PL<br>‘five tables’    |
|     | b. | tri gor-ý<br>three mountain(FEM)-GEN.SG<br>‘three mountains’ | e. | pjat’ gor-Ø<br>five mountain(FEM)-GEN.PL<br>‘five mountains’ |
|     | c. | tri gorničn-ye<br>three maid(FEM)-NOM.PL<br>‘three maids’    | f. | pjat’ gorničn-yx<br>five maid(FEM)-GEN.PL<br>‘five maids’    |

Another welcome consequence of our analysis involves the compatibility of *pluralia tantum* nouns with different types of numerals in Russian. *Pluralia tantum* nouns (e.g., *očki* ‘eyeglasses’, *sutki* ‘24-hour period’) are unlike other nouns in being lexically specified for plural number. Since numerals are lexically specified for number as well, *pluralia tantum* nouns are compatible only with numerals that are specified for plural number: plural and collective numerals in (6b), but not paucal numerals in (6a).

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| (6) | a. | *tri sutok /sutki<br>three 24-hour-period.GEN/NOM.PL<br>‘three /five 24-hour periods’ | b. | troe / pjat’ sutok<br>three /five 24-hour-period.GEN.PL |
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