

Concord Failures: Defective Intervention in the Nominal Domain

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The puzzle: Russian and Bosnian/Croatian/Serbian (BCS) exhibit nominal concord in ϕ -features and case morphology. But numeral-containing nominal phrases (NCNPs) in these languages display a range of agreement patterns in Nominative environments. With low numerals (two, three and four), the range includes full agreement with feminine head nouns in BCS (1) (pitch accent is evidence for NOM.PL); number mismatch between the singular head and plural modifiers (2-4), accompanied by a gender mismatch in (2), and a case mismatch between the genitive head and nominative prenominal elements (2-3) or pre-numeral ones (4). With high numerals (five and up) we see either a case mismatch between the nominative prenumeral and genitive postnumeral elements (5) or full feature matching in (6), where all elements bear Genitive morphology in Nominative environments. Attention is restricted to Nominative here, although my analysis also accounts for the facts seen in Oblique environments (see Franks, 1995).

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|-----|-----------------------------------|-------|------------------|-------------------------------|--|--|
| (1) | ov-e | dvije | stär-e | grân-e/*grânē | | |
| | this-F.NOM.PL | two.F | old-F.NOM.PL | branch-F.NOM.PL/GEN.SG | | (BCS) |
| | 'these two old branches' | | | | | (full Nominative concord) |
| (2) | ov-a | dva | ruzinav-a | brod-a | | |
| | this-N.NOM.PL | two | rusty-N.NOM.PL | ship.M-GEN.SG | | (BCS) |
| | 'these two rusty ships' | | | | | (prenominal Case, number and gender mismatch) |
| (3) | èt-i | dve | krasiv-ye | zvezd-y | | |
| | this-NOM.PL | two.F | beautiful-NOM.PL | star.F-GEN.SG | | (Russian) |
| | 'these two beautiful stars' | | | | | (prenominal Case and number mismatch) |
| (4) | èt-i | dva | krasiv-yx | stol-a | | |
| | this-NOM.PL | two | beautiful-GEN.PL | table.M-GEN.SG | | (Russian) |
| | 'these last two beautiful tables' | | | | | (prenumeral Case and prenominal number mismatch) |
| (5) | èt-i | pjat' | krasiv-yx | stol-ov | | |
| | this-NOM.PL | five | beautiful-GEN.PL | table-GEN.PL | | (Russian) |
| | 'these five beautiful tables' | | | | | (prenumeral Case mismatch) |
| (6) | ov-ih | pet | star-ih | grân-ā/brod-ova | | |
| | this-GEN.PL | five | old-GEN.PL | branch.F-GEN.PL/ship.M-GEN.PL | | (BCS) |
| | 'these five old branches' | | | | | (full Genitive concord) |

Background: The system I propose here derives a broad range of data that cannot readily be assimilated into analyses in which numerals assign Genitive (Babby, 1987; Franks, 1995; Rappaport, 2002; Pereltsvaig, 2010). Such analyses predict (1) to be impossible, and cannot account for Nominative on adjectives in (2) and (3). Analyses relying on the existence of paucal number as a remnant of Old Slavic dual (Zlatic, 1997; Belic, 2008; Pereltsvaig, to appear) invoke a paucal paradigm that is fully syncretic with a range of singular and plural forms and cannot account for agreement facts (see Šarić, 2014). Analyses on which NCNPs have variable internal structure have look-ahead problems (Giusti & Leko, 2005; Bošković, 2006). Pesetsky (2013) argues that Genitive is a part-of-speech (pos) feature of nouns that gets overwritten (due to a *One-Suffix Rule*) by Nominative upon merging of D, which has a Nominative pos feature. In Pesetsky's account, paucal numerals being a morphological realization of a number feature merged low accounts for the mismatch in number that occurs with paucals (4). Movement of the numeral to D makes postnumeral elements inaccessible for Nominative feature assignment, yielding the Case mismatches in (4) and (5). Full agreement in (1) can be derived if feminine paucal numerals are merged in the position of high numerals, and the movement to D does not occur, which raises the question of motivation for this movement. Finally, while accounting for most Russian facts, this analysis cannot account for Russian (3), or BCS (2) and (6).

Analysis: I build on assumptions from Pesetsky's analysis, motivating the movement of numerals to D by assuming that the BCS and Russian D bears a [+qu] quantificational feature that attracts numerals, as proposed for null D by Heycock & Zamparelli (2003). Crucially, I argue that merging a feature-defective element with a feature assigner can block further feature spreading and assignment, and that Pesetsky's *Feature Assignment* mechanism proceeds stepwise and is subject to a variant of Defective Intervention. I argue that nominal concord can fail, and in the case of such failure, the derivation doesn't crash but instead either default values are assigned (for ϕ -features, as in Preminger, 2011) or Back-Up Percolation ensues (Norris, 2014). This conclusion reveals a novel parallel between the clausal and nominal domains, while providing an account of feature-sharing and feature-spreading and explaining complex cross-linguistic data in Slavic NCNPs. I assume ϕ -features are merged

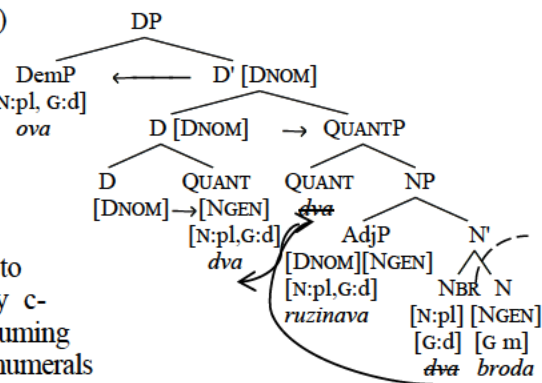
as separate projections in the nominal domain, with nouns entering the derivation numberless and merging with a number feature (Ritter, 1991 and subsequent work). As in Pesetsky (2013), the number feature (NBR) is merged lower than low adjectives, but in my analysis this feature is always present as nouns enter the derivation numberless. If merged with a plural feature, nouns can be morphologically realized as plural if a) NBR itself is not morphologically realized; or b) ϕ -features of an overt NBR match those of the noun. Otherwise, the numberless noun is realized as singular (the morphological default), and the overt NBR is the morphological realization of plural. In BCS and Russian, paucal numerals are instantiations of overt NBR, and high numerals are heads of QUANTP that take NPs as their complements. Additionally, I assume Norris' (2014) *Feature Percolation Principles*, paraphrased in (7). Finally, I propose an extended version of Pesetsky's *Feature Assignment*, shown in (8) (extension in *italics*) and a blocking principle in (9):

- (7) FPP: All projections of a head have the same feature-value pairs as the head. Let α be a head lacking a feature [F]. When α merges with β , projecting αP , if β bears a valued [F:val], αP also bears [F:val].
- (8) All-or-Nothing feature sharing: Let [F:pos] be a part-of-speech feature on a head α and β be a *non-defective* head. When β is merged with α , [F:pos] is copied onto β and realized as morphology on all accessible lexical items merged with a projection of α which share all of β 's ϕ -features.
- (9) Feature Assignment blocking: Let [F:pos] be a part-of-speech feature on a head α and β be a morphologically defective head. When β is merged with α , α is blocked from copying its grammatical features onto β ; all projections of α are rendered unable to copy [F:pos] on elements they merge with.

With these assumptions in place, the entire range of data in (1)-(6) (and all the facts from Oblique cases, assuming POBL to be a P pos

(10)

feature) can be derived from numerals' feature [DNOM, N:pl, G:d] specifications. Assuming paucals bear an unvalued gender feature that can only be valued [+feminine] and gets a default value when the goal bears a M or N gender feature, full agreement in (1) is accounted for, as are mismatches in (2) and (4), where the differences are due to adjectives sharing features with the most local goal they c-command (NBR) or the projection of N they merge with. Assuming high numerals merge with plural nouns, and Russian high numerals bear a default gender feature, while BCS ones are morphologically defective, we derive (5) and (6). The difference between adjectives in (3) and (4) is also explained, and we get the correct prediction that no Nominative adjectives are allowed in post-numeral positions with Russian high numerals. An outstanding question is that of GEN.SG morphology on the feminine head noun in (3). A diagram for (2) is in (10). As NBR cannot get its gender feature valued by agreeing with the noun, a default value is assigned. As ϕ -features of the numeral and numberless N don't match, N gets morphologically realized as singular. [NGEN] feature is assigned to all elements merged with a projection of N that match ϕ -features of NBR (8). Adjectives probe for ϕ -features and agree with NBR. After the [+qu] feature of D attracts NBR, D assigns its DNOM feature (FA indicated by horizontal arrows) to QUANT and all elements merged with a projection of D that share the full set of ϕ -features with QUANT (a dashed line indicates the cut-off point of feature mismatch). The derivation proceeds similarly, with variation as discussed above, for (1)-(6), as well as the facts observable in Oblique environments.



Consequences: This account introduces a novel idea that morphological defectivity of the most local potential feature assignee can block an assigner from sharing its feature with all elements in the nominal domain. **Empirically**, it explains the existing cross-linguistic patterns while avoiding the weaknesses of other analyses. **Theoretically**, it shows a new parallel between nominal and clausal domains: failure to share and assign features due to the presence of defective elements is the nominal parallel to failure to agree due to defective intervention in the clausal domain, discussed by Preminger (2011), while also supporting Pesetsky's (2013) idea of case as a morphological realization of pos features.

Selected References: Bošković (2006). Case and Agreement with Genitive of Quantification in Russian. *Agreement Systems* • Norris (2014). *A Theory of Nominal Concord*. UCSC. • Pereltsvaig (to appear) On Numberlessness and Paucal Numerals in Russian. *Proceedings of FASL*. • Pesetsky (2013) *Russian Case Morphology and the Syntactic Categories* • Preminger (2011) *Agreement as a Fallible Operation*. MIT.