Maximizing concord through impoverishment: Evidence from Slavic

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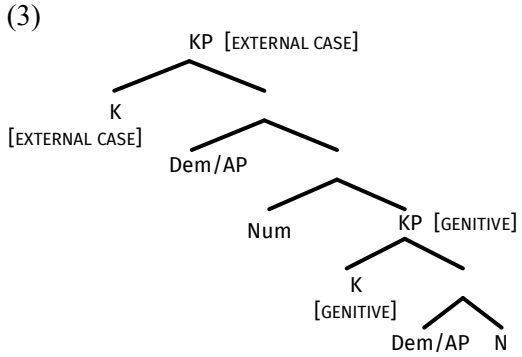
Introduction: As argued in Norris 2014, concord results from the realization of features of dominating nodes on available terminals (see also Ackema & Neeleman 2020). Extending the analysis, I emphasize a theme of domain maximization—features are realized as low as possible in concord, in accordance with locality. Russian and Bosnian/Croatian/Serbian (BCS) numeral constructions such as (1) and (2) are used to illustrate the analysis.

(1) <èt-i> pjat' <èt-ix> star-yx knig
these-NOM.PL five.NOM these-GEN.PL old-GEN.PL book-GEN.PL
'these five old books' / 'five of these old books' *Russian*

(2) <t-ih> pet <t-ih> star-ih knjig-a
those-GEN.PL five those-GEN.PL old-GEN.PL book-GEN.PL
'those five old books' / 'five of those old books' *BCS*

Considering the distribution of demonstratives in (1) and (2) against Cinque's (2005) analysis of Universal 20, I adopt (3) as the basic structure for these numeral constructions. Crucially, (3) consists of two extended projections, or two syntactic domains: a genitive case phrase forms the lower domain, given the common observation that Slavic numerals impose genitive case on their complements (e.g., Franks 1995), while the higher KP reflects the external case context.

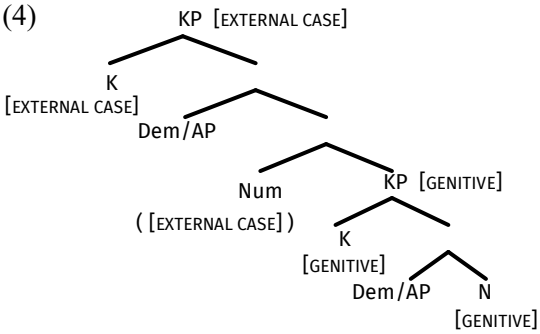
(3)



Under the current view of concord, then, Num and the higher modifier are predicted to realize the external case, while the lower modifier and N realize genitive. This theory of concord also implies that impoverishment can function as a method of domain extension. Using (3) again, suppose that genitive is deleted on the lower KP: the absence of genitive forces the external case to be realized throughout the construction as the most local case, which produces an extended domain of concord. With a few added constraints, these basic principles can derive a variety of complex patterns. These patterns include examples such as (1) where the underlying syntactic domains determined by the extended projections appear to align perfectly with the concord domains that are realized. It can also handle, among others, examples like (2), where the distribution of demonstratives suggests two syntactic domains, but the case distribution provides evidence of only one concord domain. I will argue that the resulting account of concord is ultimately simpler than a purely agreement-based analysis.

Mechanisms underlying concord: The analysis relies on three additional hypotheses: (i) head-to-head agreement between N and the lower K-head, which results in N being specified for GEN; (ii) potential head-to-head agreement between Num and the higher K-head, according to language-specific tendencies (numerals agree in Russian but not in BCS). These first two hypotheses yield a modified version of the structure in (3), as shown in (4). Finally: (iii) language-specific impoverishment rules are restricted to nodes that have the feature targeted for deletion. Following Norris's (2014) theory, these nodes amount to heads (N, Num, K) and the dominating nodes to which their features have percolated. Crucially, modifiers receive features through concord and are not possible loci for impoverishment.

(4)



Predicted effects of impoverishment: The outcome of no impoverishment was discussed earlier using (3),

and nothing changes in (4) if Num agrees with K. This produces the *aligned heterogeneous* pattern (a further specification on Babby's (1987) "heterogeneous" vs. "homogeneous" agreement), where the concord domains align with the underlying syntactic domains, as we see in (1) with Russian. When Num does not agree with K, however, the set of GEN features is able to percolate upward to the higher KP. This results in the *upward homogeneous* pattern displayed by BCS higher numerals (five and above), where GEN is realized both above and below Num (2). With the addition of impoverishment, several more scenarios are imaginable given the current constraints: impoverishment in the lower domain; impoverishment across both domains; or impoverishment restricted to N. Other combinations are possible, and time permitting, the presentation will include a reflection on these predictions. Continuing with the structure in (4), the *downward homogenous* pattern derives from impoverishment in the lower domain, extending the domain of the externally assigned case to be realized throughout the numeral construction. This pattern is displayed by Russian numerals in lexical case environments (5), while some BCS speakers allow it with lower numeral constructions (two, three, four) in dative contexts. Meanwhile, impoverishment across both domains following percolation of the genitive derives the *non-aligned heterogeneous* pattern common of BCS lower numeral constructions, where two domains of concord are realized that do not align with the underlying syntactic domains (6) (the distribution of features here is analyzed following Šarić 2014, but the talk will contain more on 'paucal'). BCS numerals do not receive case via agreement with K, so the set of GEN features is not blocked from upward percolation. Thus, the extended domain of NOM in the non-aligned heterogeneous pattern of (6) derives from impoverishment of the GEN features on nonterminal nodes across both domains. The fourth scenario, where case-feature impoverishment occurs only on N, has little effect, as N simply becomes another terminal that realizes the local dominating case. However, I will show that this can also be used to derive the distribution of φ-features observed in examples such as (6).

(5) èt-im pjat-i krasiv-ym stol-am
these-DAT.PL five-DAT beautiful-DAT.PL table-DAT.PL
'to these five beautiful tables' *Russian* (adapted from Pesetsky 2013:3)

(6) <t-a> dv-a <t-a> velik-a stol-a
those-N.NOM.PL two-N.NOM those-N.NOM.PL large-N.NOM.PL table-M.GEN.SG
'those two large tables' / 'two of those large tables' *BCS*

Implications: This talk promotes a view of concord in line with Norris 2014, where dominating nodes provide the feature content for spell-out, but I take the concept of maximization further by introducing impoverishment as a method of domain extension, deriving several complex Slavic patterns. The resulting analysis provides an alternative to those that account for concord solely with agreement mechanisms that can become unnecessarily complicated. As another simplification, the derivations in this presentation will indicate that 'paucal' (which has a controversial status in Slavic) can be used purely as a feature of lower numerals that drives impoverishment; it is not necessary, nor simpler, to analyze it as a number feature or case (cf. Bailyn & Nevins 2008; Ionin & Matushansky 2018).

Selected references: Ackema, P. & A. Neeleman. 2020. Unifying nominal and verbal syntax: Agreement and feature realization. In A. Alexiadou & H. Borer (eds.), *Nominalization: 50 years on from Chomsky's* Remarks, 29–52. Oxford University Press. **Babby, L. H.** 1987. Case, prequantifiers, and discontinuous agreement. *Natural Language & Linguistic Theory* 5.1: 91–138. **Bailyn, J. & A. Nevins.** 2008. Russian genitive plurals are imposters. In A. Nevins & A. Bachrach (eds.), *Inflectional identity*, 237–270. Oxford University Press. **Cinque, G.** 2005. Deriving Greenberg's Universal 20 and its exceptions. *Linguistic Inquiry* 36.3: 315–332. **Franks, S.** 1995. *Parameters of Slavic morphosyntax*. Oxford University Press. **Ionin, T. & O. Matushansky.** 2018. *Cardinals: The syntax and semantics of cardinal-containing expressions*. MIT Press. **Norris, M.** 2014. A theory of nominal concord. Diss., University of California Santa Cruz. **Pesetsky, D.** 2013. *Russian case morphology and the syntactic categories*. MIT Press. **Šarić, A**. 2014. *Numeral induced agreement mismatches in Serbo-Croatian*. Master's thesis, Utrecht University.