Why Russian counts and binds: on D, PERSON, and the role of labeling for ϕ-Agree

This paper presents new empirical evidence for a formal connection between Case and PERSON, and PERSON and referential index (Schütze 1997, Martin 1999, Chomsky 2000, Béjar and Rezac 2003, Richards 2008, a.o.). I argue that structural nominative case (NOM) corresponds to a nominal structure labeled by a D head (Chomsky 2013). Consequently, such a structure may become a goal of syntactic ϕ-feature Agree. The core labeling feature ([+D] of Landau 2010) formally corresponds to CI licensing of [+PERSON] feature. The empirical motivation comes from a cross-linguistic comparison of numeral constructions in Slavic.

The puzzle: Russian paucal and 5&up numeral constructions exhibit heterogenous case marking: while the structurally lower part ($\sim$NP) is in genitive (GEN), the structurally higher part ($\sim$DP) is in NOM, (1).

(1) èt-i posledn-ie pjat' krasiv-ych stol-ov
these-NOM.PL last-NOM.PL five beautiful-GEN.PL table-GEN.PL
'these last five beautiful tables' RUSSIAN 5&UP

Pesetsky (2013) uses this type of data to argue that Russian nouns are born GEN and that case stacking (Richards 2013) is real: GEN, however, rarely surfaces because it gets phonologically rewritten by a structurally higher case assignment (by a locality restricted feature spreading, Feature Assignment; FA). In particular, NOM is assigned by D (DNOM). NOM then usually spreads through the entire DP. Numerals are interestingly different: the nature of the number feature on NUM enforces head movement to D, NUM-to-D raising blocks FA, and in turn the structurally lower part remains in GEN.

Pesetsky's proposal predicts that all DNOM DPs should be by default NOM. Only under exceptional circumstances the NP part might preserve the underlying GEN but the D domain should still be in NOM. This prediction is not borne out: the Russian heterogeneous case pattern is cross-linguistically rare, even within Slavic. E.g., Czech, Polish, and Slovenian exhibit homogeneous GEN throughout. [Note: these languages do not have paucals. For reasons of space, the data here are only from Russian and Czech.]

(2) tě-ch/ *t-y posledn-ích/ *posledn-í pět krásných stolů
those-GEN.PL/ *those-NOM.PL last-GEN.PL/ *last-NOM.PL five beautiful-GEN.PL table-GEN.PL
'those last five beautiful tables' CZECH 5&UP

According to Pesetsky, the case variation concerns only morphology, not the syntactic structure. I argue that the difference is structural: Czech GEN 5&UP constructions systematically differ from their Russian counterparts in that they (i) do not trigger ϕ-feature agreement, (3), (ii) cannot form a boolean conjunction in coordinations (Munn 1993), (4), and (iii) cannot licence secondary predicates, (5). The difference cannot be explained by stipulating that Czech 5&UPs are NPs or that the GEN elements scrambled out of NP: unlike in Russian, demonstratives, possessive determiners, and D-dependent quantifiers are in GEN, (6).

(3) Pět chlapců přišlo / *přišli.
five boys.GEN.PL came.N.SG / *came.M.PL
'Five boys came.'

(4) Pět chlapců a pět dívek se sešlo/ *sešli v klubu.
five boys.GEN and five girls.GEN REFL get-together.N.SG/ *M.PL in club
'Five boys and five girls got together in the club.'

(5) Pět chlapců sledovalo čtyři děvčata *opilých/ *opilí.
five boys.GEN.PL watched.N.SG four.ACC girls.acc.pl drunk.GEN.PL/ naked.NOM.PL
'Five boys$_i$ watched four girls drunk$_i$.'

(6) těch/ našich/ každých/ všech pět krásných stolů
those.GEN.PL/ our.GEN.PL/ each.GEN.PL/ all.GEN.PL five.NOM beautiful.GEN.PL tables.GEN.PL
'these/our/each/all five beautiful tables'

The role of PERSON: According to Pesetsky (2013), Russian 5&UPs are numberless. Yet, they trigger plural agreement, (7). This is surprising if there is no valued number feature and semantic agreement is restricted to non-local Agree. Czech is more in line with Pesetsky's analysis: 5&UPs yield failed Agree, (3).

(7) pjat' malčikov prišli
five.NOM boys.GEN.PL came.PL
'(the) five boys came'

That 5&UPs lack valued ϕ-features can be shown on intra-sentential anaphors. If ϕ-features on a DP are valued in narrow syntax but the semantic values of the DP are distinct (e.g., neuter nouns denoting females), intra-sentential anaphors agree with the semantic value or the grammatical value, (8). In contrast, anaphors to 5&UP DPs must agree with the semantic number, (9), which shows that there is no ϕ-feature goal.

(8) Děvče přišlo. Ono/ ona...
girl.N.SG came.N.SG it.N.SG/ she.F.SG
'A/the girl came. She [=the girl]...'

(9) Pět chlapců přišlo. *Ono/ oni...
five.nom boys-gen.pl came.n.sg it.N.SG/ they.M.PL
'Five boys came. They [=the five boys] ...'

I argue that Russian 5&UPs trigger semantic agreement because their DP is labeled for PERSON. In contrast, PERSON in Czech 5&UPs is too deeply embedded to be minimally searchable and to label (Chomsky 2013). Independent evidence that PERSON is not part of the label in Czech comes from DP coordinations. I follow Farkaş and Zec (1995) in that features of a coordinated DP are computed as a combination of semantic and morpho-syntactic features. The primary semantic feature is PERSON, modeled as [±PARTICIPANT] (Nevins 2007), which allows for a direct CI association with an index (obligatory for [+PERSON]/[+PARTICIPANT]). Semantic coordination is based on indices associated with individual conjuncts (matching indices ⇒ SG; non-matching ⇒ PL). Semantic plurality is obligatory if at least one of the conjuncts is [+PERSON]. 5&UPs lack a PERSON feature but if they combine with [+PERSON], agreement is still PL because the [+PERSON] conjunct provides an index, and there is no matching index on the 5&UP conjunct, (10). If the coordination consists solely of 5&UPs, there is no PERSON feature to compute semantic agreement. In addition, since 5&UPs are numberless, the system cannot calculate the number from morpho-syntactic features either, and the only plausible agreement is post-syntactic agreement with the closest conjunct (Bhatt and Walkow 2013), (4). If one conjunct is [−PERSON], the system can either track the PERSON feature (⇒ PL), or morpho-syntactic features (⇒ closest conjunct agreement), (11). (Cf. Marušič et al. (2015))

(10) Já/ty a pět chlapců jsme/jste šli/ *šlo do ZOO.
I.NOM/ you.NOM and five.NOM boys.GEN.PL AUX.1/2.PL gone.M.PL/ gone.N.SG to ZOO
'I/you and five boys went to the ZOO.'

(11) Děvąta a pět chlapců šli/ šlo/ *šla do ZOO.
girls.N.PL and five boys gone.M.PL/ N.SG/ N.PL to ZOO
'Girls and five boys went to the ZOO.'

The proposal: Following Pesetsky (2013), I argue that in both language groups, NUM raises to D. This operation yields criterial freezing (Rizzi 2006, 2007), and in turn makes D and its features invisible for labeling. The reason Russian is different is that in Russian-type languages D undergoes an additional raising that makes D accessible to minimal search/labeling. Independent evidence that Russian D (or at least its PERSON/index feature) comes from binding: while in the Czech-type languages only c-commanding DP in NOM can bind, in Russian, possessive pronouns in spec,DP (and Datives) bind outside their c-command domain (Nikolaeva 2014), (12). The correlation between binding and NOM licensing further supports the hypothesis that PERSON is the core feature that provides a formal connection to a referential index at the CI interface, and it is in the very core of being NOM.

(12) a. *Ëë$_i$ učitel'nica poxvalila Mašu$_i$.
her teacher.NOM praised Maša.ACC
'Her$_i$ teacher praised Maša$_i$.' RUSSIAN

b. Jejı$_i$ učitelka pochválila Mášu$_i$.
her teacher.NOM praised Maša.ACC
'Her$_i$ teacher praised Maša$_i$.' CZECH

POLISH NUMERAL NP AGREEMENT AS A FUNCTION OF SURFACE MORPHOLOGY

Puzzle: Subject numeral NPs in Polish show a clear effect of surface morphology (case and number) on the agreement on T. Cardinals five and higher trigger the default neuter singular agreement on the verb irrespective of gender (1b-c), while the lower cardinals 2-4 require plural (1a), except if the lexical NP they combine with is virile, i.e., human masculine (glossed as [V]; non-virile is glossed as [NV]). In this latter case the entire numeral NP can also be marked with the genitive case and the verb must then surface in the default form, giving rise to the optionality in (2).

(1) a. Dwie dziewczyny/ Dwa koty przyszły.
two.F.NOM=ACC girl.PL.NOM/ two.NV.NOM=ACC cat.M.PL.NOM came.NV.3PL
'Two girls/cats came.'

b. Pięć dziewczyn/kotów przyszło.
five.NV.ACC=NOM girl.PL.GEN/cat.M.PL.GEN came.N.3SG
'Five girls/cats came.'

c. Pięciu chłopców przyszło.
five.V.OBL boy.PL.GEN came.N.3SG
'Five boys came.'

(2) a. Dwaj chłopcy przyszli.
two.V.NOM boy.PL.NOM came.V.3PL
'Two boys came.'

b. Dwóch chłopców przyszło.
two.V.GEN=ACC boy.PL.GEN came.N.3SG
'Two boys came.'

Two questions arise: (1) how to explain the optionality with virile lower numerals, and (2) how is the link between the surface case on the numeral NP and its agreement properties accounted for?

Some untenable analyses: Klockmann 2012, 2013 proposes that higher but not lower cardinals in Polish are phi-deficient, thus failing to value phi-features on T. This analysis, however, is silent about the case-marking and concomitant agreement failure in (2b). An alternative is the so-called *Accusative Hypothesis* (Schenker 1971, Franks 1995, 2002, etc.), on which Polish higher cardinals appear in the subject position in the accusative case (realized as genitive for virile numeral NPs (1c) and as accusative for non-virile numeral NPs (1b)): it is possible to link the agreement failure in (1b) to the non-nominative case on the subject. However, the contrast in (2) is a problem for this analysis as well.

Core issue: The behavior of lower cardinals requires an explanation: either they are nominative (so the genitive case in (2b) must be accounted for) or they are accusative, just like higher cardinals (and so it is necessary to account for (2a), as well as for their ability to trigger agreement). While the latter hypothesis seems *a priori* more complicated, it can be given independent support: there are reasons to believe that the nominative form in (2a) is not a cardinal. First, this form can only be used for all-male groups (Swan 2002:190), which makes it different from all other instances of the virile, which are compatible with a female-male mixture. Second, this form cannot appear in complex cardinals ((3a) vs. (3b)).

(3) a. * Dwadzieścia/dwudziestu dwaj/trzej/czterej chłopcy przyszli.
twenty.NV/twenty.V two/three/four.V.NOM boy.PL.NOM came.V.3PL

b. Dwudziestu dwóch /trzech /czterech chłopców przyszło.
twenty.V two/three/four.V.ACC=GEN boy.PL.GEN came.N.3SG
'Twenty-two/three/four boys came.'

We propose therefore that the lower cardinals 2-4 may possess two minimally different lexical specifications: they can be fully adjectival (with intersective semantics and a full set of phi-features), as in (2a), or they can be deficient in the same way the higher cardinals are (see below). In the former case they are nominative and trigger agreement. In the latter case they behave exactly as the higher cardinals do and become then subject to the accusative syncretism: surfacing as genitive with virile NPs in (2b) and as accusative with non-virile NPs in (1a). Agreement on T then is determined by the surface case realization: plural with nominative and default with genitive. The nominative forms in (1a) can therefore correspond either to an underlying adjectival structure or to a numeral one.

Two-step agreement: To account for the effect of surface case-marking on agreement, we make use of the hypothesis (see Ackema and Neeleman 2003, Bonet 2013, Bonet et al. 2015, i.a.) that agreement proceeds in two steps: a syntactic one and a post-syntactic one (cf. Bobaljik 2008). We propose that in Polish, like in a number of languages, numeral NPs are deficient with regard to syntactic agreement: in fact, following Matushansky and Ruys 2015, we propose that numeral NPs lack the individuation feature (a feature in the referentiality hierarchy, cf. Harley and Ritter 2002), which precludes their agreement with T. As a result, not only does number agreement fail, but the numeral NP also fails to receive (nominative) case. We propose that the apparent accusative syncretism of subject numeral NPs in Polish is related not to accusative case-marking, but to the default realization of NPs not specified for oblique or nominative cases: genitive for virile NPs in the plural (2c) and nominative otherwise (1b).

While syntactic agreement is sensitive to syntactic case, the post-syntactic step of agreement can be reasonably assumed to interact with its morphological realization, which defines the accessibility of an NP to probing (Bobaljik 2008). In this step it is the surface case-marking of a numeral NP that determines agreement; it seems natural to assume that since numeral NPs containing the higher cardinals are not morphologically specified for number, they fail to trigger number agreement in this step even when their surface case-marking would permit it.

Independent evidence: The individuation feature can be motivated by the systematic agreement failure with numeral NPs and sometimes pseudo-partitives cross-linguistically. In Polish, the contrast between numeral NPs and regular plurals is limited to number agreement on T: the individuation feature, while forming part of the phi-feature bundle on T, is, just like the person feature, missing from the phi-feature bundle on adjectives. As the examples in (4) show, for non-virile cardinal-containing NPs in Polish, both attributive and predicative adjectives can bear either genitive or accusative (all four possible combinations are allowed); the same is true for depictives.

(4) a. Nastepne kilkadziesiat metrów było czyste.
next.ACC several ten.PL.ACC=NOM meter.PL.GEN was.N.3SG clean.ACC=NOM
'The next few tens of metres were clean.'

b. Kolejnych jedenascie zarzutów było podobnych.
further.GEN eleven.ACC=NOM charge.PL.GEN was.N.3SG similar.GEN
'Further eleven charges were similar.' Przepiórkowski and Patejuk 2012

In the spirit of Przepiórkowski and Patejuk 2012, we suggest that adjectives can agree either with the (genitive) lexical NP or with the entire cardinal-containing NP (not case-marked in the subject position; surfacing as nominative). In the minimalist perspective, this can be formalized as follows: as adjectives agree for number and gender, they should bear two uninterpretable features. Assuming that they do not probe simultaneously, the optionality in (4) arises from the order of probing. If the first feature to probe is uninterpretable number, it finds its interpretable counterpart on the cardinal. If the first feature to probe is gender, then, cardinals being unspecified for gender, it finds its interpretable counterpart on the lexical NP. The case feature is valued as a free-rider, on the first agreement relation. Plural marking shows that number agreement does not fail in either case; the hypothesis that another feature is present on T explains why, despite the presence of [number] on the cardinal, there is no number agreement on the verb in (4).

Further issues: Completing our analysis of Polish, we will discuss agreement with the highest (nominal) cardinals *thousand*, *million*, etc., and the issue of case-assignment: the cardinals 5 and up assign genitive to the lexical NP (1b). We will argue, following Hurford 2003, etc., that higher cardinals are more nominal than lower cardinals (for Polish: that the lower cardinals, like adjectives, bear uninterpretable phi-features, with the highest cardinals, like nouns, being specified for interpretable phi-features) and that it is the presence of additional phi-features on the cardinal itself that determines its interaction with the lexical NP (cf. Bailyn 2004, Matushansky 2012, Pesetsky 2013). Finally, we will address the issue of the semantics of cardinals and show how Polish facts support the non-intersective analysis of Ionin and Matushansky 2006.

3-5 keywords: numerals, Polish, post-syntactic agreement, case

The Kase Phrase does it all: a nanosyntax-based analysis of the internal and external syntax of the Polish Genitive of Quantification.

In Polish and some other Slavic languages the presence of numeral 5 and onwards triggers genitive on the complement (GoQ) noun when the quantified phrase (Q_HP) is found in nominative and accusative contexts. Otherwise, the quantifier and the noun agree in case. Although an abundance of analyses has appeared within the mainstream generative syntax (e.g. Babby 1987; Franks 1994, 1995; Przepiórkowski 2004; Baylin 2004; Bošković 2006; Pesetsky 2014; Willim 2014, etc) each of them faces potential problems regarding at least one of the following: **(i)** the structure hosting both the agreeing (>5) and genitive-assigning (<5) numeral quantifiers, **(ii)** the nominal status of Qs in structural case positions, **(iii)** agreement patterns with numeral subjects and **(iv)** the form of a prenumeral modifier sharing case either with (nom/acc) Q or (gen) N (cf. Franks 1994, 1995, 2002; Bailyn 2004; Bošković 2006; Przepiórkowski 2001; Pereltsweig 2006; Przepiórkowski & Patejuk 2012; Watanabe 2012; Willim 2014). This presentation overcomes these drawbacks and introduces an analysis that not only addresses issues (i-iv), but also explains the intricacies of GoQ, problematic for the majority of generative accounts. Our discussion is based on the nanosytactic proposal of split KP (case projections) in the extended functional projection of the noun, which directly accounts for problematic agreement facts found in Polish, Russian and other Slavic languages, i.e. that the subject Q_HPs in Polish cause default agreement on the verb and do so only optionally in Russian (e.g. 1-2). Moreover, in Polish the participle/predicative adj can optionally occur in two forms, i.e. acc or gen (e.g. 3).

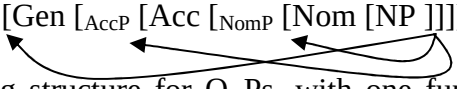
(1) a. *Te trzy dziewczyny pracowały/*pracowało tam.* (Polish)
these-$_{NOM}$ three-$_{NOM}$ girls-$_{NOM}$ worked -$_{PL/SG}$ there
b. *Te pięć dziewczyn *pracowały/pracowało tam.* (Polish)
these-$_{ACC}$ five -$_{ACC}$ girls-$_{GEN}$ worked-$_{PL/SG}$ there

(2) a. *Pjat' devushek rabotali/rabotalo tam.* (Russian)
five girls-$_{GEN}$ worked-$_{PL/SG}$ there
b. *Eti pjat' devushek rabotali/*rabotalo tam.* (Russian)
these-$_{NOM}$ five girls-$_{GEN}$ worked-$_{PL/SG}$ there

(3) *Pięć nauczycielek zostało* ***wybranych/ wybrane*** *do pomocy w egzaminach końcowy*ch
five teachers-$_{FEM.PL.GEN}$ was-$_{3SG.NEUT}$ chosen-$_{PL.GEN/ACC}$ to help in examinations final.
'Five teachers were chosen to help in final examinations.'

The nanosyntax angle: Following the tenets of nanosyntax, case distribution proceeds via movement of a nominal to a position within an articulated Kase Phrase (KP, Willim 2000; Franks 2002) to acquire a proper case suffix, i.e. to obtain a morphological case required by a syntactic probe, e.g. from Caha (2010). Movement of QP/NP to a specifier position of a given case projection is triggered by the external selector which activates a given case region, e.g. v activates AccP, while T (typically) activates NomP:

(4) [$_{InsP}$ [Inst [$_{LocP}$ [Loc [$_{DatP}$ [Dat [$_{GenP}$ [Gen [$_{AccP}$ [Acc [$_{NomP}$ [Nom [NP]]]]]]]]]]].



The analysis: We assume the following structure for Q_HPs, with one functional sequence (KP) dominating NP in both inherent and structural case contexts. Yet, in in the structural case contexts the numeral exceptionally acts as a quasi-nominal (bears complete φ-features). This hybrid behavior is a residue of an incomplete diachronic change, whereby the higher numeral changed the nominal paradigm (feminine) for the adjectival one (cf. Babby 1987; Rutkowski 2007). In ex. (5) Num claims accusative as closer, while the NP complement needs to search for adnominal genitive, e.g.:

(5) [$_{vP}$ v [$_{VP}$ V [$_{KP}$ K… [$_{QhP}$ Num F_Q [$_{NP}$ N]]]]]

We follow Franks (1994, 1995, 2002) and Przepiórkowski (2002) and assume that Q_HPs spell out both structural cases as accusative. In terms of a split KP analysis, v/T activates the head

of AccP in (4) and the entire Q_HP moves to [spec, Acc]; thus accusative on Q_H is licensed. But the NP complement is still caseless and needs to move to [spec, Gen], pied-piping the Q_HP level dominating it (cf. Cinque 2005, 2009):

(6) [$_{GenP}$ [$_{QP}$ pięć F_Q [$_{NP}$ nauczycielek]] Gen [$_{AccP}$ [$_{QP}$ pięć F_Q [$_{NP}$ nauczycielek]] Acc [$_{NomP}$ Nom[~~**QP**~~]]]]

step2 step1

The result is the following case (projection) stack, with AccP placed in the specifier position of GenP:

(7) X → [$_{GenP}$ [$_{AccP}$ *pięć nauczycielek*] Gen] (five$_{ACC}$ teachers$_{GEN}$)

On the strength of the definition of closeness (Pesetsky & Torrego 2001) the maximal projection and its specifier are equally close to a c-commanding probe:

(8) (i.) *Attract Closest*: If a head K attracts feature F on X, no constituent that bears F is closer to K than X. (ii.) *Closeness*: Y is closer to K than X if K c-commands Y and Y c-commands K.

The structure of the Q_HP in **(7)** has the following property: both the maximal projection of GenP and the specifier of AccP are close(r) to X. Consequently, X can become involved in Agree with either GenP (for genitive) or AccP (for accusative). When X is T, default agreement comes out in Polish, as neither layer of the case (projection) stack on the Q_HP subject is NomP, cf. (1b). We assume, following Bošković (2006), that Russian Q_HPs come in two options (nominative or accusative) where option (9a) can return nominative agreement on T, cf. (2):

(9) a. T [$_{GenP}$ [$_{NomP}$ …] … Gen (Russian)
b. T [$_{GenP}$ [$_{AccP}$ …] … Gen (Russian and Polish)

When X = Participle/Adjective, these are incomplete φ-probes miss the [_person] feature and function as passive recipients of the features provided by their nominal goal (and probe T). A default T makes no claims on the features of Part, whereas both GenP and AccP are close(r) to Part/A on the strength of (8), providing it with a free option. Therefore Part/A can become involved in Agree and valuation either with AccP or GenP, so the mystery of (3) is solved.

The account based on articulated KP and case-driven movement does not overgenerate and predicts that optional agreement does not apply in cases of the concord holding between a verb (selected by a φ-complete T) and a nominative subject containing a specifier (or complement) in genitive; the genitive is a case of an extended nominal projection separate from the projection of the nominal head; ex. (10b) and (11b) show a different structure from (7) and (9):

(10) a. T … [jego [książka]] b. T [$_{NomP}$ [$_{NP}$ [$_{GenP}$ jego] [$_{N'}$ książka…]]]] …
his book

(11) a. *róg ulicy* b. [$_{NomP}$ [$_{NP}$ róg [$_{GenP}$ [$_{NP}$ ulicy]]]]
corner street-$_{GEN}$

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Old Church Slavonic was head-initial

This talk addresses the issue of head directionality in Old Church Slavonic (OCS). Whereas some analyses assume that OCS was head-initial on a par with Modern Slavic (Willis 2010, Jung 2015, Jung& Migdalski 2015), some other accounts postulate that OCS was T-final (Pancheva 2005, 2008) or X^0-final in the VP-domain but X^0-initial in the CP-domain (Dimitrova-Vulchanova & Vulchanov (2008). This talk argues that there is little evidence for head-finality of OCS: the diagnostics used in support of this claim give wrong predictions when applied to the same patterns in Modern Slavic, and they are also challenged by diachronic consideration that have not been addressed by their proponents.

Pancheva (2005) assumes T-finality to account for diachronic changes in Bulgarian cliticization. She shows that while OCS and 9th-13thc. Bg had post-verbal clitics (1a), analyzed by her as left-adjoined to final T^0 (1b), in 13th-17thc. Bg pronominal clitics move to second position (2P), which she attributes to the emergence of a new T-initial grammar. As a result, pronominal clitics precede T^0 and lean onto elements in SpecCP or SpecTP (2a). From the 17thc., 2P clitics are replaced by preverbal clitics; the change correlates with a decline of obligatory topicalization to SpecTP (2b), and in consequence the clitics are not interpreted as 2P but as adjoined to functional heads below T^0 (cf. 3). Since Pancheva (2005: 146) presumes that in OB lexical verbs do not reach T^0 but only Asp^0 below T^0, her evidence for the final T^0 comes from the position of pronominal clitics (*ja* in 1a) with respect to the aux in T^0 (*estь* in 1a). I observe that this diagnostic gives conflicting results when applied to the Modern Slavic languages in which the 3rd person aux (*je* in 4a) follows pronominal clitics, while the other aux forms (e.g. *sam* in 4b) precede them. If Pancheva's conjecture is adopted, T^0 in Modern Slavic is predicted to be final when occupied by the 3rd person singular aux, and initial otherwise. Diachronically, in OB all auxiliary forms followed pronominal clitics (Sławski 1946; see 5), as in the pattern in (1), which at first sight may support Pancheva's analysis. Yet, in the 17-18thc. the 1/2 aux forms shifted across the pronominal clitics, adopting the current distribution (Sławski 1946: 76-77). The timing of the shift poses a problem for Pancheva (2005), as it occurred when according to her Bg was T-initial, with no 2P clitics left. This means that 2P cliticization is unrelated to the alleged loss of T-finality, as is also confirmed by Old Russian, which featured 2P cliticization until the 14thc. but 1/2 aux rigidly followed the pronominal clitics throughout this period (Jung 2015). I argue that the shift of the aux forms is due to the strengthening of the person feature on T, and that [-person] forms do not target T but remain in the base position, below pronominal clitics. This proposal receives support also from Polish, in which 1/2 aux are above the 3rd person copula (6), and Old Russian, in which 1/2 aux and 1/2 pronominal subjects are in complementary distribution, in contrast to 3-aux and pronouns (Jung 2015).

In her later work, Pancheva (2008) argues for T-finality in OCS on the basis of the position of negation in complex tenses. Negation is a proclitic that attracts and incorporates into the verb in Slavic (Rivero 1991). Assuming that NegP is above TP (Willis 2000), neg-part-aux orders may be indicative of a T-final structure. Since Bg permits only the neg-aux-part order, while both neg-aux-part and neg-part-aux are possible in OCS (7), Pancheva presumes the OCS variation to be indicative of competition between two grammars (T-final/T-initial). I observe that her diagnostics are challenged by Modern Slavic. In Polish Neg attracts the future aux rather than the participle, but in past forms it adjoins to the participle rather than the aux (8), even though the aux can lean onto the subject (6). Likewise, in Czech negation attracts the participle, though it may attract the verb "be" when it is a copula, but not the aux (9). Thus, a comprehensive survey of Slavic shows that neg-aux and neg-part are determined by the height of NegP or/and the X/XP status of the element attracted by negation (see Migdalski 2006). They are not contingent on T-directionality and grammar competition is not at work here. Pancheva's (2008) third argument for the T-finality comes from her estimates of the ratio of part/aux orders in OCS (10) and Bg: whereas in OCS both orders are in a balanced proportion (aux-part 59% vs. part-aux 41%), in Modern Bulgarian the aux-part order clearly prevails (aux-part 97% vs. part-aux 3%). She attributes the contrast to T-finality of OCS, in which she assumes the less common part-aux order (10b) was the basic one, and the aux-part (10a) derived via rightward participle movement. I observe that the different ratios may have been influenced by other diachronic issues: Damborský (1967) states that in OCS the *l*-participle was an innovation and considered too novel for biblical texts. Dostál (1954) shows that in OCS the *l*-participle is attested sporadically: it constitutes 5% of all tense forms although it is the most common tense form in Modern Slavic. I attribute the lower ratio of part-aux patterns in Modern Bg to the loss of obligatory topicalization to SpecTP around the 17thc. noted by Pancheva (2005: 153). The fact that the *l*-participle may topicalize

to SpecTP is confirmed by the ban on subject placement in part-aux orders (Migdalski 2006; cf. 11). I further propose that the high ratio of OV orders in OCS (Dimitrova-Vulchanova & Vulchanov 2008) is also due to the obligatory topicalization, but this high ratio does not imply the V^0-finality, as is also shown by Eckhoff's (forthcoming) comparison of VO structures in OCS with the Greek vorlage.

(1) a. svętъ bo mŏš stvorilъ *ja* estъ
holy because man $create_{PART.M.SG}$ $them_{ACC}$ is_{AUX}
"Because a holy man has created them" (9^{th} c. Bg, Pancheva 2005: 139)
b. $[_{TP}\ [_{vP}\ [_{V'}\ t_i\ V^0\ ]]\ [_T\ CL_i\ T^0]]$ (post-verbal clitics) (Pancheva 2005: 139)

(2) a. $[_{TP}\ [_{TP}$ (cl) $[_{TP}$ XP =CL T $[_{AspP}\ [_{Asp}$ V Asp]]]]] (2P clitics, Pancheva 2005: 151)
b. tova *se* pomoli Juda bogu (*tova* = topic in Spec, TP)
$that_{TOP}$ REFL $ask_{PART.M.PL}$ Judas God
"Judas asked God $that_{TOP}$" (18^{th} c. Bg, Pancheva 2005: 154)

(3) $[_{TP}\ ...T^0...[_{XP}\ [_X\ CL\ X^0\ ]\ ...\ [_{vP}\ V^0\ ]]]$ (pre-verbal clitics, Pancheva 2005: 137)

(4) a. On *mu ih je* dao b. Ja *sam mu ih* dao
he him_{DAT} $them_{ACC}$ $is_{AUX.3SG}$ $give_{PART}$ I $am_{AUX.1SG}$ him_{DAT} $them_{ACC}$ $give_{PART}$
"He gave them to him" "I gave them to him" (S-C)

(5) a. pustila *mę*$_{ACC}$ *sta*$_{AUX.2.DUAL}$ oba carě (14^{th} c. Bg)
b. tvoè zlàto što *mu*$_{DAT}$ *si*$_{AUX.2.SG}$ pròvodilь (17^{th} c. Bg, Sławski 1946: 76)

(6) a. My-*śmy* są zadowoleni
$we+_{AUX.1PL}$ be_{3PL} $glad_{VIR.PL}$ "We are glad" (Polish)

(7) a ne mogl̆ъ bi tvoriti ničesože
NEG $can_{PART.M.SG}$ $be_{COND.3SG}$ do_{INF} nothing
"He couldn't do anything" (OCS, John 9.33)
b. sego avraamъ nĕstъ sъtvorilъ
this Abraham $NEG+is_{AUX}$ $do_{PART.M.SG}$
"Abraham did not do this" (OCS, John 8.40, Pancheva 2008)

(8) a. Nie będę biegł b. Nie biegli-śmy
NEG $be_{PRF.1SG}$ $run_{PART.M.SG}$ NEG $run_{PART.M.PL}+AUX_{1PL}$
"I won't run" "We didn't run"
a'. *Nie biegł będę b'. *Nie-śmy biegli (Polish)

(9) a. Nepřišel jsi b. Nejsi zdráv
$NEG+come_{PART.M.SG}$ are_{AUX} $NEG+are_{2SG}$ healthy
"You have come" "You're not healthy" (Czech, Toman 1980)
a'. *Nejsi přišel b'. *Jsi nezdráv

(10) a. iže bĕaxŏ prišъli otъ vьsěkoję vьsi
who+FOC $be_{PAST.3PL}$ $come_{PART.PL}$ from every village
"who had come from every village" (OCS, Luke 5.17)
b. učenici bo ego ošъli bĕaxŏ vъ gradъ
disciples for his $go_{PART.PL}$ $be_{PAST.3PL}$ in town
"because his disciples had gone to the town" (OCS, John 4.8, Pancheva 2008)

(11) Pročela (*Paulina) beše knigata
$read_{PART.F.SG}$ Paulina $be_{PAST.AUX.3SG}$ book-the
"(Paulina) had read the book" (Bg, see Embick & Izvorski 1995)

COORDINATION IN CROATIAN CHURCH SLAVONIC

There are, at the moment, two major approaches to the structure of coordination. The first treats coordinator as a head, the second conjunct as a complement and the first conjunct as a specifier of that head (Zoerner 1995, Progovac 1998, Zhang 2010, etc.). According to the second approach the coordinator and the second conjunct are adjoined to the first conjunct, which is the head of the whole coordination (Munn 1993, Larson 2010, Prażmowska 2013). The aim of this paper is to present some arguments from Croatian Church Slavonic which support the second approach. Croatian Church Slavonic is a literary language which was in use in the littoral part of Croatia during the Middle Ages. Like English *and*, the Croatian Church Slavonic coordinate conjunction *i* can connect phrases of all syntactic categories, which means that it does not have any categorial features (Zhang 2010: 43). However, unlike English *and*, it can occur in front of the first conjunct:

(1) da naslêduûĉe zap(o)v(ê)di tvoe · i voleû tebê i dêêniem' ugodili bihom'

that following orders your and will$_{INSTR}$ you$_{DAT}$ and deed$_{INSTR}$ pleased be$_{AOR1PL}$

'That we could, following your orders, please you, both in will and deeds.'

Moreover, it often occurs only with one phrase (one conjunct) following it:

(2) b(lagoslo)vi i mene o(t)če moi (Gn 27,34)

bless and me father$_{VOC}$ my

'Bless me also, O my father.'

Such examples create a problem for the first approach. It is generally accepted that the category of the whole coordination is identical to at least one of the conjuncts. In the case of English *and* and Croatian Church Slavonic *i* it is usually the first conjunct. In order to explain this fact, Zhang (2010) proposes that the categorial feature (and probably some other features) percolates from the first conjunct (specifier) onto the coordinator (head) and then, from there, onto the whole coordinate complex. However, in such examples as (1) and (2), there is no specifier in front of the (first) coordinator, and the categorial status of the whole complex must be determined by the phrase following the coordinator. The only solution is to assume the existence of two different *i*'s, one of which is a coordinator and the other some kind of (focus) particle. However, such an assumption does not capture obvious generalization that both *i*'s can introduce phrases of all categories, which means that both have no categorial feature. Therefore, it seems that this solution is not good and economic. In examples like (2) the other (first) conjunct is usually understood, but it is also unnatural to assume that the missing conjunct can determine the categorial make-up of the coordination. The solution to the question of the categorial status of coordinations is less problematic in the second approach. The category of the and-phrase (which here consists only of the coordinator and the second conjunct) is always determined by the conjunct following the coordinator. Since this phrase can be adjoined to any category, it is normal that in cases when we have two or more conjuncts the first one is c-selected and, therefore, determines the categorial make-up of the whole complex. The fact that the situation is the same in other Slavic languages, as well as in some languages from other families (for example Latin), makes the problem for the first approach more serious. Therefore, the adjunction analysis appears (at least for some languages) more appropriate for coordination than the first approach.

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Lechitic Vowel Developments of Posen Low German

This paper explores the role of language contact in the development of secondary palatalization in the Eastern Low German region of Posen (Koerth 1913, 1914; Teuchert 1913). Teuchert and Koerth believe that this feature developed due to language contact with Polish, but they are at a loss to explain how Polish could have been responsible for the development (Koerth 1913:281, Teuchtert 1913:37). In this paper, I propose that the development of secondary palatalization in Posen Low German (PLG) actually comes from the borrowing of a VC co-articulation rule from Lechitic into Low German.

Teuchert identified a rule in which low-mid front vowels of PLG diphthongized <ę> [ɛ] and <ǫ̈> [œ] → <ja> [ja] and <jǫ> [jɔ] (Teuchert 1913:36-7). Teuchert didn't realize that this change only happened if an alveolar segment followed the vowel such as *tjalǫ* < *tęlen* 'to count', *vjǫǫta* < *vǫ̈rtel* 'root' (c.f. English *wort*), *ffjaaste* < *fęnster* 'window' (c.f. Standard German *Fenster*). A reformulation of the diphthongization rule of PLG rule is given in (1).

(1) $$\begin{Bmatrix} \varepsilon \\ \text{œ} \end{Bmatrix} \rightarrow \begin{Bmatrix} \text{ja} \\ \text{jɔ} \end{Bmatrix} / \_\_\_\_ C_{[\text{alveolar}]}$$

It is only after Rule (1) applied, that there was a reanalysis of the on-glide to be a feature of the preceding consonant: C[ʲV] → [Cʲ]V. No other vowels in the system underwent this kind of diphthongization and no other vowels in the system triggered secondary palatalization to develop on the preceding consonant.

A very similar rule operated in Lechitic languages. All Lechitic languages had a vowel backing rule in which lower front vowels would agree in backness with the following alveolar consonant (Stieber 1973, Carleton 1991). Palatalized alveolar consonants were [-BACK] and non-palatalized consonants were [+BACK]. Rule (2) provides a formalization of the VC assimilation rule.

(2) $$\begin{Bmatrix} \text{e} \\ \text{ę} \\ \text{ě} \end{Bmatrix} \rightarrow [+\text{back}] / \_\_\_\_ C_{[\text{alveolar,+back}]}$$

Rule (2) led to synchronic alternations of the type found in Polish *świat*: *świecie* 'world NOM: LOC', Kashubian *miasto*:*miesce* 'town NOM SG:LOC SG', and Polabian *cornĕ*:*carnaićă* 'black:blackberry' (Rothstein 2002, Stone 2002, Polański 2002).

I propose that the rule in PLG was borrowed from Lechitic. Low German speakers began settling in regions east of the Elbe river in the 12th century, and the Lechitic co-artuclation rule was operative in Polish through at least the 13th century (Stieber 1973:24-6). Even though PLG originally lacked [±BACK] alveolar consonants, bilingual speakers could have associated the PLG alveolars as [+BACK] alveolars of Polish. Differences in the output of the rule are due to PLG speakers prioritizing retention of as many features of the input Low German vowel as possible. This leads to the fission of the original vowel in PLG into one mora which retains the original [+FRONT] feature and a second mora which reflects the original [ROUND] feature and the innovative [+BACK] feature of the consonant. This account of PLG secondary palatalization answers the unanswered question of Teuchert and Koerth by identifying the Lechitic rule responsible for the development of secondary palatalization and explaining the idiosyncrasies of the PLG version of the rule.

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What we aren't given: The influence of selection on ditransitive passives in Slovenian

The talk deals with Slovenian ditransitive passives, specifically cases where passives appear to be blocked by a particular reading or by specific ditransitive verbs. We propose that this follows from c-selection restricting the possible resolutions of labeling conflicts that arise when GOAL-NPs merge with VP or ApplP.

In languages with *double-object constructions* (DOC), their passives are often subject to restrictions. In English, only indirect objects (IO) may become subjects (SU) in passives, as in (1a,b). This contrasts with *prepositional-dative constructions* (PDC), where only direct objects (DO) may be promoted to SU (1c,d).

(1) a. Ziggy was given t_{IO} a guitar. b. *A guitar was given Ziggy t_{DO}.
c. *To Ziggy was given a guitar t_{IO}. d. A guitar was given t_{DO} to Ziggy.

This is often used as evidence for DOCs as applicatives (Marantz 1993) where the IO asymmetrically c-commands the DO, and intervenes for any checking relation between T and DO (Anagnostopoulou 2003). Slovenian seems to go against this generalization, as it appears to have the DOC, but only the DO may become SU, as in (2). The passive of (2a) is (2b), where the THEME is the SU, as indicated by agreement, and other subjecthood tests (given in the talk). In contrast, the IO may not become a SU and lose dative case (DAT) (2c) in the same way the DO loses accusative case (ACC) in (2b). And whenever the GOAL has DAT, the participle and auxiliary must agree with the THEME, as shown by the ungrammaticality of (2d).

(2) a. Vojvoda je dal Davidu kitaro.
duke.NOM is gave David.DAT guitar.ACC
"The duke gave David a/the guitar."
b. Davidu je bila dana kitara.
David.DAT is been.F given.F guitar.NOM
"A/The guitar was given to David"
c. *David je bil dan kitaro.
David.NOM is been.M given.M guitar.ACC
"David was given a/the guitar"
c. *Davidu je bil(o) dan(o) kitara/o.
David.DAT is been.M/N given.M/N guitar.NOM/ACC
"David was given a/the guitar"

One could assume that in Slovenian the base object order in DOCs is actually DO > IO (">" marks both precedence and asymmetric c-command). But if this is the case, why is quantifier scope rigid with IO > DO and flexible with DO > IO? We see this in (3), where *"other"* requires an existential quantifier to scope over it to get a bound variable-type reading. This reading is unavailable in (3a), with an IO > DO order, and available in (3b), where the order is DO > IO, indicating the option of reconstruction in (3b), but not (3a).

(3) a. Aladin je zato povedal [#drugemu prijatelju] [vsako zgodbo].
Aladin is therefore told [other.DAT friend.DAT] [every.ACC story.ACC]
"Aladdin therefore told { the other friend every story / *every story to a different friend }. *∀ > oth.
b. Aladin je zato povedal [vsako zgodbo] [drugemu prijatelju] .
Aladin is therefore told [every.ACC story.ACC] [other.DAT friend.DAT]
"Aladdin therefore told { every story to a different friend / the other friend every story }. ∀ > oth.

This asymmetry, and the fact that the DO > IO order establishes new binding relations (Marvin & Stegovec 2012), can be seen as evidence for an A-scrambling analysis with an IO > DO base order: the DO may optionally move to a specifier above IO, which removes IO as an intervener for T and DO (Ura 1996, McGinnis 1998). This is then also responsible for the apparent optional IO > DO/DO > IO alternation in active contexts. But as we will see bellow not all DOs may become SU in passives of DOCs in Slovenian.

The problem: In Slovenian, particular ditransitive idiomatic expressions "select" a specific object order in out-of-the-blue contexts. In (4a) we see an example of an IO > DO idiom, while (5a) is a DO > IO idiom. Crucially, in passives, the idiomatic meaning is maintained with the latter (5b), not with the former (4b).

(4) a. Jana je dala Tomu košarico.
Jana is gave Tom.DAT basket.ACC
"Jana dumped Tom."
b. #Košarica je bila dana Tomu.
basket is been given Tom.DAT
"The basket was given to Tom (only literal)."

(5) a. Major je prepustil podrejene usodi.
Major is left subordinates.ACC fate.DAT
"The major left his subordinates to their fate"
b. Podrejeni so bili prepuščeni usodi.
subordinates are been left fate.DAT
"The subordinates were left to their fate."

Similarly, *benefactive* (high applicative) readings select IO > DO. And in passives of sentences ambiguous between *benefactive* and *malefactive* readings, such as (6a), only the *malefactive* reading is possible (6b).

(6) a. Tom je ukradel Jani ogrlico.
Tom is stole Jana.DAT necklace.ACC
b. Ogrlica je bila ukradena Jani.
necklace is been.F stolen.F Jana.DAT

i. "Tom stole Jana's necklace." i. "Jana's necklace was stolen."
ii. "Tom stole a/the necklace for Jana." ii. *"A/The necklace was stolen for Jana."

The same restriction is also observed with verbs like *"envy"*, which require an IO > DO order in neutral contexts, as in (7a). Such *envy*-DOCs also cannot become passives, as shown by the ungrammatical (7b).

(7) a. Igor je zavidal Davidu nadarjenost. b. *Nadarjenost je bila zavidana Davidu.
Igor is envied David.DAT talent.ACC talent is been.F envied.F David.DAT
"Igor envied David his talent" "(His) Talent was envied David."

If A-scrambling enables DO to become SU in passives, then (due to its free availability) it should also be available in (4-7). But this is not the case. An alternative is to follow Marvin & Stegovec (2012) who propose two distinct ditransitive constructions: PDC (DO > IO) and DOC (IO > DO). This resolves the locality issue, but requires positing two distinct DAT assigners in ditransitives: $Appl^0$ and a silent P^0. This issue is resolved in our analysis: Like A-scrambling analyses we posit a single DAT assigner, while also deriving the fact that either IO > DO or DO > IO order can be selected by some verbs, idioms or readings.

Analysis: We follow Chomsky (2013) and assume that if X^0 merges with YP, X^0 projects, but if XP and YP merge, a *labeling algorithm* (LA) conflict arises, and the conflict is resolved if either XP or YP moves. As for the structure of DOCs, we assume a High-$Appl^0$(icative) introduces IO in its Spec and selects a VP (Pylkkänen 2002), but that a Low-$Appl^0$ only licenses an IO first merged at the VP-level (Georgala 2012). We further propose: **(I)** *c-selection* by X^0 resolves LA conflicts if a competing label is of the category selected by X^0; and **(II)** if XP merges with a Probe that projects a YP, Agree with XP allows YP to project.

The derivation of DOC/Low-$Appl^0$ in Slovenian begins with $V^0 + NP_{DO}$ merger, where V^0 projects because it is an X^0 (8a). The NP_{IO} then merges with VP, but as they are both maximal projections this leads to a LA conflict (= ?) (8b). The conflict is not resolved by $Appl^0$ (8c), as it does not select a VP. Unlike High-$Appl^0$, which selects a VP, the Low-$Appl^0$ merged in basic DOCs only merges after NP_{IO} so it may license it.

(8) a. $V^0 + NP_{DO} \rightarrow [_{VP}\, V^0\, NP_{DO}]$ b. $[_{VP}\, V^0\, NP_{DO}] + NP_{IO} \rightarrow [_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]]$
c. $[_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]] + Appl^0 \rightarrow [_{ApplP}\, Appl^0\, [_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]]]$

Possible LA resolutions for (8c) are: (i) NP_{IO} moves, or (ii) VP moves. The former is shown in (9a): moving the NP_{IO} to ApplP allows VP to project and results in NP_{IO} receiving DAT case from $Appl^0$ (via Agree). This causes ApplP to project (cf. **(II)**), making NP_{IO} its Spec. The second option is (9b): VP moves to ApplP, allowing NP_{IO} to project, and $Appl^0$ assigns case to it. The resulting VP + ApplP causes an LA conflict that resolves when v^0 is merged, selecting either ApplP or VP (cf. **(I)**) (details in the talk) thus providing a label.

(9) a. $[_{ApplP}\, Appl^0\, [_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]] \rightarrow [_{ApplP}\, NP_{DAT}\, [_{ApplP}\, Appl^0\, [\underline{_{VP}}\ t_{IO}\, [_{VP}\, \underline{\mathbf{V^0}}\, NP_{DO}]]]]$
b. $[_{ApplP}\, Appl^0\, [_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]] \rightarrow [_{?}\, [_{VP}\, V^0\, NP_{DO}]\, [_{ApplP}\, Appl^0\, [\underline{_{NP}}\ \underline{NP_{DAT}}\ t_{VP}\,]]]$

Option (ii) is inspired by the analysis of French causatives and PDCs in Kayne (2005). But unlike Kayne we do not have to invoke movement of non-constituents (V'). Crucially, the VP-movement is also a case of "smuggling" (Collins 2005). So unlike A-scrambling, which involves A-movement over an A-position, our approach complies with a strict version of Relativized Minimality, as the argument moves within a VP.

The imposition of a specific order of objects by some verbs, idioms, or readings is due to c-selection: v^0 either selects ApplP or VP. The latter option requires VP-movement, so it imposes a DO > IO order (10).

(10) $[_{ApplP}\, Appl^0\, [_{?}\, NP_{IO}\, [_{VP}\, V^0\, NP_{DO}]] + v^0 \rightarrow [_{vP}\, \underline{\mathbf{v^0}}\, [\underline{_{VP}}\ [\underline{_{VP}}\ \underline{\mathbf{V}}^0\, NP_{DO}]\, [_{ApplP}\, Appl^0\, [\underline{_{NP}}\ \underline{NP_{DAT}}\ t_{VP}\,]]]]$

Cases where the order is restricted to IO > DO (4,6,7) involve High $Appl^0$ selecting VP and introducing IO (11b). This allows a *benefactive* reading and blocks VP+DO movement, as no LA conflict arises (11c). Crucially, the VP+DO movement is only possible as a result of the LA resolution, and not with High-Appl.

(11) a. $V^0 + NP_{DO} \rightarrow [_{VP}\, V^0\, NP_{DO}]$ b. $[_{VP}\, V^0\, NP_{DO}] + Appl^0 \rightarrow [_{ApplP}\, Appl^0\, [_{VP}\, V^0\, NP_{DO}]]$
c. $[_{ApplP}\, Appl^0\, [_{VP}\, V^0\, NP_{DO}]] + NP_{IO} \rightarrow [\underline{_{ApplP}}\ \underline{NP_{DAT}}\, [_{ApplP}\, \underline{Appl}^0\, [_{VP}\, V^0\, NP_{DO}]]]$

In Slovenian, IO is independently blocked from moving to Spec,TP (presumably by inherent case), but IO in (11) also blocks movement of DO to Spec,TP. This explains why passives of such DOCs are impossible.

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Are dative-infinitive constructions in Russian really biclausal?

It has recently been proposed that the dative-infinitive construction (DIC) in Russian (1) involves a biclausal structure (Sigurðsson 2002, Fleisher 2006, Jung 2009, 2011, Kondrashova 2009). This view is opposed to a monoclausal analysis of DIC (Kondrashova 1994, Komar 1999, Moore and Perlmutter 2000). The common assumption of a biclausal account is that the verb *byt'* 'be' in (1) is an existential predicate that is also found in possessive (2) and modal existential *wh*-constructions (3) (Babby 2000, Kondrashova and Šimík 2013). Alternatively, Moore and Perlmutter (1999) propose that impersonal *byt'* in DIC is a temporal particle functioning as an adverbial modifier. In this paper, I argue against the biclausal hypothesis and offer an applicative analysis of DIC.

Under a biclausal analysis of (1), *byt'* 'be' (V_{BE}) is analyzed as either a control or a raising predicate. Thus, Fleisher (2006) claims that (1) is essentially an object control structure with a ditransitive V_{BE} taking the dative NP and the infinitival CP as its internal arguments (and a null expletive instead of a thematic subject); see (4). On the other hand, Jung (2009, 2011: chap. 3) suggests a raising structure, assuming that V_{BE} is a deontic modal that takes a CP as its complement: the dative case is assigned under exceptional case marking by a null P_{DAT} (heading CP) and the dative NP then raises to the matrix clause (5). Both analyses run into a problem as they fail to explain why the assumed V_{BE} cannot be head-moved to form a matrix yes-no question, as shown in (6a) (derived from (1b)). This behaviour is unusual for either a control or a raising verb; cf. the deontic modal *stoit'* 'shall' in (6b) and the raising verb *sčitat'sja* 'to be considered' in (6c). Note that if *bylo* is an adverbial phrase that is optionally added as a temporal modifier, the main V movement should not be a problem either, contrary to fact (7).

Pursuing a monoclausal analysis of DIC, I assume that the datives in (1)-(3) are introduced by an applicative head (Appl). In (2)-(3), Appl is merged with an existential phrase headed by *byt'* 'be'. The latter is in its turn merged with either an NP (2) or an infinitival VP (3) (I assume with Kondrashova and Šimík (2013) that there is no embedded CP in (3)). As for (1), Appl is merged as high as TP: Appl takes a temporal event as its complement and relates it to an individual, NP-DAT (cf. Rivero 2009). More precisely, I propose the structure in (9a) (NegP would be absent in cases like (1a)).

From a morpho-syntactic perspective, the BE-form in (1) (*bylo*/*budet*) is split between two heads: Appl (*by-*/*bud-*) and T (*-lo*/*-et*). In fact, Appl is lexicalized to "support" T, otherwise it would remain empty, as in (2)-(3). Note that Neg cannot cliticize to T, since the latter does not host a verbal stem, like it presumably does in the analytic future (e.g., *My ne budem pet'* 'We will not sing'). Therefore, Neg has to follow the BE-form in DIC. At the same time, Appl cannot move to C, since it has to form a phonological word with the lower T, excluding cases like (6a).

As it stands, the lexicalized Appl-T complex prevents the infinitive from moving to C (7). Now we have the following questions: Under which circumstances the V-to-C movement (8) would then be possible? Do we need to postulate an empty T in (8)? I would like to suggest that the absence of a BE-form in DIC indicates the absence of T in the functional spine of the clause. If T is absent, Appl remains empty and does not create an obstacle for the moving verb (8). In sum, the structure in (9b) is another option for DIC in Russian (Appl can take a negated event as its complement, but NegP does not have to be present).

Finally, I assume that ApplP contributes to the modal meaning of DIC. For example, in the nominal domain the locative *U Ivana est' mašina* 'Ivan has a car' (actual possession) is opposed to the dative *Ivanu est' mašina* 'There is a car for Ivan' (possible possession). In DIC, the modal meaning is carried by a modal operator of the infinitive (Kondrashova 2009) and, as proposed here, by the dative case feature. It is thus not surprising that the dative case is silently present in infinitival constructions with a modal force (e.g., in object control contexts). The proposed analysis thus extends to the discussion of secondary datives and has the potential for providing a new perspective on this perennial topic of Russian syntax.

(1) a. Čto nam bylo delat' v etoj situacii?
what us.DAT be.PST.N do.INF in this situation
'What were we supposed to do in this situation?'

b. Gruzovikam bylo / budet ne proexat' po etomu bolotu.
trucks.DAT be.PST.N / be.FUT.3SG NEG go.through.INF on this swamp
'It was not / will not be (in the cards) for the trucks to get through this swamp.'

(2) Ivanu tože budet mašina.
Ivan.DAT also be.FUT.3SG car.NOM
'There will be a car for Ivan as well.'

(3) Nam est' s kem pogovorit'.
us.DAT be.PRES with whom speak.INF
'We have somebody to speak with.'

(4) [$_{vP}$ *expl* [$_{VP}$ NP-DAT$_i$ V$_{BE}$ [$_{CP}$ PRO$_i$ *infinitive*]]]

(5) [$_{TP}$ NP-DAT$_i$ [$_{VP}$ V$_{BE}$ [$_{CP}$ P$_{DAT}$ [$_{TP}$ t_i *infinitive*]]]]

(6) a. *Bylo li gruzovikam ne proexat' po etomu bolotu?
be.PST.N Q trucks.DAT NEG go.through.INF on this swamp
'Was it (in the cards) for the trucks to get through this swamp?'

b. Stoilo li nam ob etom govorit'?
shall.PST.N Q us.DAT about it talk.INF
'Was it necessary for us to talk about it?'

c. Sčitaetsja li Ivan xorošim igrokom?
be.considred.3SG Q Ivan.NOM good.INSTR player.INSTR
'Is Ivan considered to be a good player?'

(7) *Ne proexat' li bylo gruzovikam po etomu bolotu?
NEG go.through.INF Q be.PST.N trucks.DAT on this swamp
'Was it (in the cards) for trucks to get through this swamp?'

(8) Ne proexat' li gruzovikam po etomu bolotu?
NEG go.through.INF Q trucks.DAT on this swamp
'Why not for the trucks to get through this swamp?'

(9) a. [$_{CP}$ C [$_{ApplP}$ NP-DAT [$_{Appl'}$ Appl [$_{TP}$ T [$_{NegP}$ Neg [$_{vP}$ *infinitive*]]]]]]
b. [$_{CP}$ C [$_{ApplP}$ NP-DAT [$_{Appl'}$ Appl-∅ [$_{NegP}$ Neg [$_{vP}$ *infinitive*]]]]]

References

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When near Snakes, Move Sideward!

Background: Given the distributional similarities between the anaphor binding and NP-movement, it is unsurprising (though not uncontroversial) that the two have been argued to involve the same syntactic relation. One possibility to unify the two is given in Hornstein (200, 2006), where the locality conditions of Principle A reduce to the locality conditions on movement and the interpretative properties of the dependency between the reflexive and its antecedent are derived syntactically. Adopting and adapting Hornstein's account, Marelj (2007, 2010) shows that the movement analysis captures the data in Serbo-Croatian (SC). If reflexivization is movement, it follows that *sebe* (elided in the second conjunct in (1a)) is the reflex of the movement of *Tristram* and the only available reading is predicted to be the sloppy one. Under a movement approach, the elimination of Principle A leads to the elimination of Principle B, on empirical grounds: bound pronouns and reflexives are in complementary distribution (1b).

(1) a. Lorens mrzi **sebe**, a i Tristram takodje (sloppy reading only)
Laurence hates oneself and Tristram too
Laurence hates himself, and Tristram does too.
b. Tristram$_i$ kažnjava **sebe/*njega$_i$**
Tristram$_i$ *punishes* ***himself/*him$_i$***

Movement derivation is not restricted to monoclausal environments (1b). Marelj (2010) gives evidence of movement in small clause environment, infinitives, and subjunctive *da*-complements of S-verbs of Progovac (Progovac 1994). When Movement is barred, however - the extraction from the relative clause is impossible (2a) & (2b) - the Pronoun Insertion Strategy takes place and *njega* (2c) and *him* (2d) arise:

(2) a. ***Koji egzotični jezik** je Lorens zaposlio mladu sekretaricu [$_{\text{Sentential Adjunct}}$ koja govori ___]?
b. ***Which exotic language** did Laurence hired a young secretary [$_{\text{Sentential Adjunct}}$ who speaks__]?
c. Luka$_i$ je zaljubljen u devojčicu [$_{\text{Sentential Adjunct}}$ koja **(nje)ga$_i$ /*se(be)$_i$** hvali]
d. Luka is enamored with the girl [$_{\text{sentential Adjunct}}$ who praises **him/*himself**]

As movement is barred out of adjuncts in general (3), the Pronoun Insertion Strategy is expected in cases of PP-adjuncts as well. English data (4) seem to show exactly that. Standardly, *himself* in (4) is treated as a logophor in the sense of Reinhart and Reuland (see Reinhart and Reuland 1991, 1993). Unlike reflexives, logophors are permitted in environments where there is no local antecedent (4b). As reflexivization is restricted to co-arguments of a predicate, under a predicate-based account, the non-complementarity between *himself* and *him* is also expected. Under a movement account, logophors are not the result of movement and derivations in which they occur are not in competition with the Pronoun Insertion Strategy. Again, it follows that logophors are not in complementary distribution with pronouns.

(3) a. ***Who** did you seen the snake [$_{\text{PP-adjunct}}$ near ~~**who**~~]?
b. ??/***Pored čije** je on video zmiju [$_{\text{PP-adjunct}}$ ~~**pored čije**~~ noge]?[1]
next.to whose AUX he seen snake leg

(4) a. John saw a snake [$_{\text{PP-adjunct}}$ near **himself/him**]
b. Max boasted that the queen invited Mary and **him**/**himself** for tea.

Plot thickens: Parallel SC data, however, seem to challenge both predicate-based and movement theories alike: *njega* can only be referential and *sebe* is clearly a local reflexive (5a). Moreover, *sebe* cannot be a logophor to start with (5b)! SC data are hardly exceptional; (6a-b) patterns with SC (5a-b). Finally, (6c) casts doubt on the validity of the standard account of (4a) in English.

(5) a. Jovan$_i$ je video je zmiju [pored **sebe/*njega$_i$**]
b. Max je rekao da je Kraljica je pozvala Mariju i **njega/*sebe** na čaj.

(6) a. Hans$_i$ zah eine Schlange [neben **sich/*ihm$_i$]** [German]
b. Max sagte, dass die Königin Maria und **ihn/*sich** zu Tee eingelande habe.
c. **[Every boy]$_i$** saw a snake [near **himself/him$_{j/*i}$]**

Proposal: I argue that *sebe* in (5a) is the result of movement, the crucial difference between (1b) and

[1] SC is a non-P stranding language but it allows the so-called extraordinary LBE (see Bošković 2005 and Talić 2014 and references there for a discussion, elaboration, and evidence that extraordinary LBE is truly movement).

(5a) is in the fact that (5a) is an instance of **S**(ideward) **M**(ovement) (Nunes 1995 et seq. Hornstein 2001 et seq.) Binding into this PP is a case of SM, derivational steps of which are given in (7).

(7) a. [$_{vP}$saw the snake] Workspace 1
b. [$_{PP}$ near [Jovan]] Workspace 2
c. [$_{vP}$ [Jovan]saw the snake] [$_{PP}$ near [~~Jovan~~-SELF]]
d. [$_{vP}$ [$_{vP}$[Jovan] saw a snake] [$_{PP}$ near~~-Jovan~~-SELF]]
e. [$_{TP}$ [Jovan] T [$_{vP}$ [$_{vP}$[~~Jovan~~] saw a snake] [$_{PP}$ near ~~Jovan~~ –SELF]]][2]

Questions: Technically, it is unproblematic to extend the analysis in (7) to other languages. Two questions arise directly, however: **i)** if movement out of adjuncts is barred, how can *Jovan* move out of the PP to start with? & even more intriguingly **ii)** if movement is somehow legit in (5a), why is it barred in (3b)? We start with the first question. Technically (compare 7c with 7d), once the PP becomes an adjunct, the movement out of it is impossible. In other words, the derivation in (7) converges because the movement takes place ***prior*** to PP adjoining to the *v*P. The technical set-up of SM then allows not only *Jovan* to legitimately move, but SM embodies an conceptually appealing and empirically correct treatment of adjuncts as ***relational***. Something is an adjunct ***only*** with respect to something else:

(8) a. Tristram put the book **[$_{ARGUMENT}$ on the table]**
b. Laurence wrote the book **[$_{ADJUNCT}$ on the table]**

Still, unless we can motivate this movement, it remains but a technical trick. I argue that the motivation for this movement is thematic. The numeration for (5a) involves 2 nominals (*Jovan* and *zmiju* (snake) and 3 theta-roles (Location, Theme, & Perceiver) that need to be checked. It is for the reason of checking the theta-role Perceiver that *Jovan* moves from within the PP to the *v*P domain. SELF (s*ebe*) arises as a result of this movement. Quite uncontroversially then, the movement in (5a) is the Last Resort option driven by feature checking. Let us now move to the second problem. The problem of restricting sideward movement is a known challenge for MTC. The derivation in (9) is barred because it needs to satisfy two conflicting requirements: *who* (9c) needs to move sideward to [Spec, CP], but the attachment site of the entire PP is the *v*P. So by the time C mergers, *who* is "trapped" in an adjunct island!

(9) a.* Who did John laugh at Bill [before Mary spoke to~~-who~~] (MTC: Hornstein 2001)
b. [$_{CP}$ C [$_{TP}$ [John] [$_{vP}$ [~~John~~] laugh at Bill]]] Workspace 1
c. [$_{PP}$ before Mary spoke to [who]] Workspace 2

(Sub)-plot thickens: But if *wh*-movement always proceeds via [Spec, *v*P] – as now standardly assumed in Phase Theory – then the movement of *who* cannot be barred in (9a). Moreover, the assumption that *wh*-movement passes through [Spec, *v*P] seem to lead to massive overgeneration for SM in general.
Proposal: The conditions that need to be met for movement to be legitimate are discussed in the literature, but the timing is not. It is clear that the multiple workspaces get to be resolved into a single – matrix – workspace, but the point when multiple workspaces ***must*** resolve to a single derivational space needs to be addressed. I propose (10) and I will show how the ungrammaticality of (5) & (9a) and the grammaticality of (11) follow from it, while allowing *wh*-movement to proceed via [Spec, *v*P].

(10) **Multiple Workspaces Earliness Hypothesis:** Multiple workspaces derivations must resolve to a single workspace at the earliest possible convenience, where "at the earliest possible convenience" means" "at the point when the adjunction site is created."

(11) **Ispred čije** je on ubijen [~~ispred čije~~ kapije]?
In front whose AUX he killed gate

Selected References: Bošković, Ž. 2005. On the Locality of Left Branch Extraction and the Structure of NP. *Studia Linguistica* 59: 1- 45; **Hornstein, N**. 2001. *Move! A Minimalist Theory of Construal*. Oxford: Blackwell; **Marelj, M.** 2010. Bound-Variable Anaphora and Left Branch Condition. *Syntax* 14: 205-229; **Nunes, J.** 2001.Sideward Movement. Linguistic Inquiry 32: 303-344; **Progovac, Lj**. 1994. *Negative and Positive Polarity - A Binding Approach.* Cambridge: Cambridge University Press*;* **Reinhart, T. & E. Reuland**. 1993. Reflexivity. *Linguistic Inquiry* 24:657-720.

[2] SELF checks ACC (see Hornstein 2001, 2006 on *(him)self* & Marelj 2007, 2010 on *sebe*).

Visible and invisible null copies: Enclitics in the syntax and in prosody

This paper reveals a novel paradigm involving Bosnian/Croatian/Serbian (BCS) enclitics in contexts where they interact or fail to interact with the accent of their host, which gives us a new insight into the nature of the syntax-phonology interface, the phonological status of null copies left by movement in the syntax, as well as the nature of second position requirement of BCS enclitics. Based on this split, I show that type of cliticization and accent assignment are sensitive to some null elements present in the phonology, but not to all. In particular, I show that phonology ignores null lower copies of moved elements, but that it is sensitive to the highest copies of moved elements even when they are null. These contexts may also provide tools to tease apart four alternative approaches to second position cliticization.

Accent and Clitics. BCS is a pitch-accent language where prominent syllables carry either a *falling accent* (indicated by a grave accent mark above the vowel [`]), or a *rising accent* (indicated by an acute mark [´]). The falling accent is a result of a prosodic word initial lexical or default High tone, and a rising accent is a result of High tone spreading to the preceding syllable. It has been noticed in the literature that proclitics in this language can interact or fail to interact with the accent of their host, depending on syntactic complexity of the host (Riđanović and Aljović 2009; Talić 2015). In (1a) the clitic precedes a syntactically simple host, it incorporates into its prosodic word, and enters into the domain of the default rule of accent assignment, which yields a falling accent in the initial syllable, i.e. the clitic. In (1b-c), the clitic precedes a syntactically branching host, it does not incorporate into its prosodic word, and cannot interact with its accent.

(1) a. z**à**_ra:d — initial falling tone - proclitic interacts with the host
for_work/article
b. ***zà/*zá**_[ra:d [o klitikama]] no interaction
c. za [rà:d [o klitikama]]
for article about clitics

Enclitics. In contrast, the influence of enclitics on the accent of their host has not been discussed. Interestingly, although contexts for the interaction of enclitics with the accent of their host are even more limited than those with proclitics, we still do find a few simple hosts with whose prosody enclitics can interact. Question words like *kò* 'who', *štà* 'what', *štò* 'why' (the shorter form of *zašto* 'why'), and *gdjè* 'where' in the absence of enclitics get a falling accent. When enclitics follow these hosts, which do not have a lexical High tone (see e.g. Zec and Inkelas 1991), we observe two different effects. In (2), enclitics, which have a lexical High tone, incorporate into the prosodic word of the host; the High tone spreads from the clitic to the host, yielding a rising accent. In (3), the host has a falling accent, just like when no clitic follows it, which indicates that the clitic is not in the accentual domain (prosodic word) of the host; thus, it does not interact with its accent. (BCS prosody is an area with very rich microvariation, and it may be possible that the same split is not found in all dialects, especially those spoken outside of Bosnia and Herzegovina.)

(2) Host-Cl Interaction: *rising accent on host*

a. Gdjé_li_su (oni) parkirali auto?
where_Q_are (they)parked car
'Where did you park the car?'
b. Gdjé_ste parkirali auto?
where_are parked car
'Where did you park the car?'
c. Gdjé_mu_je parkirao auto?
where_him_is parked car
'Where did he park the car for him?'

(3) No interaction: *falling accent on host*

a. Gdjè_se predstavio studentima?
Where_SE introduced students
'Where did he introduce himself to students?
b. Gdjè_se predstavlja studentima?
where_SE introduces students
'Where is he introducing himself to students?'
c. Gdjè_mu predstavlja studente?
where_him introduce students
'Where is he introducing the students to him?'

What is the difference between (2) and (3)? Crucially, clitics need to be in the prosodic word of the host to be able to interact with its accent. At first glance, clitics in both cases seem to be immediately following a syntactically simple host, and thus should interact with the accent in both cases (cf. (1a)).

Surprisingly, such interaction is not possible in (3). The question here is then why are clitics in (2) in the prosodic word of the host, but not in (3). To address this question, we need to consider the well-known fact about BCS that these are second-position clitics (2P), which have to occur after the first word or a phrase (Browne 1974; Comrie 1981):

(4) Vesela {**su}** djeca {**su}** brala trešnje.
cheerful are children are picked cherries
'Cheerful children were picking cherries.'

There are four lines of approaches to what lies behind the second position requirement: Is it the syntax, phonology, or both? (See Bošković (2001) for an overview): (i) Clitics move to the 2P in the syntax (Progovac 1996; Franks and Progovac 1994; Roberts 1994; Wilder and Ćavar 1994; Dimitrova-Vulchanova 1995; Tomić 1996; Franks 1997); (ii) The syntax is mostly responsible for the 2P requirement, but there is some reordering in PF (Halpern 1992, 1995; Schütze 1994; King 1996); (iii) Clitics move to the 2P in the phonology due to [+clitic] feature (Radanović-Kocić 1988, 1996); (iv) The syntax is blind to the 2P requirement, the PF filters out and repairs phonologically infelicitous orders (Bošković 1995, 2001; Franks 1998). Importantly, under (i)-(iii), there is no difference between the sentences in (2) and (3) in the phonology. In all cases, the clitic is moved either in the syntax or in PF, or with a combination of syntactic and PF operations into the position immediately following the host. Based on (2), we see that in such configuration, the clitic can interact with the accent of the host. However, these approaches predict that such interaction should be possible in (3) as well because under (i-iii) the host and the clitics are immediately adjacent in the syntax and/or in the phonology. The examples in (3), however, show that this is not borne out. In contrast, under (iv), the clitics in (2) and (3) do not all raise very high in the structure, so they are not in the same syntactic position (*li* 'question particle' is high in C, and *mu* 'him.dat' is low within vP or VP), and as a result I propose that they are not in the same phonological position either. In particular, in (2), the host and the clitic are not separated by a "visible" null copy of any element. In (2c), there may be a null copy of *gdje* left by movement between the highest copy of *gdje* and the clitic, however, the clitic is still able to incorporate into the prosodic word of the host and interact with its accent, just like in (2a-b) where nothing separates the host in SpecCP and *li* or the auxiliary in C. In contrast, in (3a) in the presence of the clitic *se* 'self', the auxiliary *je* has to be deleted (they both need to occur the last in the clitic cluster, see Bošković 2001); the null deleted copy of *je* is different from null *gdje* in (2c) because it is a result of deletion of the highest copy of the auxiliary that moved to C. Similarly, BCS is a V-raising language, and in (3b-c), the low clitics *se* and *mu* are separated from their host by the highest copy of the verb in the syntax. This violates the 2P requirement. Bošković (2001) suggests such violation is repaired by pronouncing a lower copy and deleting the highest copy instead. Thus, again the clitic and the host are separated by a deleted highest copy of the verb, and such null copy blocks the interaction between the enclitic and the accent of the host.

(5) a. **Gdje**+**clitic**… →(2); b. **Gdje**+~~je~~+**clitic**… →(3a); c. **Gdje**+~~Vlex~~+**clitic**+Vlex…(3b-c)

Crucially, even in the sentences with a finite verb, where the low object clitics cannot interact with the accent of the host, the clitic *li*, which originates in C, still interacts with the accent of the host, as in (6).

(6) Dá_li mu vjeruješ?
that_Q him believe
'Do you believe him?'

In sum, an enclitic can interact with the accent of the host across lower copies left by movement, but not if the enclitic is separated from the host by the highest copy of an element deleted due to phonological constraints. This indicates that BCS enclitics are immediately adjacent to their host high in the structure.

Selected references: Bošković 2001: *On the nature of the syntax-phonology interface*; Franks and Progovac 1994: *On the placement of Serbo-Croatian clitics*; Riđanović and Aljović 2009: *On the shift of Bosnian accent from host to proclitic;* Zec and Inkelas 1991: *The place of clitics in the prosodic hierarchy*; Tomić 1994: *The Balkan Slavic clausal clitics*.

Structural differences between epistemic and root modality: Evidence from BCS

The distinction between epistemic and root modals has been argued to be syntactic (Cinque (1999)) or contextually determined in the sematic/pragmatic component, with no syntactic differences needed (Kratzer (1977)) et seq.). This paper adds to that discussion, applying a broad range of diagnostics on data from Bosnian/Croatian/Serbian (BCS) to show that constructions with epistemic modals are biclausal, while ones with root modals are monoclausal. The BCS modal *morati* 'must' appears in three types of constructions: it can be followed by a clause containing a finite verb (1), an infinitive (2) or a subjunctive (3). Present tense and subjunctive forms are identical for all BCS verbs but *biti* 'to be', used to show the distinction here.

(1) Rakapaika mora-Ø da je naš kralj-Ø. (*epistemic*)
Rakapaika.M.NOM must-3SG.PRS COMP be.3SG.PRS our king.M-NOM.SG

(2) Rakapaika mora-Ø bi-ti naš kralj-Ø. (*deontic*)
Rakapaika.M.NOM must-3SG.PRS be-INF our king.M-NOM.SG

(3) Rakapaika mora-Ø da bud-e naš kralj-Ø. (*deontic*)
Rakapaika.M.NOM must-3SG.PRS COMP be.SBJV-3SG our king.M-NOM.SG
'Rakapaika must be our king.'

Only an epistemic interpretation is available for (1), while only root interpretations are possible for (2) and (3). I show the syntax of epistemic modal constructions to differ from root modal constructions. They differ in default word order – epistemic modals precede subjects (4) unless the subject is moved as in (1), possibly through topicalizing, as Werkmann (2007) suggests for Bulgarian and Macedonian. Deontic modals don't appear in this position (5). There are also differences in agreement and tense, as deontic modals show tense morphology and agree with the subject (7), while epistemic modals maintain the default 3SG.PRS form regardless of temporal interpretation of the main clause and subject φ-features (6).

(4) Mora-Ø da je Rakapaika kralj.
must-3SG.PRS COMP be.3SG.PRS Rakapaika.M.NOM king.M-NOM.SG
'Rakapaika must be the king.' (*epistemic, default w.o.*)

(5) ??Mora-Ø da Rakapaika bude-Ø kralj.
must-3SG.PRS COMP Rakapaika.M.NOM be.SBJV-3SG king.M-NOM.SG
'Rakapaika must be the king.' (*deontic*)

(6) Mora da (su bi-li)/ (će bi-ti) kralj-evi.
must-3**SG.PRS** COMP (be.3PL.PRS be-PPT.M.PL)/(will.3PL.PRS be-INF) king.M-NOM.**PL**
'They must have been kings.' / 'It must be the case that they will be kings.' (*epistemic*)

(7) (Mora-li su)/ (Mora-ti će) da bud-u kralj-evi.
(must-PPT.M.**PL** be.3PL.PRS)/ (must-INF will.3**PL**.PRS) COMP be-3PL.SBJV king.M-NOM.**PL**
'They had to be kings.' / 'They will have to be kings.' (*deontic*)

More evidence comes from NPIs. Progovac (1993) shows that BCS *ni*-NPIs are licensed by clausemate negation only. Negation that scopes under the modal licenses *ni*-NPIs regardless of modal flavor, (8)-(10):

(8) Mora-Ø da ne jed-u ni-šta slatk-o.
must-3SG.PRS COMP NEG eat-3PL.PRS NEG-what.NOM sweet-N.SG
'It must be the case that they don't eat any sweets.' (□ > ¬, *epistemic*)

(9) Mora-ju da ne jed-u ništa slatko.
must-1PL.PRS COMP NEG eat-3PL.PRS NEG-what.NOM sweet-N.SG
'They have to not eat any sweets.' (□ > ¬, *deontic*)

(10) Mora-ju ne jes-ti ništa slatko.
must-3PL.PRS NEG eat-INF NEG-what.NOM sweet-N.SG
'They have to not eat any sweets.' (□ > ¬, *deontic*)

Negation scoping over deontic uses of *morati* 'must' also licenses *ni*-NPIs (11), (12), but negation scoping over epistemic uses of *morati* doesn't (13). This suggests that negation scoping over the epistemic modal isn't in the same clause as the *ni*-NPI, as the *ni*-NPI should otherwise be licensed in (13).

(11) Ne mora-ju da jed-u ni-šta slatko.
NEG must-3PL.PRS COMP eat-3PL.SBJV NEG-what.NOM sweet-N.SG
'They don't have to eat any sweets.' (¬ > □ , *deontic*)

(12) Ne mora-ju jes-ti ni-šta slatko.
NEG must-3PL.PRS eat-INF NEG-what.NOM sweet-N.SG
'They don't have to eat any sweets.' (¬ > □ , *deontic*)

(13) *Ne mora-Ø da jed-u ni-šta slatk-o.
NEG must-3SG.PRS COMP eat-3PL.PRS NEG-what.NOM sweet-N.SG
Intended: 'It doesn't have to be the case that they don't eat any sweets.' (¬ > □ , *epistemic*)

Negation that scopes over modals provides another piece of evidence, unrelated to the NPIs. The only way for such negation to combine with epistemic modals is to introduce an infinitive *biti* 'to be', as in (14), neither required nor allowed when negation scopes over root modals (15). Crucially, the absence of *biti* is not what makes (13) ungrammatical. *Ni*-NPIs are only allowed when negation scopes over the epistemic modal if a separate negation is scoping under it (but over the predicate). In this case, *biti* is also required, as in (16).

(14) Ne mora-Ø *(bi-ti) da su djeca gladna.
NEG must-3SG.PRS be-INF COMP be.3PL.PRS children hungry
'It doesn't have to be the case that the children are hungry.' (¬ > □ , *epistemic*)

(15) Djeca ne mora-ju (*bi-ti) da bud-u gladna.
Children NEG must-3L.PRS be-INF COMP be.SBJV-3PL hungry
'The children don't have to be hungry.' (¬ > □ , *deontic*)

(16) Ne mora-Ø *(bi-ti) da ne jede-mo ni-šta slatk-o.
NEG must-3SG.PRS be-INF COMP NEG eat-1PL.PRS NEG-what.NOM sweet-N.SG
'It doesn't have to be the case that we aren't eating any sweets.' (¬ > □ , *epistemic*)

The facts presented suggest that deontic and epistemic necessity modals are merged in two distinct positions (in the presentation, I will also discuss possibility modals). I argue that epistemic modals are merged higher, taking a VP complement headed by optionally silent infinitive *biti* 'to be' (it can be overt in affirmatives, omitted for space) which takes a CP complement, making epistemic modal constructions biclausal. For deontic modals, I present evidence that their non-finite VP complements are headed by the main verb. Some evidence comes from ellipsis – (17) is appropriate following (2) and (3), but not (1) or (4). This is parallel to VP ellipsis facts with German modals reported in Ross (1969). In BCS, ellipsis is marginally available with epistemics only if the optionally silent *biti* is overt - (18) can follow (16). This suggests that while the size of the complement of the two types of modals differs, the type may be the same, be it a VP or, as Aelbrecht (2012) suggests for Dutch, MoodP.

(17) Ne mora-Ø.
NEG must-3SG.PRS
'No, he doesn't.'

(18) ? Mora-Ø.
must-3SG.PRS
'Yes, it does.'

Additional evidence comes from the position of clitics, which always appear in second position in their clause in BCS, yet cannot appear in the second position in the matrix clause with epistemic modals (19). With root modals, clitics must appear in the second position in the matrix clause (20).

(19) Mora-Ø (***su***) da ***(su)** dječac-i (***su***) bi-li kuć-i.
must-3SG.PRS be.PRS.3SG COMP be.3PL.PRS boy-NOM.PL be.PRS.3SG be-PPT.M.PL home-DAT.SG
'The boys must have been at home.' (*epistemic*)

(20) Dječac-i *(**su**) mora-li (***su***) da (***su***) bud-u kuć-i.
boy-NOM.PL be.PRS.3SG must-PPT.M.PL be.PRS.3SG COMP be.PRS.3SG be.SBJV-3PL home-DAT.SG
'The boys had to be at home.' (*deontic*)

These conclusions support Cinque's (1999) claim (followed by Drubig (2001), Hacquard (2011) and others) that epistemic modals are higher than root modals, but conflict with his idea that epistemic and root modals are part of the same clause. The data clearly show that epistemic modals are not in the same clause the main verb is in, whereas root modals are. Kratzer's framework (1977; et seq.) can likely accommodate for this, but a purely semantic account is insufficient, as syntactic differences between epistemic and root modals beyond the difference in the modal base and the ordering source have to be accounted for.

Selected References: Cinque, G. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective.* • Hacquard, V. 2011. *Modality* • Kratzer, A. 1977. *What 'Must' and 'Can' Must and Can Mean.* • Progovac, L. 1993. *Subjunctive: the (mis)behavior of anaphora and negative polarity.* • Ross, J. R. 1969. *Auxiliaries as Main Verbs.* • Werkmann, V. 2007. *Subjunctive Complements of Modal Verbs in Bulgarian and Macedonian.*

If *if and wh*, why not *that and wh*?

Citko and Gracanin-Yuksek **(CGY)** (2013) show that questions with coordinated wh-phrases allow three different structures; one mono-clausal (only in languages with multiple wh-fronting) and two bi-clausal ones. CGY (2015) show that, by contrast, free relatives with coordinated wh-phrases require a bi-clausal structure, irrespective of the language. In this paper, we turn to coordination of complementizers (**COMPs**) (interrogative and declarative) with wh-pronouns, focusing on data from Croatian, Polish, and English. All three languages allow coordination of an interrogative COMP with wh-pronouns (1a/2a) (see Giannakidou and Merchant 1998 **(G&M)** on English), but Polish and Croatian *differ* from English in that they also allow *<u>that</u> and wh* coordination (1b vs. 2b). We propose the structure for *COMP and wh* coordination in all three languages and offer an explanation for the absence of *that and wh* in English.

1) a. I wonder **if and when** John left. b. *I know **that and when** John left.

2) a. Zastanawiam się **czy i kiedy** Jan wyszedł. b. Wiem, **że i kiedy** Jan wyszedł. *Pol*
wonder.1sg refl if and when Jan left. know.1sg that and when Jan left *(Cro the same)*
'I wonder if and when Jan left.' Lit.: 'I know that and when Jan left.'

G&M argue that (1a) in English (and Greek) involves *reverse sluicing*, i.e. the TP in the *if*-conjunct is sluiced under the identity with the TP in the *wh*-conjunct, and explain the ill-formedness of *that and wh* by proposing that only predicates embedding interrogative complements license reverse sluicing. Given that conditions on sluicing (and stranding of declarative and interrogative COMP) are the same in Polish/ Croatian as in English (3-4), the sluicing analysis cannot explain the contrast between (1b) and (2b).

3) a. *John doesn't know whether Mary is coming, but I know **<u>that</u>**. No stranding of *that* by sluicing
b. *The Earth is round everyone knows **<u>that</u>**. No stranding of *that* by movement

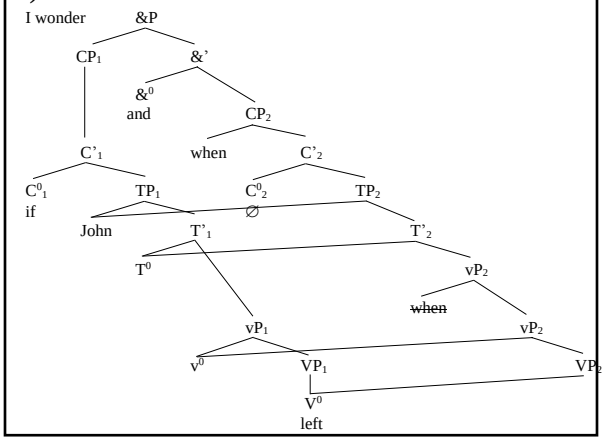
4) a. *Jan ne zna da li Marija dolazi, ali ja znam **<u>da</u>**. No stranding of *that* by
Jan not know if Marija comes but I know that sluicing
Lit. *'Jan doesn't know if Maria is coming but i know that' *(Cro, Pol the same)*
c. *Zemlja je okrugla, svatko zna **<u>da</u>**. No stranding of *that* by
earth is round everyone knows that movement
Lit.*'The earth is round, everyone knows that.' *(Cro, Pol the same)*

However, both English and Polish/Croatian allow Right Node Raising (**RNR**) where the shared element is the TP complement of (declarative and interrogative) COMPS, as shown in (4) for Polish.

5) Wszyscy wiedzą że __ i nikt nie zastanawia się czy __ ziemia jest okrągła. Pol
all know that and noone not wonders refl if earth is round *(Cro the same)*
'Everyone knows that and no one wonders if the earth is round.

If RNR involves neither deletion nor movement, but instead a multidominant (**MD**) representation (see eg., McCawley 1988, Wilder 1999, Bachrach and Katzir 2009, who argue that RNR involves an MD structure with the pivot *shared* between the two conjuncts), the contrast between the ill-formed (3-4) and the well-formed (5) is explained: the complement of *that* or *if* cannot be deleted or moved (see Abels 2003 for a possible phase-based explanation), but it can be *shared*. To explain the well-formedness of *COMP and wh* coordination in the three languages, we propose that it similarly involves a bi-clausal structure in which nothing is missing at any level of representation. Instead, parts of the two conjuncts are shared in a 'non-bulk' manner, as shown in (6). Crucially, the COMPS, as well as the wh-phrase of the second conjunct, are *not* shared. Further arguments for the structure in (6) (for both *if and wh* and *that and wh* coordination) come from the interpretation and transitivity restrictions. First, the structure in (6) predicts that (2b) (*that and wh*) is paraphrased as (7a), in which the

6) a. I wonder **if and when** John left.



wh-pronoun is not shared, and not as (7b), which would require the wh-pronoun to be present in the first conjunct (because it is interpreted there).

7) a. I know **that** Jan left and I know **when** Jan left.
   b. #I know that Jan left **<u>at a certain time</u>** and I know when that time is.

Second, *that and wh* coordination degrades when the wh-phrase is an object (*what*) and the verb is obligatorily transitive ((8a) *vs.* (9a)). This is expected if in (8a) the first conjunct is missing an obligatory argument of the verb. It follows from (5), where the first conjunct does *not* contain the wh-phrase.

8) a. Wiem, **że i co** Jan studiuje.
know.1sg that and what Jan studies
'I know that and what Jan studies.'
b. Jan studiuje. *Polish*
Jan studies *(Cro the same)*
'Jan studies.'

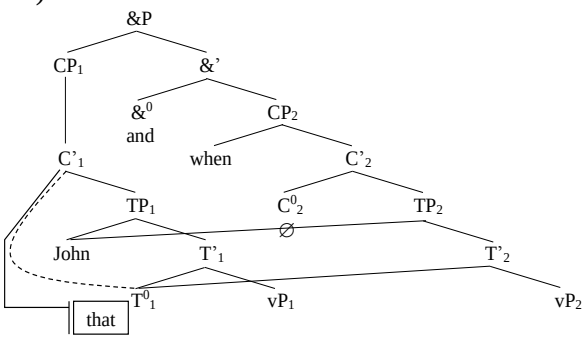
9) a. ??Wiem, **że i co** Jan naprawił.
know.1sg that and what Jan fixed
Lit. 'I know that and what Jan fixed.'
b. ??Jan naprawił. *Polish*
Jan fixed *(Cro the same)*
Lit: 'Jan fixed.'

So, what rules out *that and wh* in English? We attribute this to independent differences between declarative COMPS in the two language types. We take the English *that* to be the spellout of the T-to-C movement (Pesetsky and Torrego 2001) and argue that this makes *that and wh* coordination non-linearizable and therefore ungrammatical. In Polish and Croatian, the declarative COMP is C proper (contra Miechowicz-Mathiasen 2012), as shown by the fact that COMPS cannot be omitted (10a), as well as by the lack of *that*-trace effect (10b).

10) a. Znam *(da) Petar voli Anu.
know.1sg that Petar loves Ana.acc
'I know that Petar loves Ana.'
b. Tko misliš da je došao? *Croatian*
who think.2sg that Aux come *(Pol the same)*
Lit.: 'Who do you think that came?'

Both the ill-formed (1b) and the well-formed (2b) involve coordination of two CPs which share everything except the C heads and the wh-phrase, as in (6)/(11). In the Polish (2b), the declarative COMP *że* is externally merged in the position which in (6) is occupied by *if*. Since *że* is not shared between the conjuncts, it is only linearized in the first one; it precedes the rest of the CP: the (shared) subject and verb. When the two conjuncts are linearized, all shared material is ordered after all unshared material (Gracanin-Yuksek 2013; Wilder 1999), yielding the attested word order. In the English (1b), the presence of *that* in the first conjunct indicates the presence of T-to-C movement. The second conjunct is an embedded wh-question; the C in that conjunct does not have an EPP feature, so T-to-C is blocked (Pesetsky and Torrego 2001: 380). The resulting structure is in (11), where the two conjuncts are non-parallel as to the position of the shared T, which has raised to C in one, but not the other. In (11), *that* has to be linearized in both CPs because it is an instance of a *shared* (raised) T. In the first CP, where T has raised to C, *that* precedes the subject *John* because from its derived position it asymmetrically c-commands the subject (Gracanin-Yuksek 2013; Wilder 1999). But in the second CP, T is linearized in T, so that it follows the subject. Since the subject is only pronounced once, *that* is required to both precede and follow it. Since this is impossible, the structure is non-linearizable and therefore ungrammatical. This analysis explains the difference between English and Polish/Croatian, and the contrast between *that and wh* and *if and wh* in English (since *if* is also a lexical COMP, rather than a spellout of T-to-C).

11) *I know



Selected References: Abels, K. 2003. Successive cyclicity, anti-locality and adposition stranding, PhD thesis, UConn. **Citko, B. & M. Gracanin-Yuksek.** 2013. Towards a new typology of coordinated wh-questions. Journal of Linguistics 49: 1-32. **Giannakidou, A. & J. Merchant**. 1998. Reverse sluicing in English and Greek. The Linguistic Review 15: 233-256. **Pesetsky, D. & E. Torrego**. 2001. T-to-C movement: Causes and Consequences. Ken Hale: A life in language, ed. by M. Kenstowicz, 355-426. Cambridge: MIT Press. **Wilder, C**. 1999. Right Node Raising and the LCA. WCCFL 18: 586-598.

Sonority Sequencing in Polish: Defying the Stimulus?

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Recent work on phonological learning has questioned the traditional view that innate principles guide and constrain language development in children and explain universal properties cross-linguistically. In this talk I focus on a particular universal, the Sonority Sequencing Principle (SSP), which governs preferences among sequences of consonants syllable-initially. Experimental evidence indicates that English, Mandarin, and Korean speakers exhibit sensitivity to the SSP even for consonant sequences that never occur syllable-initially in those languages (such as [nb] vs. [bn] in English). There is disagreement regarding the implications of this finding. Berent et al. (2007) argue that these results can only be explained with reference to an innate principle; however, Daland et. al (2011) show that computational models capable of inferring statistical generalizations over sound classes can detect evidence for these preferences based on related patterns in the language input (and therefore no reference to innate principles is required). Building on these studies, I argue that English is the wrong test case: it does not differentiate predictions of these two hypotheses. I examine development of syllable structure in Polish, a language with very different sonority sequencing patterns from English. I show that the same computational models capable of detecting SSP preferences based on data from English, Mandarin and Korean cannot do so in Polish: this is because the statistical patterns in Polish contradict the SSP. I then show that children acquiring Polish are nonetheless sensitive to the SSP, suggesting a crucial role for this universal principle in language learning.

Russian negative fragments revisited

This paper is a reply to Fitzgibbons 2013. The main point contra Fitzgibbons 2013 that we going to argue for is that negative fragment answers to wh-questions in Russian (or what looks like such) are **not** used exclusively to deny the questions' presuppositions. We will reexamine Fitzgibbons's data and show that Russian negative fragments are in fact "normal" answers with parts elided under strict semantic identity with wh-remnants.

The current picture. Fitzgibbons (2013) argues that negative fragment answers (NFA) to wh-questions in Russian are in fact not picking members of the set of possible answers, but rather denying the questions' presuppositions (cf. Abusch 2010 for similar views on English NFAs). Since wh-questions are taken to have existential presuppositions (*Who came?* presupposes that *Someone came,* hence *No one came* is not in the set of possible answers), the antecedent of ellipsis in NFA cannot be construed as the wh-remnant in the question. The main argument comes from the fact that NFAs to negative wh-questions in Russian, if acceptable at all, are interpreted as involving double negation (DN):

(1) a. Kto ne prišël?
who NEG came?
'Who didn't come?'

b. (?) Nikto ~~ne ne prišël~~.
n-who NEG NEG came
'Nobody didn't come' = 'Everyone came' (DN, perceived as a joke)
(Fitzgibbons 2013: 94, 98)

Taken together with the fact that NFAs to negative wh-questions involve the same n-words as NFAs to positive wh-questions (2), it is suggested that the elided part of an NFA always involves an extra negation, not present in the question (cf. Giannakidou 2000, 2006 for Greek).

(2) a. Kogo ty videl?
whom you saw
'Who did you see?'

b. Nikogo ~~ja ne videl~~
n-whom I NEG saw
'Nobody'

We will argue that contrary to the claims in Fitzgibbons 2013, NFAs are not designated presupposition deniers and that in general they may have elided parts anteceded by the backgrounded material in the question, under strict semantic identity, without an extra unpronounced negation.

NFAs do not deny presuppositions. Whether wh-questions trigger presuppositions is a controversial topic (see Katz and Postal 1964, Postal 1971, Horn 1972, Karttunen 1977, Groenendijk and Stokhof 1984, Comorovski 1996, Fitzpatrick 2005, Brandtler 2008, Eilam and Lai 2009), but even if we maintain that they do, the claim that Russian NFAs deny the questions' presuppositions makes wrong predictions.

1. Consider the case of questions with *only* as in *Who did only John see?* If this question does trigger a presupposition, it is roughly as follows: 'Everyone in the contextually relevant set (say, John, Bill, and Mary) saw someone'. In Russian, it should be possible to deny the presupposition with the use of an n-word, but the prediction is not borne out:

(3) a. Kogo videl tol'ko Džon?
whom saw only John
'Whom did only John see?'

b. Nikogo.
n-whom
'There is no person who only John saw'
*'There is no person who everyone saw'
*'It is not the case that everyone saw someone'

2. Consider the case of single pair multiple wh-questions where the order in the pair is under discussion.

(4) The teacher discusses Pushkin's "*Eugene Onegin*", specifically Onegin and Lensky characters and asks checking how well students know the plot:

a. Kto kogo ubil?
Who whom killed
'Who killed who?'

b. # Nikto nikogo.
n-who *n*-whom
Intended: 'Nobody killed anyone'

If the question presupposes anything, it would seem to presuppose that one of the two killed the other of the two. Then it should be the case that the presupposition could be denied as in (4b).
The prediction is not borne out, even though (4b) would be a fine answer to a pair-list question. (It does not work as an answer to (4b), because the only relevant possible answers are 'Onegin killed Lensky' and 'Lensky killed Onegin', 'Nobody killed anyone' is not in the set.)

3. The distribution of negative fragments in Russian is not limited to question-answer pairs. For example, negative fragments in gapping seem to have very similar properties in what concerns the presence of negation in the elided part, but clearly do not have anything to do with presupposition denial:

(5) a. Ja videl Džona, a on — nikogo (ne videl).
I saw John and he *n*-whom (NEG saw)
'I saw John and he didn't see anyone.'
b. (?) Ja ne videl Džona, a on — nikogo
I NEG saw John and he *n*-whom
(?) 'I didn't see John, and he saw everyone'

Ellipsis in NFA can be anteceded directly in the question. As mentioned in Fitzgibbons 2013, there are exceptions to the obligatory double negation interpretation of NFAs in answers to negative questions. For example, no second negation seems to be needed in the case of questions with the negated copula *net:*

(6) a. U kogo net ocenki?
by whom NEG.is grade
'Who doesn't have a grade?'
b. Ni u kogo ~~net ocenki~~
n by whom NEG.is grade
'Nobody has a grade.'

It turns out that the exceptions are rather systematic. In fact, double negation interpretation is only available when the question involves unstressed negative particle *ne.* When other (stronger) negative elements that can license n-words are used, no double negation in NFAs arises.

(7) *Nel'zja* (not.allowed)
a. Na kakix životnyx nel'zja oxotit'sa'?
on what animals not.allowed to.hunt
'What animals is not allowed to hunt'
b. Ni na kakix ~~životnyx nel'zja oxotit'sa~~
n on what animals not.allowed to.hunt
'It is not allowed to hunt any animals.'

(8) Stressed *né* (NEG)
a. U kogo né bylo ocenki?
by whom NEG was grade
'Who doesn't have a grade?'
b. Ni u kogo ~~né bylo ocenki~~
n by whom NEG was grade
'Nobody has a grade.'

This may suggest a take on the problem that is rather different from the one in Fitzgibbons 2013. It may be that in the general case ellipsis in Russian NFAs is anteceded by overt material in the wh-question. However, for some reason "weak" negation inside the elided phrase cannot license n-words outside of it. In such cases an extra negation is used to license n-words as a last resort (1). It is the same extra negation that is needed to license them in answers to positive wh-questions (2).
This analysis is consistent with the view according to which NFAs are not designated to deny presuppositions but rather are "normal" fragment answers.
While the main ingredients of Fitzgibbons's (2013) syntactic analysis can be left intact, Russian NFAs do not seem to have any special status setting them apart from other fragment answers. Their "double negation" property may be viewed as a consequence of constraints on ellipsis and licensing.

Fitzgibbons, N. 2013. "Negative concord items in fragment answers: not so negative after all". In *A. Podobryaev* (ed.) *Formal Approaches to Slavic Linguistics, The Second MIT Meeting, 2011.* Ann Arbor, MI: Michigan Slavica Publishers.

An NPI disjunction: from coordination to focus particle
[Negation and Polarity, Semantics, Syntax-Semantics, Serbian]

I. Negative(?) coordination Special coordination markers that emerge in negative contexts have not been extensively studied (de Swart 2001, Doetjes 2005, Wurmbrand 2008, Dagnac 2012, Gonzalez&Demirdache 2015). The central question debated in literature is whether these items are inherently negative or semantically non-negative. The former would correspond to conjunctions and the latter to disjunctions. Serbian *ni* was described as a negative conjunction (Arsenijević 2011), since the conjunction *i* can be identified in its morphological make-up (*n-i*). This paper, however, claims that Serbian *ni* is, in fact, a strong Negative Polarity Item (NPI) disjunction, and that this can correctly capture the coordination facts, as well as its interesting role as a focus particle (additive or scalar).

II. (*Ni...*)*ni* as a strong NPI disjunction Serbian *ni* can coordinate NPs, DPs, PPs, VPs. It is accepted only in negative sentences where a negative verbal marker (*ne*, *ni*-AUX) is spelled out. In post-verbal positions, single *ni* is sufficient to introduce the last member of the coordination (1b), whereas pre-verbally each coordinant has to be preceded by *ni* (1a).

(1) a. Ni Sofija ni Lea ne idu na plivanje. √[¬ (p ∨ q)]; *[¬ (p ∧ q)]
ni Sofija$_{NOM}$ *ni* Lea$_{NOM}$ not go$_{3Pl}$ on swimming$_{ACC}$
'Neither Sofija nor Lea go swimming'

b. Lea nije (ni) pojela sendvič ni popila jogurt. √[¬ (p ∨ q)]; *[¬ (p ∧ q)]
Lea$_{NOM}$ didn't *ni* eat$_{PART}$ sandwich$_{ACC}$ *ni* drink$_{PART}$ yogurt$_{ACC}$
'Lea neither ate a sandwich nor drank yogurt'

Regardless of its position in the structure, *ni*-coordination cannot be interpreted as a conjunction of two constituents in the scope of negation. *Ni* fails at coordinating TPs or CPs (2a), unless they are gapped (2b)

(2) a. ?* Ni Sofija nije videla Tamaru, ni Lea neće zvati Marka.
ni Sofija$_{NOM}$ didn't see$_{PART}$ Tamara$_{ACC}$ *ni* Lea$_{NOM}$ won't call$_{PART}$ Marko$_{ACC}$
'Neither Sofija saw Tamara, nor will Lea call Marko'

b. (Ni) Sofija nije videla Tamaru, ni Lea Marka.
ni Sofija$_{NOM}$ didn't see$_{PART}$ Tamara$_{ACC}$ *ni* Lea$_{NOM}$ Marko$_{ACC}$
'Neither Sofija saw Tamara, nor Lea (saw) Marko'

Recent analyses of gapping (Coppock 2001, Johnson 2014) treat it as VP-ellipsis in a situation where what has been conjoined are the VPs beneath an auxiliary verb. This is consistent with an analysis of *ni* as a disjunction which needs to be in the scope of a negative operator. *Ni*-disjunction is ungrammatical if in a Downward Entailing (DE) environment, such as the scope of 'few' in (3).

(3) * Malo dece vole (ni) španać ni šargarepu.
few children$_{GEN}$ like *ni* spinach$_{ACC}$ *ni* carrot$_{ACC}$
'Few children like spinach or carrots'

We argue that Serbian *ni* is semantically non-negative and that its polarity sensitive behavior comes from the presence of a formal feature which needs to be checked by a matching feature present on a strong ONLY-operator (O^S). The result of this agreement relation is the exhaustification of the scalar and domain alternatives activated for *ni*. For the grammatical examples in (1) and (2):

(4) a. Scalar alternatives: ¬(p ∨ q); ¬(p ∧ q)
b. Domain alternatives: ¬p; ¬q
c. Assertion: ¬O^S (p ∨ q)
d. Exhaustification: ¬(p ∨ q)

Exhaustification is vacuous in these cases, since all the alternatives are entailed by the assertion, i.e. the assertion ¬(p ∨ q) is the strongest alternative and therefore negating other (scalar and domain) alternatives does not yield a contradiction. Since the exhaustification of alternatives performed by O^S is strong, presuppositions and implicatures must be taken into account (Chierchia 2013) and for this reason (*ni...*)*ni* is ungrammatical in DE environments that are not anti-additive (3): 'few children like spinach' bears an implicature that 'some children like spinach' and this disrupts the DE-nature of the sentence.

(5) ??? Ne voli svako dete ni španać ni šargarepu. [¬(a∨b) > ∀]

not likes every$_{NOM}$ child$_{NOM}$ *ni* spinach$_{ACC}$ *ni* carrot$_{ACC}$
'Not every child likes spinach or carrots'

Furthermore, O^S-exhaustification is responsible for the weakness of intervention effects with high end scalemates such as the quantifier 'every' (5): it forces the *ni*-coordination to move out and come into a more local relation, whereas the intervening element takes the lowest scope. The presence of an intervention effect with 'because' speaks in favor of this: 'because'-clauses are strong islands and movement is, therefore, blocked.

III. *Ni* as a strong NPI focus particle We further claim that a strong NPI disjunction analysis for S-C *ni* should be maintained for its use as a focus additive particle that only occurs in negative environments (6).

(6) (Sofija ne jede španać.) Ni Lea (ne jede španać).
Sofija$_{NOM}$ not eats spinach$_{ACC}$ ni Lea$_{NOM}$ not eats spinach$_{ACC}$
'(Sofija doesn't eat spinach.) Lea doesn't eat spinach, either'

Namely, single *ni* is this time adjoined to a focalized constituent, bearing an anaphoric requirement. Following Ahn's (2014) analysis for English 'either', Serbian *ni* is understood as a disjunction that takes as its arguments the host proposition and a silent anaphor for which it is presupposed that it is a distinct focus alternative of the host proposition. A salient antecedent must be invoked in the discourse or in the context, and this antecedent must entail one of the alternatives activated by focus in the host proposition. In paralel to *ni*-coordination, analysing *ni* focus additive particle as a disjunction allows us to explain its polarity-sensitive behavior – its distribution is restricted to negative enviroments only. This is due to the obligatory presence of an ONLY-operator and the alternatives activated by focus. Once the matching feature on *ni* is checked, the operator exhaustifies the scalar and domain alternatives, as in (7).

(7) a. Scalar alternatives: $\neg(p \vee q)$; $\neg(p \wedge q)$
b. Domain alternatives: $\neg p$; $\neg q$
c. Assertion: $\neg O^S(p \vee q)$, where p = [[Lea eats spinach]] and $q \in [[p]]^F$
d. Exhaustification: $\neg(ni\ p) = \neg(p \vee q)$

Again, the exhaustification is vacuous, since the assertion in (7c) entails all other alternatives. Crucially, without sentential negation, the sentence with *ni* would be ungrammatical because the ONLY-operator would negate all the alternatives that are not entailed by the assertion and this would lead to a contradiction:

(8) Exhaustification: *ni* p = $(p \vee q) \wedge \neg p \wedge \neg q \wedge \neg(p \wedge q)$

Importantly, *ni* as a focus particle can also express a scalar meaning, similar to that of English 'even' occurring in a negative context:

(9) Ni Sofija nije uradila domaći.
Ni Sofija$_{NOM}$ didn't do$_{PART}$ homework$_{ACC}$
'Not even Sofija did the homework'

Once the alternatives are ordered on a likelihood scale that builds up a focus value, instead of merely belonging to one (as in the case of the additive *ni*), a different kind od exhaustifier is required – an EVEN-operator. Just like the ONLY-operator, EVEN-operator agrees with *ni* and exhaustifies alternatives. *Ni* being a strong NPI disjunction, only when embedded in a negative context it yields the right meaning (on the example in (9)): it is not the case that Sofija did her homework, it is not the case that someone else did their homework, and Sofija not doing her homework is the least likely alternative.

IV. Conclusions In our proposal, Serbian *ni* is a strong NPI disjunction and this account covers both coordination and focus particle uses of *ni*. It correctly predicts its polarity-sensitive behavior, inside the alternatives and exhaustification framework. *Ni*-coordination is subject to distributional restrictions to which Serbian conjunction *i* is not sensitive (coordination of bigger structures), and this is another consequence of the disjunction-based nature of S-C *ni*.

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Dissociating the scalarity and additivity of EVEN – the case of "čak" and "čak i" in BCS

Many languages seem to possess scalar additive operators (SAO) like the English *even* in (1) (Gast & van der Auwera 2011). Characteristically, SAOs add two presuppositions to the meaning to the sentence: (a) a *scalar presupposition*, e.g. that Ivan's drinking three bottles of wine is unlikely/significant as compared to some alternatives, e.g. drinking other things in (1); and (b) an *additive presupposition*, that some alternative is the case, e.g. that Ivan also drank something else (Horn 1969, Karttunen and Peters 1979, Rooth 1985, 1992, a.o.).

(1) Ivan even drank [three bottles of WINE.]F
(2) Ivan je popio čak i tri flaše vina.
Ivan aux drank even three bottles wine

The particle *čak* (2) is usually assumed to be the BCS counterpart of the English *even*, and Gast & van der Auwera categorize it as a SAO. However, the same particle in Bulgarian has been argued to only carry a scalar, and no additive presupposition (Tomaszewicz 2014), whereas the Bulgarian SAO is realized in *dori*/*daže*. In this paper we argue that the BCS *čak* is also just scalar and not additive. Moreover, BCS does not have a general SAO realized by a single lexical item. Instead, scalarity and additivity are dissociated: The SAO meaning is conveyed only when scalar *čak* appears in combination with the additive particle *i* (or *ni* in negative contexts), which constitutes about 2/3 of the uses of *čak* (based on counts on a Croatian and a Serbian subcorpus of Parasol, Waldenfels 2006).

The first argument for the dissociation of scalarity and additivity in BCS comes from the observation that in all contexts where the additive presupposition is satisfied speakers overwhelmingly choose "čak i". For instance, the context in (3) stipulates that in addition to the rest of the dinner, Maria ate the potatoes. All of the speakers we consulted (9) stated that "i" cannot be omitted for this reading.

(3) Marija nikad ne pojede celu večeru, ali danas je pojela **čak i** krompire.
Marija never not eats whole dinner but today AUX ate even potatoes
'Maria never finishes eating all of her dinner, but today she ate **even** the potatoes.'

Furthermore, the dissociation between additivity and scalarity predicts that the converse is true: in contexts where additivity is infelicitous, speakers should reject *čak i*, but allow *čak*. This is exactly what we find in contexts such as (4), where the dean is high on a rank scale of possible addressees of the complaint, but the exclusion of alternatives is explicitly asserted. The second clause is a felicitous continuation in (4a) which contains *čak* alone, but it is incongruous with (4b) containing *čak i* and with *even* in (4c). The contrasts in (4) indicate that, unlike the English *even*, *čak* alone contributes scalarity without additivity.

(4) a. Poslao sam žalbu **čak** dekanu, ali je nisam poslao nikome drugome.
Sent AUX complaint "even" dean but it NEG.AUX sent no one other
'I sent my complaint **čak** to the dean, but I didn't send it to anyone else.'
b. Poslao sam žalbu **čak i** dekanu, #ali je nisam poslao nikome drugome.
c. I sent my complaint **even** to the dean, #but I didn't send it to anyone else.

In negative contexts, *čak* may appear with or without the negative concord additive particle *ni* 'either, neither'. Again, if the additive presupposition is satisfied the presence of *ni* is obligatory. This is for instance the case in a context like: The Novak family usually goes on a trip abroad and to their grandparents' village Dašnica, but this year they had no money and they didn't go on vacation at all. All our informants strongly preferred (6) with *ni* in this context.

(6) Nisu išli čak ni u Dašnicu.
NEG.AUX went even to Dašnica
'They didn't even go Dašnica.' [Add. Presupp: They did not go abroad.]

The native speakers' judgements vary on whether *čak* is possible without *ni* under negation. However, speakers who allow it, prefer *čak* without *ni* in a context that contradicts the additive presupposition. Suppose Ivan is travelling from Belgrade to Munich. Salzburg is located quite far on Ivan's route. Then speaker A can utter (7A) indicating by the use of *čak* that Salzburg is high on the distance from Belgrade scale. Speaker B can deny that statement, cf. (7B), using *čak* under negation. Note that the presupposition that Salzburg is far remains intact, i.e. the scalar presupposition projects from under negation. If the sentence contained *ni*, it would also have the additive presupposition that Ivan did get as far as some other relevant place, such as Zagreb, however this presupposition is contradicted by the statement that Ivan is now in Zagreb. This is why *ni* is not felicitous in (7B). However, it is felicitous if Salzburg is replaced by Zagreb, cf. (8), to the extent that Zagreb is seen as low on a distance scale.

(7) A: Ivan je **čak** u Salzburgu.
Ivan is "even" in Salzburg
'Ivan is **čak** in Salzburg.'
B: Ne, Ivan **nije** **čak** u Salzburgu, sad je u Zagrebu.
No Ivan NEG.is "even" in Salzburg, now is in Zagreb.
'No, Ivan is **not as far as** Salzburg, he is in Zagreb now.'

(8) Ivan **nije** **čak ni** u Zagrebu/#Salzburgu.
Ivan NEG.is even in Zagreb
'Ivan is **not even** in Zagreb/#Salzburg.'

The fact that the the scalar presupposition of *čak* projects past negation, (7B), provides support for the scope theory on which EVEN must outscope negation resulting in scale reversal, (8), (Karttunen and Peters 1979, Guerzoni 2003). As shown in (10b), considering all the alternatives to ¬*p*, the place that is closest to the point of Ivan's departure becomes the most significant.

(10)	Assertion *p*	Additive presupposition $\exists q \in C$ [$q \neq p$]	Scalar presupposition $\forall q \in C$ [$q \neq p \rightarrow p > q$]
a.	Ivan is in A.	Ivan is in B.	That Ivan is in A is more significant than any alternative *q*.
b.	Ivan is not in A. (=¬*p*)	Ivan is not in B.	That Ivan is **not** in A is more significant than any alternative *q*.

The absence of scalar reversal with *čak* alone, (6B), is accounted for if we follow Tomaszewicz's (2012, 2014) analysis for *aż/čak* in other Slavic languages on which the prejacent *p* is not asserted (as in 10) but presupposed.

We conclude that the novel facts we presented (the absence of the additive implication in the absence of *i*, (3), (7A vs. 6); the felicity of *čak* alone in exclusive contexts, (4), (7); the absence of scale reversal with *čak* under negation (6B), scale reversal with *čak ni*, (7)) argue against a uniform treatment for *even* and *čak* in BSC. Instead, we propose that the two meaning components of *even*, scalarity and additivity, are lexicalized separately by *čak* and *i*. In this sense, BCS presents a typologically interesting and so far less well studied case. Since unlike most other languages, BCS encodes scalarity and additivity by two different particles this allows studying each of these properties separately, which potentially provides a perfect testbed for theories of scalar (and) additive operators.

Case Syncretism in Russian, Polish and Czech ATB Constructions

This paper investigates case syncretism in ATB constructions (ATBs), provides some new ATB data and proposes to derive ATBs by means of two independent movements and haplology reduction.

Background: 1. Case mismatches. It has been shown that ATB dependencies with conjuncts that demand different cases result in ungrammaticality (e.g. Borsley 1983, Dyła 1984 and Bondaruk 2003); see (1), where *lubi* selects an accusative object and *nienawidzi* a genitive object.

(1) * $Co_{NOM/ACC}$ Janek lubi t_{ACC} a Jerzy nienawidzi t_{GEN}? (Polish, Dyła 1984: 702)
what Janek likes and Jerzy hates

Syncretism, however, can repair otherwise illicit case mismatches (Dyła 1984, Franks 1993, 1995, Citko 2005), as in (2), where *kogo* – in contrast to *co* in (1) – is syncretic for accusative and genitive.

(2) $Kogo_{ACC/GEN}$ Janek lubi t_{ACC} a Jerzy nienawidzi t_{GEN}? (Polish, Dyła 1984: 701)
who Janek likes and Jerzy hates
'Who does Janek like and Jerzy hate?'

In asymmetric approaches to ATBs (extraction takes place from only one conjunct), case mismatches are possible: in the parasitic gap (PG) approach (e.g. Munn 1992, Franks 1995) because there are two different gaps that can receive case from different probes; in Zhang (2010) because *pro* (in the non-initial conjunct) bound by the moved filler can receive a case different from the case of the filler; and in the ellipsis approach (e.g. Ha 2008, Salzmann 2012) because gaps in particular conjuncts are not directly related and ellipsis allows morphological mismatches. These approaches need some mechanism to block cases like (1) (and to ensure that the filler is specified for both case features); see e.g. Dyła (1984), Franks (1993) and Bondaruk (2003) for morphological case parallelism. As to case mismatches and symmetric approaches (extraction takes place from all conjuncts) with a shared element (e.g. Citko 2011, Nunes 2004), they need to assume underspecification and multiple cases on the shared element. In symmetric approaches with extraction from all conjuncts (Williams 1978, Blümel 2014), the case matching requirement must be stipulated.

2. (Non-)identity reading. ATBs like (2) receive a single-identity reading (IR) in the unmarked case but non-identical readings (NIR) are also possible; see various types of ATBs in (3)-(5) (and e.g. De Vries to appear). For instance, the Czech (3a) is not a question about an identical speed (mostly, humans run and swim at different speeds), hence it can be answered by (3b).

(3) a. Jak rychle Marie běhá a Jirka plave?
how fast Marie runs and Jirka swims
'How fast does Marie run and Jirka swim?'

b. Marie běhá 7 km/h a Jirka plave 4 km/h.
Marie runs 7 km/h and Jirka swims 4 km/h
'Marie runs 7 km/h and Jirka swims 4 km/h.'

Example (4a) has both IR and NIR. The interpretation also depends on other elements in the clause; when *pak* 'then' is added, only IR is possible (4b). The order of conjuncts, hence the order of described events, is also important; in (4c) NIR is preferred. Given our world knowledge, the most prominent IR reading of (4c) is the type-identity (not token) reading; it can be e.g. a question about books with the same title. That NIR is indeed available is shown in (4d), with an ATB relative clause. If IR were the only possible reading, (4d) would be a contradiction.

(4) a. Co Marie koupila a Jirka spálil?
what Marie bought and Jirka burned
'What did Marie buy and Jirka burn?'

b. Co Marie koupila a Jirka pak spálil?
what Marie bought and Jirka then burned
'What did Marie buy and then Jirka burn?'

c. Co Jirka spálil a Marie koupila?
what Jirka burned and Marie bought
'What did Jirka burn and Marie buy?'

d. Ta věc, kterou Marie koupila a Jirka spálil, nebyla identická.
the thing which Marie bought and Jirka burned was.not identical (Czech)

The ATB topicalization construction in (5) has NIR (in the out-of-the-blue context). IR must be forced by an appropriate context, for instance, by: Artur has two sons, Ivan and Oleg.

(5) Svoego otca Ivan ljubit i Oleg nenavidit. (Russian)
self father Ivan likes and Oleg hates
'His father, Ivan likes and Oleg hates.'

NIR poses a problem for sharing approaches like Citko (2005, 2011) and Nunes (2004) because they assume only one element shared by all conjuncts. In symmetric approaches with extraction from all conjuncts like Blümel (2014), where copies from particular conjuncts form one chain, NIR is also not possible. As to asymmetric approaches, in the PG approach (e.g. Franks 1995) NIR is also unexpected

since the parasitic gap is in a chain with the antecedent of the true gap, and the same holds for the ellipsis approach like Salzmann (2012), where the moved operator binds traces in all conjuncts. NIR is also problematic for the *pro* approach because *pro* is bound by the filler moved from the initial conjunct. Note also that (4)-(5) tell against Zhang's (2009) generalization that NIR is licensed by plurality and non-thematic properties of the left-peripheral element.

Analysis. To derive NIR, I assume that there are two (or more) independent movement chains in ATBs, as schematized in (6) for wh-movement (note that Slavic has overt multiple wh-fronting; in English-type languages, such a derivation is excluded by the ban against overt multiple specifiers). Thus, NIR is a result of the presence of two distinct operators binding their corresponding variables. Since sentence mood is identical but tenses of the conjuncts can differ, TPs, not CPs, are conjoined.

(6) $[_{CP}\ whP_1\ whP_2\ [_{\&P}\ [_{TP}\ t_1]\ [\&\ [_{TP}\ t_2]]]]$

If the moved elements are syncretic, haplology reduction applies, which results in a string like (2). Haplology can also delete a syncretic complex constituent like *jak rychle* in (3); cf. Richards's (2010) discussion of multiple wh-fronting. Haplology must always apply; cf. the ungrammatical undeleted (7) with the deleted (2). The deleted constituent can be recovered from the parallel element but this possibility is not available in non-coordinated structures, hence they are ungrammatical, as in (8).

(7) * $Kogo_{ACC/GEN}$ $kogo_{ACC/GEN}$ Janek lubi t_{ACC} a Jerzy nienawidzi t_{GEN}?
who who Janek likes and Jerzy hates

(8) * Čto ~~čto~~ pričinilo? (Russian)
what what caused
intended: 'What caused what?'

There are two options wrt. IR, coreference and binding, specifically, optional coindexing of the two operators and their corresponding variables. Recall that the type of the reading depends not only on the meaning of other elements in the clause (4b) and on the ordering of events in the coordination (4a,c), but also on the specific extra-clausal context (5) and on our general world knowledge (3), (4c). Given the modularity of the generative system, it is difficult to model the dependency between these factors and the coindexation of appropriate operators. In contrast, coreference relates expressions to the set of entities in the discourse; hence, although it is less economical than binding, it is the preferable option.

Reconstruction data like (5) and island data like (9) support the view that movement takes place from both conjuncts in ATBs. The derivation is bad regardless of whether the adjunct with the gap occurs in the first or in the second conjunct:

(9) a. *Co Jan koupil t a Lída brečela, protože zničila t? (Czech)
what Jan bought and Lída cried because destroyed

b. * Co Jan brečel, protože zničil t a Lída koupila t?
what Jan cried because destroyed and Lída bought

As to cases like (1), I assume in accordance with the literature (Dyła 1984, Franks 1993, 1995, Bondaruk 2003) that there is a morphological case parallelism, as stated in (10) (there can also be other parallelism requirements, see ibid., Fox 2000). 'Parallely moved' identifies elements that move from distinct conjuncts and meet the usual requirements on movement from coordinations.

(10) Morphological case parallelism

Elements parallely moved out of a coordinated structure must have the same morphological case.

This renders derivations containing elements with non-syncretic cases moved out of distinct conjuncts ungrammatical, independently of whether or not the deletion applies; consider (1) and (11).

(11) * $Co_{NOM/ACC}$ $czego_{GEN}$ Janek lubi t_{ACC} a Jerzy nienawidzi t_{GEN}?
what what Janek likes and Jerzy hates

To conclude, in contrast to many other approaches to ATBs, the current proposal can derive both case syncretism and NIR (plus IR). It also has other advantages; it does not need forking chains – which are restricted only to coordinated structures and have peculiar properties like violation of the Bijection principle – and it does not have to employ a special coindexing mechanism like Munn (1999).

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Similarity avoidance and its impact on the lexicon

Similarity avoidance (dissimilation) has been studied in connection with such (morpho-) phonological conditions as featural similarity, adjacency, domains and "no interveners" (Alderete and Frisch 2007). The Obligatory Contour Principle (Goldsmith 1976) has commonly served to formalize similarity avoidance. Subsequent research has shown that avoidance of similar consonants is a phonotactic restriction whose strength is gradiently dependent on the similarity of consonants involved, distance between segments, segment frequency and segmental position in the word. The gradient nature of these restrictions lends support to their functional motivation. There is evidence in psycholinguistics that processing a sequence of similar items is more difficult than processing a sequence of dissimilar items (Frisch 2004). I consider several word formation processes from Polish and French that potentially lead to the emergence of similar consonants in close proximity. I focus on a range of distinct morphological and phonological strategies of dealing with similarity (an unexpected suffix, an unexpected stem, lexical gaps and OCP violations) and on the gradience of the restrictions.

1.		Locative Nouns		
	a.	Base V: pływ-ać 'swim'	pływ-a[l]ni-a	
	b.	Base N: ciastk-o 'cookie'	ciastk-a[r]ni-a	
	c.	Base V: powiel-ać 'copy'	powie[l]-a[r]ni-a	*powie[l]-a[l]ni-a
	d.	Base Noun: papier 'paper'	papie[r]-ni-a	*papie[r]-a[r]ni-a
2.		Adverbs (French)		
	a.	Base Adj: élégant 'elegant'	éléga-[m]ent	
	b.	Base Adj: charmant 'charming'	char[m]ant-[m]ent	*char[m]a-[m]ent
3.		Double diminutives		
	a.	Base: dom 'house'	dom-e[tʃ]-ek	
	b.	Base: żuk 'beetle'	lexical gap	*żu[tʃ]-e[tʃ]-ek
	c.	Base: róg 'corner'	lexical gap	*ro[ʒ]-e[tʃ]-ek
	d.	Base: pieluch-a 'diaper'	pielu[ʃ]-e[tʃ]-k-a	
	e.	Base: dach 'roof'	?da[ʃ]-e[tʃ]-ek	
	f.	Base: klisz-a 'film'	lexical gap	*kli[ʃ]-e[tʃ]-k-a
4.		Verbs		
	a.	Base: parad-a 'parade'	parad-o[v]ać	
	b.	Base: nerw 'nerve'	de-ner[v]-o[v]ać	
5.		Nouns		
	a.	Base V: robi-ć 'do'	robi-e[ɲ]e	
	b.	Base V: usprawni-ać 'improve'	uspraw[ɲ]-e[ɲ]-e	

Locative nouns take *-alnia* when they are derived from verbs (1a); *-arnia* is used when they are derived from noun bases (1b). However, if the addition of *-alnia* might result in repeated *l*s, the suffix *-arnia* is chosen, in spite of its morphosyntactic restriction (1c). The suffix *-arnia* appears in its truncated form *-nia* just in case its addition might lead to repeated *r*s (1d). As for French adverbs, similarity avoidance brings about the selection of an unexpected stem (2b). In the case of Polish double diminutives, dissimilation leads to lexical gaps (3b). The item in (3c) shows that for dissimilation to take effect the relevant consonants need not be identical but have to share a particular feature (retroflex sibilant). Avoidance of similar sounds is non-categorical for less similar consonants, as evidenced in (3d-f), where

some double diminutives of similar structure are acceptable, others marginally acceptable, while still others unattested. The verb and noun formation processes exemplified in (4) and (5), on the other hand, do not exhibit any strategies of similarity avoidance.

In an OT formalization, a family of constraints is necessary to represent gradient OCP effects reflecting the degree of similarity and proximity. Similarity is computed according to the model of Frisch, Pierrehumbert and Broe (2004) and is based on shared natural classes.

$$Similarity = \frac{Shared\ natural\ classes}{Shared\ natural\ classes\ +\ Non\text{-}shared\ natural\ classes}$$

EXISTENCE, a constraint that penalizes lexical gaps, is ranked with respect to the family of OCP constraints. In order to explain the different strategies used to deal with OCP violations, I also refer to three non-phonological conditions: contribution (How vital is the derivative for communication?), availability of other suffixes (Are there any other productive suffixes that could be used in the same function?) and the frequency of a suffix, gauged by the number of dictionary entries (type frequency). Following Mascaró (2007), I make reference to inputs which contain multiple allomorphs in an ordering relation. PRIORITY penalizes the selection of a less preferred allomorph. It is shown that the proposed analysis can be used to predict (1) whether or not OCP violations will be tolerated and/or (2) the particular strategy used to avoid OCP violations. This analysis supports a model in which phonetic and cognitive pressures incrementally affect the lexicon (Frisch, Pierrehumbert and Broe 2004).

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Embracing the Differences: The Three Classes of Russian Ditransitives

At present, 3 main types of approaches to the structure of Russian ditransitives can be singled out:
(1) a. **Dative Goal object originates in Spec, VP position**, assigned Dative case as sister to V' (see Harbert & Toribio 1991; Greenberg & Franks 1991; Franks 1995 Richardson 2007)
b. **Accusative Theme object is generated in Spec, VP position**, with the Dative originating in the complement position (Bailyn 1995, 2009, 2012)
c. **Dative Goal object is assigned case by an Applicative head** (Dyakonova 2005, 2007, following Pylkkänen 2002)

We provide a variety of syntactic and semantic arguments strongly suggesting that none of these accounts are fully correct, since Russian ditransitives are not a homogeneous class, as is generally believed, but rather subdivide into three distinct Groups, schematized in (2).

(2) **Group 1:**	V NP-ACC NP-OBL	BASIC ORDER	(ambiguous)
V NP-OBL NP-ACC	<NP-OBL>	DERIVED ORDER	(frozen)
Group 2:	V NP-OBL NP-ACC	BASIC ORDER	(ambiguous)
V NP-ACC NP-OBL	<NP-ACC>	DERIVED ORDER	(frozen)
Group 3:	V NP-CASE1 NP-CASE2	BASIC ORDER	(ambiguous)
V […NP-CASE2…] NP-CASE2		DERIVED ORDER	(ambiguous)

The three Groups, exemplified in (3-5), are differentiated primarily by their scope behavior, but the differences between them run deeper, with these predicates' belonging to distinct Groups based on scope distribution being supported by a number of other tests, such as robust scope contrasts in ACD environments (6-7) and other syntactic tests (8-11).

(3) a. Maša našla [kakuju-to knigu] (každomu studentu) **ambiguous G1**
Masha found [some book]$_{\mathbf{ACC}}$ [every student]$_{\mathbf{DAT}}$
'Masha found some book for every student'

b. Maša našla (kakomu-to studentu) [každuju knigu] **frozen**
Masha found [some student]$_{\mathbf{DAT}}$ [every book]$_{\mathbf{ACC}}$
'Masha found some student every book'

(4) a. Maša obeskuražila (kakim-to postupkom) [každogo opponenta] **ambiguous G2**
Masha discouraged [some act]$_{\mathbf{INSTR}}$ [every opponent]$_{\mathbf{ACC}}$
'Masha discouraged with some act every opponent'

b. Maša obeskuražila [kakogo-to opponenta] (každym postupkom) **frozen**
Masha discouraged [some opponent]$_{\mathbf{ACC}}$ [every act]$_{\mathbf{INSTR}}$
'Masha discouraged some opponent with every act'

(5) a. Maša zaveščala [*(kakoe-to imenie)] [*(každomu drugu)] **ambiguous G3**
Masha bequeathed [some estate]$_{\mathbf{ACC}}$ [every friend]$_{\mathbf{DAT}}$
'Masha bequeathed some estate to every friend'

b. Maša zaveščala [*(kakomu-to drugu)] [*(každoe imenie)] **ambiguous**
Masha bequeathed [some friend]$_{\mathbf{DAT}}$ [every estate]$_{\mathbf{ACC}}$
'Masha bequeathed to some friend every estate'

Kennedy (1997) observed that grammaticality of ACD correlates with the wide scope of the QP that is involved in the resolution of ellipsis: if the relevant QP is not able to raise high enough to obtain wide scope necessary to successfully resolve ellipsis, ACD is ungrammatical. It is natural to wonder then what happens in frozen scope contexts. As noted in Bruening (2001), either ACD will be ungrammatical in such contexts or it will somehow "free up" scope, since wide scope of the hosting QP is necessary for ACD interpretation. Instead, as Bruening shows for English, ACD is grammatical, but the *relative* scope of the two QPs remains unchanged, with the lower QP still taking scope below the higher one. Examples (6-7) demonstrate the same point for Russian, as well as confirm that different Groups of Russian ditransitives behave differently from each other, as predicted by (2): thus, the orders that are frozen (3b), remains frozen in ACD contexts (6b), the

orders that are free (5) remain, expectedly, free. That ACD is grammatical in (6b) shows that the frozen QP is nevertheless able to move (i.e., scope freezing is indeed *relative*, not absolute).

(6) a. Maša našla [kakuju-to knigu] [každomu studentu, čto i ja] **ambiguous G1**
Masha found [some book]$_{\textbf{ACC}}$ [[every student]$_{\textbf{DAT}}$ that also I]
'Masha found some book for every student I did' **(some > every), (every > some)**

b. Maša našla [kakomu-to studentu] [každuju knigu, čto i ja] **frozen**
Masha found [some student]$_{\textbf{DAT}}$ [[every book]$_{\textbf{ACC}}$ that also I]
'Masha found some student every book I did' **(some > every)**, ***(every > some)**

(7) a. Maša zaveščala [*(kakoe-to imenie)] [*(každomu drugu), čto i ja] **ambiguous G3**
Masha bequeathed [some estate]$_{\textbf{ACC}}$ [every friend]$_{\textbf{DAT}}$ that also I
'Masha bequeathed some estate to every friend I did'

b. Maša zaveščala [*(kakomu-to drugu)] [*(každoe imenie),čto i ja] **ambiguous**
Masha bequeathed [some friend]$_{\textbf{DAT}}$ [every estate]$_{\textbf{ACC}}$ that also I
'Masha bequeathed to some friend every estate'

It is further argued that distinct structures and derivations are necessary to account for the contrasts the predicates in these Groups show on a variety of tests, such as the distributive *po-* and the Genitive of Negation test (Babby 1980, Pesetsky 1982), Middle Formation test, Contrastive Focus Test (Antonyuk 2015). The distributive *po* test appears to be quite informative when applied to the three groups of verbs under discussion (to save space, we focus on Group 1 and 2 verbs, noting only that in general, Group 3 verbs pattern with Group 1 predicates in virtually every respect, except for scope). The distributive *po-* test underscores that the Group 2 verbs make up a separate class, distinct from Group 1. Thus, we'll see that while the Accusative objects of Group 1 predicates routinely appear as objects of distributive *po* (8), the Accusative objects of Group 2 verbs all fail this test (9), suggesting that the Accusative objects of Group 2 predicates are not what they appear, that is, they are not true objects.

(8) √ Maša našla po knige každomu studentu **Group1**
Masha found po [book]$_{\textbf{DAT}}$ [every student]$_{\textbf{DAT}}$
'Masha found one book for every student'

(9) *Maša obeskuražila po [opponentu] (každym postupkom) **Group 2**
Masha discouraged po [opponent]$_{\textbf{DAT}}$ [every act]$_{\textbf{INSTR}}$

The same dichotomy between Groups 1 and 2 is observed with the Genitive of Negation Test:

(10) √ Maša ne našla knigi **Group1**
Masha not found [book]$_{\textbf{GEN}}$

(11) */??Maša ne obeskuražila opponentki **Group 2**
Masha not discouraged [opponent]$_{\textbf{GEN}}$

We propose structures that account for such syntactic differences, with only one of the previously proposed ones (that in Bailyn 1995, 2009, 2012) fitting the bill (for Groups 1 and 3). For Group 2, we propose a structure in which what appears to be a direct object in fact originates low in the structure inside a silent PP, providing various types of additional supporting evidence for this claim. The scopal ambiguity of Group 3, otherwise quite similar to Group 1, is explained through the kind of movement the structurally lower QP undergoes that does not result in freezing (adopting the analysis of scope freezing proposed in Antonyuk 2015). The predicates in the three Groups are also shown to differ in the resulting interpretation of the direct object (DO) on frozen orders, with the DO in Group 2 receiving *affected* interpretation when the order is scopally frozen, lacking in the other two Groups. Overall, our findings have important implications for Slavic languages (with identical situation already identified for ditransitives in the closely related Ukrainian). It is also possible that the exact same situation will be found with other Slavic languages as well, once their QP scope properties are investigated more closely. Finally, our results call for a closer investigation of other languages, currently known to show scope freezing with ditransitives (such as English, Korean, Japanese, Norwegian and French).

The ban on movement out of moved elements and inherent case

The paper shows (1) (Ross 1967, Wexler & Culicover 1980, Collins 1994, Takahashi 1994, Müller 1998, Stepanov 2001, ao) follows from the phasal/labeling system which also allows for certain violations of (1) that are indeed attested. Consequences of the account for inherently Case-marked NPs are then explored.

(1) Movement is not possible out of moved elements.

The ban on extraction from subjects in SpecTP is one case of (1) since under the VP internal subject hypothesis extraction from a subject in SpecTP involves extraction from a moved element (2) (extraction from subjects in the base-position is allowed). Extraction is also banned from moved objects, as in the particle example in (3), where the object undergoes movement (see Lasnik 2001), and with Spanish *a*-objects (4), which also move (see Torrego 1998). The effect is also found with A'-moved elements (5).

(2) ?*I wonder [$_{CP}$ who$_i$ [$_{TP}$ [$_{DP}$ friends of t$_i$]$_j$ [$_{vP}$ t$_j$ hired Mary]]]]

(3) a. ?*Who$_j$ did you call [friends of t$_j$]$_i$ of up t$_i$? b. Who$_i$ did you call up friends of t$_i$?

(4) ?*[De quién]$_j$ has visitado [$_{DP}$ a muchos amigos t$_j$]$_i$ [$_{VP}$ … t$_i$]
of whom have-2sg visited a many friends
'Who have you visited many friends of?' (Gallego and Uriagereka 2006)

(5) ?*Whose book$_i$ do you wonder [$_{CP}$ [how many reviews of t$_i$]$_j$ John read t$_j$? (Corver 2014)

Deduction: Chomsky (2000) gives a number of criteria for phases. One of them is (6) (see Chomsky 2000, 2001, Rackowski & Richards 2005, Matushansky 2005, Cheng 2012, Bošković 2015, a.o).

(6) Only phases can undergo movement.

I show (1) follows from (6) and Chomsky's (2013) theory of labeling. There, when a head and a phrase merge, the head projects (provides the label for the resulting object). There are two ways of labeling when two non-minimal projections (phrases) merge, via (i) prominent feature sharing or (ii) traces, traces being ignored for labeling. To illustrate (i), when *what* merges with interrogative C (actually CP) in (7), both *what* and the CP have the Q-feature; what is projected (determines the label) is then the Q-feature.

(7) I wonder [what$_i$ [C [John bought t$_i$]]]

Chomsky assumes successive cyclic movement does not involve feature sharing. This means there is no feature sharing between *that* and the wh-phrase passing through its edge in (8). Since labeling via feature sharing is not an option the embedded clause cannot be labeled at the point when *what* moves to its edge, as shown in (9) with ?. When v is merged, *what* moves. The element merged with *that*-CP being a trace, it is ignored for labeling, hence ? is labeled as CP after *what* moves. Only at this point the status of t'$_i$ in (8) is determined as SpecCP. Prior to the movement (9), ? is not a CP, its status is simply undetermined.

(8) What$_i$ do you think [t'$_i$ that [he bought t$_i$]]

(9) v [$_{VP}$ think [$_?$ what [$_{CP}$ that [he bought t$_i$]]]]

(9) shows how successive cyclic movement always proceeds in the labeling framework. This and (6) deduce (1). (10) involves movement of YP out of moved XP: before any movement occurs we have (11).

(10) YP$_i$ [$_{XP}$ ... t$_i$ ...]$_j$ ... t$_j$ (11) [$_{XP}$ ... YP ...]

Since only phases move, for XP to move it must be a phase. Further, given the PIC, movement out of XP must proceed via the edge of XP: for YP to move out of XP, YP must move to the edge of XP, which must precede the movement of XP given the cycle. The merger of YP and XP yields an unlabeled object, as is always the case with successive cyclic movement. For Chomsky, phases are CPs, vPs, and DPs (see Bošković 2014 on APs and PPs). But the result of merger of YP and XP is none of these; it does not have a label at all, hence it does not count as a phase (phases require label-determination, hence unlabeled objects cannot be phases. Note I assume labeling can occur as soon as it's possible (Bošković 2015, Rizzi in press, Shlonsky 2014, Saito in press)). For concreteness, consider (2). Since subjects are phases (likely only DPs), what moves from a subject must first move to its edge. Given the cycle, this happens before the subject moves from its base-position in vP. Merger of *who* and DP yields an unlabeled element, which, not having a label, is not a phase. The phrase marked with ? in (12) then cannot move, given (6).

(12) … [$_{TP}$ T... [$_{vP}$ [$_?$ who [$_{DP}$ subject]]]]

Remnant movement, as in vP fronting, is still allowed. The result of merger of the subject and vP in (13) can't be labeled (Chomsky 2013). The subject moves to SpecTP; its trace being ignored for labeling, the relevant element is labeled as vP. Being a phase vP can move. The crucial difference between (2) and (13) is that in (13) XP moves after YP moves out of it, while in (2) XP moves before YP moves out of it.

(13) [$_{vP}$ t$_i$ kiss Mary]$_j$ [$_{TP}$ Jane$_i$ did t$_j$]

The analysis provides a new perspective on (1). Under the analysis, the problem with movement of YP out of moved XP does not arise at the point of movement of YP out of XP; it arises already with move-

ment of XP; XP itself cannot move here; any later movement out of moved XP is then trivially blocked. This means (1) is fundamentally misguided. The right generalization is in fact (14), which is a theorem.

(14) Phases that host successive cyclic movement cannot undergo movement.

The account predicts movement of Y out of moved X to be possible if Y is base-generated at the X-edge, and is otherwise able to remain at the X-edge, which indicates it undergoes feature-sharing with X. While many such cases involve interfering factors (e.g. the criterial freezing effect), that movement in violation of (1) is indeed possible in this context is shown by Serbo-Croatian possessors, which are base-generated at the phasal edge (see Despić 2013 for evidence based on (15)); and undergo agreement in phi-features and case (i.e. undergo feature-sharing). Importantly, they can move out of moved elements, as in (16), a violation of (1) predicted by the proposed analysis. (The derivation of (16a) is given in (17)).

(15) [Kusturicin$_{i/*j}$ najnoviji film]] ga$_{i/*j}$ je zaista razočarao.
Kusturica's$_{NOM.MASC.SG}$ latest movie$_{NOM.MASC.SG}$ him is really disappointed
'Kusturica's latest movie really disappointed him.'

(16) a. Jovanovu$_i$ je on [t_i sliku]$_j$ kupio t_j (extraction from a fronted object)
John'$_{ACC.FEM.SG}$ is he picture$_{ACC.FEM.SG}$ bought 'He bought John's picture.'
b. Jovanova$_i$ je [t_i slika]$_j$ ukradena t_j (extraction from a moved passive subject)
John's$_{NOM.FEM.SG}$ is picture$_{NOM.FEM.SG}$ stolen 'John's picture was stolen.'

(17) a. kupio [Jovanovu sliku] b. [Jovanovu sliku]$_j$ kupio t_j c. Jovanovu$_i$ je on [t_i sliku]$_j$ kupio t_j

There is then nothing wrong in principle with movement out of moved elements; what was wrong in the cases that motivated (1) was that the element that was later moved out of couldn't move itself. A phase with a feature-sharing Spec can move; a phase with a non-feature sharing Spec (which is the case with successive cyclic movement) can't. Since non-feature sharing Specs can't stay where they are for independent reasons (that's the nature of successive cyclic movement), all such cases also involve movement of the Spec itself, hence they involve movement out of a moved element. This has led to the "illusion" that this later movement is responsible for the badness of the relevant cases, which I argue is not the case.

Consider now inherently case-marked NPs (ICNPs). As Starke (2001) notes for Czech, extraction from ICNPs, including V-complements, is worse than extraction from structurally case-marked NPs. Thus, while extraction of genitive complements of nouns is degraded in SC, (18a), involving extraction from a dative object, is clearly worse than (18b), involving extraction from an accusative object.

(18) a. *Kojeg doktora$_i$ si prijetio [prijatelju t_i]?
which doctor$_{GEN}$ are threatened friend$_{DAT}$ 'Which doctor did you threaten a friend of?'
b. ??Kojeg doktora$_i$ si vidio [prijatelja t_i]?
which doctor$_{GEN}$ are seen friend$_{ACC}$ 'Which doctor did you see a friend of?'

Bošković (2015) accounts for the islandhood of ICNPs by treating them as adjuncts: they then involve extraction from an adjunct. If ICNPs were adjuncts we would expect extraction of ICNPs from islands to yield ECP-strength violations. That (21) patterns with (20) rather than (19), involving extraction from a clear nominal adjunct, regarding the strength of the violation then argues against their adjunct status.

(19) a. *Šumom$_i$ se pitaš [kad je trčao t_i]. b. cf. Pitaš se [kad je trčao šumom]
forest$_{INSTR}$ refl wonder when is run 'You wonder when he ran through a/the forest.'

(20) a. ??Šumu$_i$ se pitaš [kad je posjekao t_i]. cf. b. Pitaš se [kad je posjekao šumu]
forest$_{ACC}$ refl wonder when is cut-down 'You wonder when he cut down a/the forest.

(21) a. ??Fabrikom$_i$ se pitaš [kad je rukovodio t_i]. b. cf. Pitaš se [kad je rukovodio fabrikom]
factory$_{INSTR}$ refl wonder when is managed 'You wonder when he managed a/the factory.'

Importantly, movement from ICNPs is not always blocked: elements base-generated at their edge can move. Thus, extraction of possessors of ICNPs is possible.

(22) Čijem$_i$ si prijetio [t_i prijatelju]?
whose$_{DAT.MASC.SG}$ are threatened friend$_{DAT.MASC.SG}$ 'Whose friend did you threaten?'

ICNPs thus show the same kind of islandhood as moved elements: they allow extraction only for elements base-generated at their edge. To capture the parallelism, I argue ICNPs must undergo movement. The analysis is generalized beyond Slavic (and extended to Spanish (4)). It is also extended to a previously unnoticed AP-subextraction contrast (note that the Adj is accusative in (23) and instrumental in (24)).

(23) ?Generalu$_i$ sam vidio [[$_{AP}$ lojalnog t_i] vojnika]
general$_{DAT}$ am seen loyal$_{ACC}$ soldier$_{ACC}$ 'I saw a soldier loyal to the general.'

(24) *Generalu$_i$ sam komandovao [[$_{AP}$ lojalnim t_i] vojnikom]
general$_{DAT}$ am commanded loyal$_{INST}$ soldier$_{INST}$ 'I commanded a soldier loyal to the general'

Specificity Movement and Scope in Ukrainian: New Arguments Against Bruening (2001)

Stepanov and Stateva (2009) extend Bruening (2001), an account of QP scope freezing found in the English Double Object Construction and the *with*-variant of the Spray-Load construction, to Russian, arguing that since Superiority does not apply to Russian (Stepanov 1998), the language consequently does not show scope freezing. Antonyuk (2015) disproves this claim, showing that Russian not only exhibits scope freezing in ditransitives, but also shows that Russian ditransitives subdivide into three distinct groups based on their scope ambiguity/freezing distribution (1):

(1) **Group 1:** V NP-ACC NP-OBL BASIC ORDER (ambiguous)
V NP-OBL NP-ACC <**NP-OBL**> DERIVED ORDER (frozen)
Group 2: V NP-OBL NP-ACC BASIC ORDER (ambiguous)
V NP-ACC NP-OBL <**NP-ACC**> DERIVED ORDER (frozen)
Group 3: V NP-CASE1 NP-CASE2 BASIC ORDER (ambiguous)
V […NP-CASE2…] NP-CASE2 DERIVED ORDER (ambiguous)

Bruening's account treats Quantifier Raising (QR) as a feature-driven type of movement where Superiority prohibits the structurally lower object (for him, the Accusative object) from raising to its *v*P-adjoined position before the structurally higher one (the Dative QP object) does. Coupled with *Shortest Attract* or *Shortest Move* (Chomsky 1993, Richards 1997) it causes the (lower) direct object to cross paths with and tuck in right below the indirect object upon QR to *v*P. Admitting that QR in general is not obviously feature-driven, Bruening draws parallels between QR and object shift found in Germanic languages, which Chomsky (2001) analyzes as being feature driven by a formal P feature optionally present on the light verb *v*. Bruening exploits the observation that both object shift in Germanic languages and QR in English have interpretive effects and proposes that the P feature can be parameterized: in languages that allow object shift the P feature is employed to attract the object to *v*P while in English (and other languages that do not have object shift) it is parameterized so as to apply to Quantifier Phrases. Formulated this way, Bruening's account seems to make the prediction that no language that allows object shift will also allow feature-driven QR, thus predicting no Scope Freezing in configurations similar to the ones found in the English Double Object Construction and Russian scopally frozen ditransitives in such languages. However, as we show here, there is at least one language, Ukrainian, for which research on object shift is available, which allows both specificity-related object shift (Mykhaylyk and Ko 2008, Mykhaylyk 2009) as well as demonstrates Scope Freezing in ditransitives. In this paper we present novel data on scope in Ukrainian and argue that it provides important arguments against Bruening's conception of QR and the mechanism of deriving scope freezing. The example (2b) below, in which the Oblique object QP precedes the Accusative Theme object, exhibits the same surface scope freezing effect as that found with the English Double Object Construction and Russian (Group1) ditransitives:

(2) a. Marijka zabrala [jakus' igrašku] [u kožnoji dytyny]
Mary took.away [some toy](ACC) [PP at [every child](GEN)]
'Mary took away some toy from every child' **(∃ > ∀, ∀ > ∃)**

b. Marijka zabrala [u jakojis' dytyny] [kožnu igrašku]
Mary took.away [PP at [some child] (GEN)] [every toy](ACC)
'Mary took away from some child every toy' **(∃ > ∀, *∀ > ∃)**

c. Marijka [u jakojis' dytyny] zabrala [kožnu igrašku]
Mary [PP at [some child] (GEN)] took.away [every toy](ACC)
'Mary took away from some specific child every toy' **(∃ > ∀, *∀ > ∃)**

d. Marijka [u jakojis' dytyny] [kožnu igrašku] zabrala
Mary [PP at [some child] (GEN)] [every toy](ACC) took.away
'Mary took some specific child's every toy' **(∃ > ∀, *∀ > ∃)**

Subjecting the higher object phrase in (2b) to object shift does not change the resulting scope interpretation (2c); however, the raised object is now interpreted as *specific*, which makes it even

clearer that surface scope is the only interpretation possible for this sentence. Now, let us take a look at what happens when both object phrases are fronted to a position above the verb (2d). The interpretation for this sentence is one in which the child is known and there is a known set of toys such that Mary took every toy from the set away from that child. Again, the only scope available is wide scope for the higher QP. As may be expected given the close similarity between Russian and Ukrainian, the latter in fact shows the same subdivision of ditransitive predicates into the three Groups that Antonyuk (2015) identifies for Russian. Let us now take a look at what happens with Group 3 ditransitives in Ukrainian in the context of object shift. The first two sentences in (3) demonstrate the fact that both orders of QPs with the verb *podaruvaty* (to present/to gift) are scopally ambiguous. The second order, however, (the one where the Dative QP precedes the Accusative), shows rather strong preference for surface scope (to indicate this, the inverse scope is marked with a question mark), although the inverse scope is still available (as confirmed by additional syntactic tests suggested in Antonyuk (2015) for Russian).

(3) a. Marijka podaruvala [jakus' igrašku] [kožnij dytyni]
Mary presented [some toy] (ACC) [every child](DAT)
'Mary presented some toy to every child' **(∃ > ∀, ∀ > ∃)**

b. Marijka podaruvala [jakijs' dytyni] [kožnu igrašku]
Mary presented [some child] (DAT) [every toy](ACC)
'Mary presented some child with every toy' **(∃ > ∀, ?∀ > ∃)**

An interesting contrast arises once object shift is applied to the two objects in the (3b) sentence:

c. Marijka [jakijs' dytyni] podaruvala [kožnu igrašku]
Mary [some child] (DAT) presented [every toy] (ACC)
'Mary presented some (specific) child with every toy' **(∃ > ∀, ?∀ > ∃)**

d. Marijka [jakijs' dytyni] [kožnu igrašku] podaruvala
Mary [some child] (DAT) [every toy] (ACC) presented
'Mary presented some specific child with every toy' **(∃ > ∀)**
'For every toy, Mary presented it to some child in a set of children' **(∀ > ∃)**

As can be seen from the glosses, shifting the higher QP object to a preverbal position forces a specific indefinite reading of this object (3c); this, in turn, makes the wide scope for the shifted object a highly salient and strongly preferred interpretation, as may well be expected. However, when both objects are shifted as in (3d), the inverse scope not only reemerges, it becomes highly salient. In fact, it was sentence (3d) that helped us confirm that this predicate belongs to the scopally ambiguous (Group 3) ones, since, as mentioned above, the sentence in (3b) shows a rather strong preference for surface scope, initially suggesting it was a Group 1 predicate. Thus, it seems that object shift can be used as yet another diagnostic for judging available scopes in ditransitives in Ukrainian (and, arguably, Russian as well).

It appears then that the original formulation of the Superiority account of Scope Freezing given in Bruening (2001) needs to be reformulated to allow for the above cases: either the same P feature on *v* has to be allowed to regulate both object shift and Superiority-obeying QR, or more than one optional feature on little *v* (and arguably on other heads, to allow for optional instances of QR past *v*P-level) has to be posited. Either of these solutions appears to weaken the original proposal in Bruening (2001) as far as we can tell. Consider the former option. Following this solution appears to force us to say that the shifted object QP does not in fact undergo QR (and as such, the P feature only regulates object shift in this case) and QR thus piggybacks on object shift, getting a free ride, so to speak; however, this view also seems to force us to commit to saying that the lower, non-shifted object undergoes QR as regulated by this very same P feature on *v*. When both objects are shifted, QR gets a free ride on object shift in both instances of movement. We provide a range of novel scope data and show that the account of scope freezing offered in Antonyuk (2015) for Russian is able to explain the scope distribution in the three groups of Ukrainian ditransitives as well as the interaction between scope and specificity in (2-3).

AGREE-dependent A-movement in Russian Unaccusative and Raising Constructions

Theories of Russian word order take differing positions as to the nature of a diverse array of pre-verbal constituent(s). Two major positions are that a) there is a designated A-position (Spec,TP) that hosts a diverse array of arguments (Bailyn 2004; Lavine & Freidin 2002) or b) that only arguments that have agreed with T land in this A-position, with all others landing in a designated A-bar position (Slioussar 2011). In this talk we argue, based on contrasting evidence from Russian raising and unaccusative predicates, that A-movement (covert or overt) is predicated on the AGREE relation between a nominative argument and finite T.

The genitive argument of an unaccusative under negation (1) and the nominative argument of a nonfinite verb embedded under a raising predicate (2) may stay in situ (1a,2a) or raise to a position before the inflected verb (1b,2b).

(1) a. UNACCUSATIVE WITH GEN. OF NEG.
Zdes′ ne rastët gribov.
here NEG grow.3SG.N mushrooms.GEN

b. Gribov zdes′ ne rastët.
mushrooms.GEN here NEG grow.3SG.N
'No mushrooms grow here.

(2) a. RAISING PREDICATE WITH NOM. SUBJECT
Perestal Yasha stroit′ dom.
stop.3SG.M Yasha.NOM build.INF house. ACC

b. Yasha perestal stroit′ dom.
Yasha.NOM stop.3SG.M build.INF house.ACC
'Yasha stopped building the house.'

For both constructions, an overt movement option is clearly available. However, Potsdam & Polinsky (2011) demonstrate (contra Babyonyshev et al. 2001) that the genitive argument does not undergo covert A-movement when it stays in situ (1a). (It follows that its preverbal position in (1b) is due to A-bar movement.) We present novel evidence – from binding, control, and scope – that, in contrast to unaccusatives, covert A-movement does take place in raising constructions when the relevant argument remains in situ:

(3) a. COVERT MOVEMENT (UNACC GEN-NEG): $[_{TP}$ ~~DP~~ v $[_{VP}$ V DP]] ✗

b. NO MOVEMENT (UNACC GEN-NEG): $[_{TP}$ v $[_{VP}$ V DP]] ✓

(4) a. COVERT MOVEMENT (RAISING): $[_{TP}$ ~~DP~~ v V $[_{TP}$ DP . . .]] ✓

b. NO MOVEMENT (RAISING): $[_{TP}$ v V $[_{TP}$ DP . . .]] ✗

We argue that the source of the difference between covert raising possibilities for (1a) and (2a) comes from the AGREE relation between the target DP and T. In Russian, T agrees only with nominative DPs. In raising constructions with nominative arguments, T agrees with the embedded subject, forcing it to raise either covertly or overtly (via EPP). By contrast, with the unaccusative construction, the argument is marked with genitive case, and therefore T does not agree with it; this in turn prevents the argument from undergoing covert or overt A-movement. This hypothesis predicts that nominative arguments in raising constructions and in single-clause unaccusative constructions will undergo covert A-movement, whereas their non-nominative counterparts will not.

First, we show that, with in-situ arguments, expanded scope possibilities exist for the nominative arguments (in both unaccusative and raising constructions) (5a,6a), but not for non-nominative arguments (5b, 6b). This indicates a covert raising possibility for the former, but not the latter.

(5) IN-SITU ARGUMENTS OF UNACCUSATIVES

a. Na sobranii ne prisutstvovali vse sotrudniki.
At meeting NEG present.3PL all.NOM co-workers.NOM
'At the meeting, not all the co-workers were present.' (NEG≫ALL, ALL≫NEG)

b. Na sobranii ne prisutstvovalo vsex sotrudnikov.
At meeting NEG present.3SG.N all.GEN co-workers.GEN
'At the meeting, not all the co-workers were present.' (NEG≫ALL, *ALL≫NEG)
(Potsdam & Polinsky 2011)

(6) IN-SITU ARGUMENTS OF THE LOWER CLAUSE WITH RAISING PREDICATES

a. Ne mogut vse rešit′ zadaču iz ètogo učebnika.
NEG can.3PL all solve.INF problem from this.GEN textbook.GEN
'Not everyone can solve a problem from this textbook.' (ALL≫NEG)
'It is not possible for everyone to solve a problem from this textbook.' (NEG≫ALL)

b. Ne možet vsem rabotat′sja lučše.
NEG can.3SG.N all.DAT work.INF.REFL better
'It is not possible for everyone to work better.' (NEG≫ALL, *ALL≫NEG)

Second, evidence from binding confirms the pattern: if the subject-oriented reflexive *svoj* is c-commanded by a covertly moved DP but not by the DP's lower position, it is predicted to be grammatical under a covert A-movement analysis but not under the non-movement analysis. *Svoj* in the matrix clause is permitted only in cases where the relevant argument is nominative (7a,8a)—in our terms, it has covertly moved to a position where it may c-command *svoj*. In contrast, this is impossible with non-nominative arguments (7b,8b).

(7) IN-SITU ARGUMENTS OF UNACCUSATIVES

a. V svoëm dome ne byli ubity mal′čiki.
in self's house NEG was.3PL killed boys.NOM
'The boys were not killed in their own house.'

b. *V svoëm dome ne bylo ni odnogo ubitogo mal′čika.
in self's house NEG was.3SG.N not one.GEN killed.GEN boy.GEN

(8) IN-SITU ARGUMENTS OF THE LOWER CLAUSE WITH RAISING PREDICATES

a. Nesmotrja na svoj preklonnyj vozrast, ne perestaval on rasskazyvat′ o sobytijax
notwithstanding on self's late age NEG stop.3SG.M he tell.INF about events
ètogo dnja.
of.that day
'Notwithstanding his old age, he did not stop telling about the events of that day.'

b. *Nesmotrja na svoj preklonnyj vozrast, ne perestavalo emu rabotat′sha lučše.
notwithstanding on self's late age NEG stop.3SG.N him.DAT work.INF.REFL better

The in-situ subject in raising constructions is truly inside the embedded clause: a temporal adverb placed just after the raising predicate and before the in situ subject gets both a matrix and, crucially, an embedded interpretation (9).

(9) Ruki perestal četryre raza pordrjad on myt′.
hands.ACC stop.3SG.M four times in-row he.NOM wash.INF
'He stopped washing his hands four times.' (both matrix and embedded modification)

This analysis bears on debates concerning the landing site of preverbal non-nominative arguments in Russian, and on the nature of the EPP crosslinguistically. Bailyn (2004) and Lavine & Freidin (2002) argue that some word orders in Russian involving pre-verbal non-nominative arguments are due to an EPP requirement that allows an argument of any case to move to the specifier of TP. On our analysis, the only elements that can raise to the specifier of TP are elements that enter into an AGREE relation with T. Because T agrees only with nominative arguments, it follows that non-nominative arguments that appear in first position are not raised to the specifier of TP but instead occupy another position.

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"Oh, Very Strange!" - the "right" analysis of the Russian OVS construction

The Russian OVS construction, illustrated in (1), presents significant challenges to derivational accounts of free word order in Russian and other Slavic languages.

1) a. *Voinu i Mir* napisal Tolstoj OVS
[*War and Peace*]$_{ACC}$ wrote Tolstoy$_{NOM}$
"Tolstoy wrote War and Peace"

b. Čeloveka ukusila bešenaja lisa. OVS
Person$_{ACC}$ bit [rabid fox]$_{NOM}$
"A person was bitten by a rabid fox." (ex from Slioussar 2011)

Various analyses of OVS exist, with sharp disagreements in the literature over judgments and derivation. Existing analyses seem to share only the assumption that SVO is the underlying order, but differ strongly in derived positions proposed for the Object (O) and the Subject (S) (as well as the Verb (V), though there is more consensus on this issue). Unfortunately, all existing analyses suffer from straightforward empirical challenges. In this paper, we review and reject (aspects of) all existing analyses, and present an alternative that combines the positive findings of various previous approaches. In particular, we account for the extensive differences between OVS and OSV sentences**,** and provide a derivation of OVS that does not require overt V→T movement or syntactically under-motivated discourse-driven movements.

On the issue of how to derive OVS from SVO, various options have been proposed:

2) Proposed derivational accounts of SVO → OSV:
a. S in situ; raise V above S, front O (to either SpecT or left periphery) (Bailyn 2004)
b. Move S out of *v*P, raise remnant *v*P above it, stranding S
(i) O moves to left periphery late in derivation (Erechko 2003, Slioussar 2011)
(ii) O moves to edge of VP before remnant movement (Bailyn 2008, 2012)
c. O fronts (either to SpecT or L-periphery); S is right adjoined/base-generated (this paper)

The problem with (2a) is that Russian does not exhibit the effects of overt V movement, as shown convincingly in Erechko 2003, Kallestinova & Slabakova 2008, Slioussar 2011, Bailyn 2012, a.o., based on adverb tests and others. (Even Bailyn (2008, 2012) abandoned the V-raising component of his 2004 analysis.) We will therefore assume that V raising above S is not an option in the derivation of OVS.

What are the options for OVS derivation if there is no V→T raising? Either a constituent containing [O+V] fronts over S (this characterizes the other existing analyses of Russian OVS in (2b)), or the subject moves rightward (or is base-generated there). In this paper, we pursue the latter option, which is not attested in the literature on Russian as far as we know (although Slioussar (2011) hints that something like this might be an alternative to (2b), but does not give any details). We demonstrate how (2c) might work after showing the other alternatives face major empirical and theoretical challenges.

The primary problem with analyses of type (2b) (involving V-contained remnant/constituent movement over S), is that they all argue against any A-properties for the initial O element. Thus, Slioussar argues that the S is always in EPP position, and the O is always in A'-position and that for binding, OVS and OSV constructions behave identically, the latter generally being considered a standard Topicalizatin construction of the kind found in English as well. In fact, however, OSV and OVS constructions differ in systematic and significant ways, as other previous literature has identified (Babyonyshev 1996, Lavine & Freiden 1998, Bailyn 2004, Antonyuk 2015, Ionin & Luchkina 2015 etc). A partial list of OVS vs. OSV distinctions is given in (3) and examples of Weak Crossover and binding are given in (4) and (5) respectively (co-indexation indicate by boldface)

3) OVS vs OSV differences: (PP and impersonals included as sub-types of OVS here)

	WCO	O can bind (into) S	Inverse scope	Principle B	neutral intonation
OVS	obviated	yes	yes	obviated	available
OSV	*	no	no	*	unavailable

4) a. *__Kogo__ [__ego__ druz'ja] ljubjat ?
__Who__$_{ACC}$ [__his__ friends]$_{NOM}$ love
'Who do his friends love?" (OSC: WCO)

b. __Kogo__ ljubjat [__ego__ druz'ja]?
__Who__$_{ACC}$ love [__his__ friends]$_{NOM}$
'Who is loved by his friends?' (OVS: no WCO)

5) __Direktora__ obyčno otvlekajut tol'ko [__svoi__ podčinennye]
__director__$_{ACC}$ usually distract only [__self's__ subordinates]
"The director is usually distracted only by his [self's] subordinates." (ex from Antonyuk 2015)

Any account of type (2bi), such as Slioussar 2011, therefore cannot be maintained, since it proposes identical positions for O in OVS and O in OSV, and for S in all constructions. So (2b-i) is out. (2b-ii) is also ruled out by the fact of all the A properties of the object, which cannot be derived if O does not land in a c-commanding A-position at some point in the derivation. For example, Bailyn 2012 loses the A-position advantages of Bailyn 2004 by abandoning Object raising into SpecT in favor of *v*P fronting, a problem shared by Erechko 2003, following Belletti 1999. The paradox is clear – we need an analysis that accounts for A properties of the fronted object and yet does not derive post-verbal subject through V raising. The only conceptual possibility remaining, other than multiplying left-edge A-positions (see Williams 2006 for such an approach), involves rightward movement or rightward generation of the subject, in the sprit of proposals for Romance post-verbal subjects such as Belletti 1999.

Furthermore, there is evidence that remnant vP raising over S is not the right analysis for Russian OVS. If vP fronting is the right analysis, TP-level right adjoined material such as high adverbials or Instrumental secondary predicate adjuncts (shown in (6)), should be able to survive the VP movement.

6) *Boris uvidel Natašu sčastlivoj p'janym včera
Boris$_{NOM}$ saw Natasha$_{ACC}$ happy$_{INSTR-F}$ drunk$_{INSTR-M}$ yesterday
"Boris saw Natasha happy drunk yesterday."

In (6), gender distinctions mandate that the closer Instr phrase ('happy') is controlled by the object Natasha, whereas the farther one ('drunk'), is controlled by Boris. The opposite order is impossible. This shows that hierarchical relations are involved and that Instr secondary predicates attach at various positions, as other adjuncts do (se Madariaga 2006 for an analysis). A possible structure is given in (7):

7) $[_{TP}[_{TP}$ Boris$_j$ $[_{VP}[_{VP}$ found Natasha$_i$ $_{VP}]$ [PRO$_i$ happy] $_{VP}]$ [PRO$_j$ drunk] $_{TP}]$ yesterday $_{TP}]$

However, as seen in (8a,b), in OVS constructions, these elements cannot be stranded, which we would expect they could after vP fronting (we omit 'happy' here because its exact position in derived structure depends on the order of fronting operations and is not relevant to the issue at hand).

8) a. * Natašu uvidel **Boris** **p'janym**
Natasha$_{ACC}$ saw **Boris**$_{NOM}$ **drunk**$_{INSTR-M}$
"Natasha was seen by Boris drunk."

b. * Natašu uvidel Boris včera
Natasha$_{ACC}$ saw Boris$_{NOM}$ yesterday
"Natasha was seen by Boris yesterday."

And indeed, as Erechko 2003 observes, "in sentences with inversion, the subject of the sentence must be final." This implicates either right adjunction or right base-generation of the subject in such constructions. In conclusion, we show how our approach can account for absence of OVS in English.

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The role of markedness in aspectual mismatch detection in Polish. Evidence from ERP experiments.

Goal and data: This study contributes to a line of psycholinguistic research related to aspectual mismatch detection during online processing (see Pickering et al. 2006, Pinango et al. 1999, Pinango et al. 2006, Todorova et al. 2000, Brennan and Pylkkanen 2010 and Bott 2010). We conducted two related Event Related Potentials (ERP) experiments (Experiment A and B) focusing on how the brain reacts online when it detects the following aspectual mismatches in Polish (a language in which every verb is obligatorily marked either for perfective or imperfective grammatical aspect):

Experiment A

Mismatch 1

(1)	**# Przez minutę**	cichutko	**otworzył**		**zamek,**	**żeby ...**
	For a minute	quietly	opened.3sg-**perf**	lock		in order to ...
(2)	**W minutę**	cichutko	**otworzył**	**zamek,**	**żeby ...**	
	In a minute	quietly	opened.3sg-**perf**	lock	in order to	

Mismatch 2

(3)	**# W minutę**	cichutko	**otwierał**	**zamek,**	**żeby ...**	
	In a minute	quietly	opened.3sg-**impf**	lock	in order to	
(4)	**Przez minutę**	cichutko	**otwierał**	**zamek,**	**żeby ...**	
	For a minute	quietly	opened.3sg-**impf**	lock	in order to ...	

Experiment B

Mismatch 1

(5)	**#Cichutko**	**otworzył**	**zamek**	**przez minutę,**	**żeby ...**
	quietly	opened.3sg-**perf**	lock	for a minute	in order to
(6)	**Cichutko**	**otworzył**	**zamek**	**w minutę,**	**żeby …**
	quietly	opened.3sg-**perf**	lock	in a minute	in order to

Mismatch 2

(7)	**# Cichutko**	**otwierał**	**zamek**	**w minutę,**	**żeby ...**
	quietly	opened.3sg-**impf**	lock I	n a minute	in order to
(8)	**Cichutko**	**otwierał**	**zamek**	**przez minutę,**	**żeby ...**
	quietly	opened.3sg-**impf**	lock	for a minute	in order to.

Experiments A and B are identical except for the positioning of temporal adverbials. In (1) and (5) in contrast to (2) and (6), V-perf 'otworzył' focuses on the end point of the event hence it is incompatible with 'for-X time' durative adverbials which modify durative eventualities. In (3) and (7) in contrast to (4) and (8), V-impf 'otwierał' denotes a durative eventuality hence it is incompatible with end point adverbial modification 'in-X time' which typically modifies terminated eventualities by specifying how much time it took for the eventuality to reach the end point. In Experiment 1A the ERPs were elicited for the verb and its complement whereas in Experiment B the ERPs were elicited for the adverbial and a word following it.

Research questions, hypotheses and competing predictions: **Question 1:** Will the strength of ERPs elicited for the mismatching contexts in both experiments be the different for perfective and imperfective aspect? Under the markedness view, the marked element (perfective aspect) announces the existence of meaning A, while its unmarked counterpart (imperfective aspect in Polish) does not announce the existence of A. Under the strictly compositional view, both perfective and imperfective aspects have a specific compositional meaning, i.e., perfective aspect has meaning A and imperfective aspect has meaning B. This boils down to two competing predictions in our experiments. **Prediction 1:** According to the strictly compositional semantic accounts, we expect comparable reactions to those mismatches for both perfective and imperfective aspect, as they should be both equally difficult to integrate in the compositional semantic sense. **Prediction 2:** According to the markedness approach, we expect no or attenuated effects for the imperfective aspect as compared to the effects obtained in response to perfective aspect in mismatching contexts, as we expect imperfective aspect to be semantically underspecified. **Question 2:** What is the domain over which the parser interprets aspect. Is it VP or V? There are two competing theories related to this question. In theoretical linguistics, Rothstein (2015) postulates that in Russian and Polish perfective and imperfective aspect are V-level operators whereas in English PROG is a VP level operator. Similarly, in psycholinguistics Bott and Hamm (2014) claim that if a language

[has/does not have] the grammatical means to express an aspectual distinction, the processor [does/does not] immediately commit to an aspectual interpretation. The opposite view is postulated by Husband and Stockall (2014), who claim that since the grammar requires a complete VP to trigger the derivation of AspP, the parser immediately commits to an aspectual interpretation upon completion of the VP constituent, but not before as this would violate the dictates of the grammar. Even in the face of a verb with unambiguous event semantics, the parser should delay commitment to an aspectual interpretation until it has processed the full VP. This dispute brings us to two competing predictions in our experiments. **Prediction 1:** If aspectual interpretation is determined at the level of AspP (when VP is formed), we expect an integration problem to show up later on the complement of a verb. Prediction 2: If aspectual interpretation is determined at the level of V, we expect an integration problem in mismatching contexts to be manifested on the verb.

Experiment description: EEG data were recorded for 28 monolingual Polish students. The experiment consisted of 160 experimental sentences and 160 fillers. Probe detection questions were used to control the level of attention. Fillers consisted of complex sentences with subordinate clauses similar to the ones used in the experimental sentences. Half of the fillers had different kinds of aspectual violations and the second half of the fillers contained well-formed sentences. **S**entences were randomly presented, distributed over 5 blocks. No two sentences with the same beginnings could be presented in a sequence and no more than two sentences from the same condition could be presented in a sequence. Sentences were presented in segments (rapid serial visual presentation) Segments appeared in the center of the screen for 500 ms per segment. 5 regions of interest (ROIs) were defined left-posterior ROI, right-posterior ROI, right-anterior ROI, left-anterior ROI and midline ROI.

Results: Answer to **Question 1**: In both experiments, we elicited statistically significant effects only for the mismatches with perfective aspect (LAN in experiment A and P300 in experiment B). No ERPs were elicited even in the visual inspection for the mismatches with the imperfective aspect, which speaks in favor of the markedness approach to aspect, where only perfective aspect has a specific semantics and imperfective aspect is semantically underspecified. Why were different components elicited for analogous mismatches in the two experiments depending on the positioning of the mismatching adverbial? As stated in Bott 2010:202, LAN indexes the impossibility to attach a new item to the syntactic representation of a sentence. Our account is then that in mismatching contexts of the type presented in (1) in contrast to (2), we elicited LAN because the adverbial is projected inside VP first and then when AspP is generated above it, it is difficult to compute (attach) perfective aspect there as it has its specific semantic requirements incompatible with the requirements of the durative adverbial already attached inside VP. Why P300 in the mismatch shown in (5) compared to (6)? Our very preliminary account is that up to the point of an adverbial 'for a minute' the VP is formed and AspP projected above it. When we encounter a mismatch the parser 'is confused' because the adverbial does not meet the requirements of the perfective aspect and probably it compares the mismatching adverbial with its more suitable 'in x time' option, which results in this binary categorization, which according to Bornkessel-Schlesewsky and Schlesewsky (2008) elicits P300. Answer to **Question 2**: The effect we elicited showed up on the complement, which may indicate that aspect is computed after the whole VP is formed. This is in line with the view of Husband and Stockall (2014), who claim that the grammar wants the whole VP to be formed for the AspP to be generated in syntax. It may also be the case that semantic integration is delayed. But in experiment B the effect was elicited on the adverbial and not on the following word. This makes it more likely that Husband and Stockall are right in that we first have to build a full VP for the AspP to be projectable.

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Case Marking in Russian Eventive Nominalizations: Inherent vs. Dependent Case Theory

Two case theories are currently competing in syntactic literature: Inherent Case Theory (ICT) and Dependent Case Theory (DCT). According to the former theory (cf. Woolford 1997, 2006, *inter alia*), case represents a relation between a noun phrase and some verbal head (e.g. *v*, T, or C); in contrast, DCT takes case to be a relationship between two noun phrases in some defined domain (cf. Marantz 1991, Baker 2015, Baker and Bobaljik 2015). Evidence for or against those theories has typically been drawn from ergative languages, such as Basque, Shipibo, or Chukchi, or from quirky subjects in languages like Icelandic. In this paper, we shed new light on this debate by bringing in experimental and corpus data from Russian, a language which, although not ergative in the clausal domain, exhibits an ergative-style alignment in eventive nominalizations: objects of transitives and subjects of intransitives are marked GEN, and the subjects of transitives are marked INSTR; cf. (1). We examine the predictions of both ICT and DCT and show that neither theory, as currently defined, can account for all of the Russian data.

Structures and Predictions. In this paper, we focus on two types of nominalizations for which ICT and DCT make distinct predictions: (a) unergative and (b) agentive transitive nominalizations whose internal argument is marked with lexical case (henceforth, transitive+lexical). In both types of nominalizations, the argument in question is assigned Agent θ-role but it does not find itself in the same case domain with a case-less noun phrase (in particular, in transitive+lexical structures the internal argument is rendered invisible by the assignment of lexical case). According to the ICT, the external argument here is expected to be marked with "inherent" case, i.e. INSTR. In contrast, since the DCT takes INSTR as "dependent" on a presence of a case-less DP (which is later assigned the "unmarked" GEN), it predicts that in the absence of an "unmarked" GEN on internal argument, the external argument would itself be GEN. As shown in (2), examples reported in previous literature appear to support the DCT. However, as our newly collected experimental and corpus data shows, empirical facts are more complex than was noted in previous literature.

New data. In order to test the predictions of ICT and DCT more fully, we have collected qualitative corpus data (from both the National corpus of Russian and the internet) and quantitative data from a survey of over 120 native speakers. Both sets of data show that the GEN marking, as in (2), is not the only option, with INSTR being a frequent alternative; cf. (3). Such data offers some support for the ICT. Moreover, our experimental study further shows that:

1. there is interspeaker variation, with the overwhelming majority of speakers (99.2%) using INSTR in **some** of the relevant examples, and none of them consistently using INSTR in **all** the examples;
2. approximately 30% of speakers used INSTR in transitive+lexical only when the internal argument is assigned lexical GEN, seemingly to avoid two GEN arguments (cf. Babby 1997);
3. the aspectual properties of the verbal stem (dynamic vs. static) play a role in determining the frequency of INSTR: it was used with dynamic verb stems in 18.25% of the tokens, and with static verb stems in 57.2% of the tokens;
4. virtually all examples of INSTR were found in transitive+lexical (as in (3c-d)); only one token of INSTR with unergatives (cf. (3b)).

These findings challenge both the ICT and the DCT. First, the inconsistency across speakers and the co-existence in the grammars of individual speakers of DCT- and ICT-based structures (as in (2) and (3), respectively) need to be accounted for. Second, our experimental data suggests that there is a contrast between unergative and transitive+lexical structures; moreover, all the examples of unergatives with INSTR collected from corpora contain an adverbial PP of some sort (cf. (3a)). Our second experimental study, currently underway, tests whether this generalization over corpora corresponds to speaker intuitions and probes deeper into the other issues mentioned above.

(1) a. razrušenie goroda vragom
destruction city.GEN enemy.INSTR
'destruction of the city by the enemy'

b. vymiranie jazykov
dying languages.GEN
'dying out of languages'

(2) a. plavanie životnyx
swimming animals.**GEN**
'swimming of animals'

b. torgovlja angličan opiumom
trading the.British.**GEN** opium.INSTR
'trading in opium by the British'

(3) unergatives:

a. xoždenie imi v ježednevno stirannyx ženoj noskax
walking.around they.**INSTR** in daily laudered wife.INSTR socks
'their walking around in socks daily washed by the wife' [Google hit]

b. ježednevnoe plavanie deduškoj
everyday swimming grandpa.**INSTR**
'swimming by grandpa' [experimental response]

transitive+lexical:

c. torgovlja angličanami opiumom
trading the.British.**INSTR** opium.INSTR
'trading in opium by the British' [Google hit]

d. kasanie sportsmenom setki
touching athlete.**INSTR** net.GEN
'touching of the net by the athlete' [Google hit; note: the GEN here is lexical]

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Inconspicuous unfaithfulness in Slovenian

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Typological studies are always theory-driven. Our current knowledge is strongly inspired by rule-based phonemic theory, which led us to data about phoneme inventories and rules (especially stress rules) from thousands of languages around the world. In contrast, there are no large-scale studies of the faithfulness-based predictions that are unique to Optimality Theory (Prince & Smolensky 1993), such as the effects that are predicted by positing faithfulness constraints that are specific to stressed syllables.

Constraints that protect stressed syllables predict, with the right ranking, that a language might shift stress away from its default position in order to violate faithfulness less conspicuously (the Beckman-Noyer pathology, Beckman 1998). Arguing that this particular pattern is pathological, McCarthy (2007, 2010) and Jesney (2011) suggest amendments that prevent the possibility of stress shift. Yet we show that this is exactly what Slovenian does.

Slovenian eliminates the lax mid vowels [ɛ, ɔ] from inflected nouns by tensing them, and to do so less conspicuously, it shift stress away from the unfaithful vowel. Lax mid vowels are generally allowed only in the nominative, e.g. [ˈjɛzik] 'language.NOM'. In the genitive, [ɛ] is tensed to [e], and to make the change less conspicuous, the stress is shifted away from the unfaithful vowel, i.e. [jeˈzika] 'language.GEN', *[ˈjezika]. Tense vowels allow stress to stay in place, as in [ˈsʊɐɾ ~ ˈsʊɐra] 'north.NOM~GEN'. A large-scale nonce word study with 145 native speakers confirms the productivity of the pattern, e.g. nonce [ˈxɔʒad ~ xoˈʒada] is significantly more acceptable than [ˈxoʒad ~ xoˈʒada].

We take the opportunity to survey further positional faithfulness effects in Slovenian and beyond, and explore amendments to the McCarthy-Jesney approach that might rule Slovenian in while ruling out even less plausible languages.

Deriving Multiple Left Branch Extraction

This paper provides an analysis of Serbo-Croatian (SC) cases like (1), which involve multiple Left Branch Extraction (LBE), where more than one left branch (LB) element has been extracted out of NP.

(1)a. *Onu/svoju/čiju*$_k$ je Ivan *staru*$_i$ prodao [$_{NP}$ t_k t_i kuću].
that/self's/whose is Ivan old sold house
'Ivan sold that old house./Ivan sold his old house./Whose old house did Ivan sell?'

b. *Jedan*$_k$ je to *strašno*$_i$ bio [$_{NP}$ t_k [$_{AdjP}$ t_i težak] zadatak]
one is that frightfully been difficult task
'That was one frightfully difficult task (a very difficult task).'

It argues that syntax provides two ways of deriving multiple LBE. In addition to Bošković's (2014, to appear) proposal that multiple left branch (LB) elements target multiple Specs of the same head, examples like (1) show that they can also target different projections. However, one problem with cases like (1) is that they involve a violation of the Phase Impenetrability Condition (PIC), as explained below, and, therefore, seem to pose challenges to current locality-of-movement theories. I argue that such cases can, nevertheless, be felicitously derived by repairing the PIC violation by copy deletion at PF (see Bošković 2011, 2013, 2014, among others). I also show that they provide evidence for Bošković's (2014, to appear (t.a.)) contextual approach to phasal edgehood determination.

Bošković (2014, t.a.) notes an ordering constraint on multiple LBE, illustrated in (2): Extracting multiple AdjPs from the left edge of NP is ok, as long as the original order of AdjPs is preserved:

(2)a. *Onu*$_k$ *staru*$_i$ je prodao [$_{NP}$ t_k t_i kuću]. b. **Staru*$_i$ *onu*$_k$ je prodao [$_{NP}$ t_k t_i kuću].
that old is sold house old that is sold house
'He sold that old house.'

Bošković takes this contrast as a piece of evidence for the contextual approach to phasal edgehood, where whether SpecXP counts as the edge of a phase depends on whether X has other Specs. Only the outmost Spec counts as the edge. Furthermore, moving the outmost Spec away can affect the edge status of the remaining Specs, allowing the remaining outmost one to count as the phasal edge. According to Bošković, given that LBE is not subject to Closest Attract, multiple LBE in (2a) follows from this system. In order for both elements to be able to move out of the NP phase, the outmost Spec (*onu*) must move first. This leaves the initially lower Spec (*staru)* on the edge of the phase, which then also becomes accessible for movement. According to Bošković, the ordering restriction is obtained because *staru* undergoes Richards (2001)-style tucking-in below *onu*. *Onu* and *staru* thus move to multiple Specs of the same head, which is confirmed by the fact that second position clitics can follow them. However, in cases like (1a), elements intervene between the extracted AdjPs, indicating that they do not have to be in the same projection. I will refer to examples like (1) as *splitting* and to cases like (2) as *tucking-in*.

One problem with (1a) is that the linear order of AdjPs is unexpected given that it involves a violation of PIC. It entails that *staru* must have moved out of NP first, crossing the outmost Spec *onu* and violating PIC, with a later movement of *onu* to a higher projection. So, the question is why this order is grammatical. I argue that even though such examples look like problems, they actually provide evidence for Bošković's contextual determination of phasal edges, as well as evidence that PIC violations can be rescued by copy deletion at PF. The first thing to note is that (1a) should be as bad as (3), where *onu* remains in situ, and *staru* moves over it in clear violation of PIC.

(3)a. *Ivan je *staru*$_i$ prodao [$_{NP}$ onu t_i kuću] b. ?**Staru*$_i$ je Ivan prodao [$_{NP}$ onu t_i kuću]
Ivan is old sold that house old is Ivan sold that house

The contrast between (1a) and (3), therefore, shows that *staru* can move over the higher Spec *onu* only if *onu* undergoes movement. I argue that this is crucial to explaining the contrast, because the movement of *onu* allows the crossed edge to be turned into a copy. Bošković (2011, 2014, t.a.) argues that certain types of violations, including PIC violations, can be rescued by copy deletion at PF by extending Ross's (1969) rescue-by-PF-deletion account of island amelioration under sluicing to PF copy deletion. I show that examples like (1a) provide evidence for a particular instantiation of the rescue-by-copy-deletion-at-PF account. Following a suggestion by A. Talić, Bošković (2014, t.a.) proposes that in multiple edge cases, when an element moves out of a phase XP in violation of PIC, a * is placed on the outmost edge (Spec).

If the Spec is turned into a copy, once copy deletion applies at PF, the * is deleted together with the copy, and the violation is repaired. Given this, the derivation of examples like (1a) proceeds as follows:

(4)a. staru$_i$…[$_{NP}$ onu*..staru$_i$] b. onu$_k$…staru$_i$..[$_{NP}$ onu$_k$* staru$_i$] c. onu$_k$…staru$_i$..[$_{NP}$ onu$_k$…staru$_i$]

In narrow syntax, (4a), *staru* moves over the outmost Spec *onu* out of the NP phase in violation of PIC. *Onu* is marked with a *. *Onu* then undergoes movement over *staru* to a higher projection, leaving a copy with a * on it, (4b). At PF in (4c), the copy of *onu* with the * is deleted, and the derivation is rescued. One question, though, is why after *staru* moves over *onu* in (4a), *onu* cannot tuck in under *staru*. As (2b) shows, this order is ungrammatical, so we have to make sure that the rescue-by-PF-deletion mechanism does not allow it to be ruled in. I propose that part of the answer to this question lies in the type of feature that is checked under tucking-in and splitting. Since the LB elements in (1a) move to different projections, it is reasonable to assume that they have distinct features to check. In tucking-in cases like (2a), they check the same feature. Thus, if they are given distinct features in (4), *onu* cannot tuck in under *staru*, given that it has no feature to check in that projection. It can only move to another projection. However, the crucial questions is why *onu* cannot tuck in below *staru*, when they are both given the same feature. I propose that in tucking-in cases, the feature that is checked by both elements has Hiraiwa's (2001) [+multiple] property, causing it to undergo a Multiple Agree/Move operation with all elements that have it, simultaneously attracting all of them. As Hiraiwa (2001) points out this is 'a *single* simultaneous operation that merges multiple goals without any countercyclic merger and therefore a c-command relation between the goals cannot be changed'. Thus, once the head with this feature is introduced into the structure, it will simultaneously attract both elements out of NP, and once it does, their order cannot be changed. Since in this case there is no chance for *staru* to ever move over *onu*, the rescue-by-PF deletion is not relevant in this respect. So, we have the right cut: the mechanism helps with LB element reordering when the LB elements have distinct features, but not the same feature.

The proposed analysis predicts that the order of extracted LB elements is freer under splitting than under tucking in. Cases like (5) confirm this prediction.

(5)a. *Staru$_k$* je Ivan *onu$_i$* prodao [t$_i$ t$_k$ kuću] (ne novu).
old is Ivan that sold house not new 'Ivan sold that old house (not that new one).'

This sentence is felicitous in the context where *staru* is foregrounded or contrastively focused, while *onu* is not. Crucially, as the contrast between (5) and (3) shows, *staru* can occur higher than *onu*, only if *onu* undergoes movement. In (5), where *onu* and *staru* have different features, *onu* moves first. Its movement leaves *staru* at the edge of the NP phase, which can, then, move out of it to a higher projection. The analysis also predicts that cases like (1b), which involve LBE of an AdjP modifying a noun, and an AdvP, which is a left branch of another AdjP modifying the same noun, should be grammatical, and they are. First, Talić (to appear) shows that the extraction of AdvP out of AdjP headed by short adjectival forms in SC is possible, as in (6):

(6) *Strašno$_i$* je to bio [$_{NP}$ [$_{AdJP}$ t$_i$ težak] zadatak].
frightfully is that been difficult task 'That was a frightfully difficult task.'

This means that the leftmost Spec embedded in the topmost edge (AdjP) of the NP phase also counts as the edge of the phase for the purposes of PIC. Since this Spec is accessible for movement, then under the proposed analysis, multiple LBE in (1b) that affects the AdjP *jedan* and the AdvP *strašno* (the outmost Spec of the AdjP *težak*) is not a surprise. Note that (1b) is a split pattern just as (1a), and thus, it involves rescuing a PIC violation by copy deletion at PF. While (1b) shows that splitting is possible with this type of multiple LBE, how about tucking-in? Interestingly, some speakers find it more difficult than examples where two AdjPs are tucked in. They find a contrast between tucking-in cases like (7a) and split cases like (1b) on one hand, and between (7a) and (7b) on the other. Other speakers do not find (7a) as degraded.

(7)a. ??*Jedan$_i$ strašno$_k$* je to bio [t$_i$ [t$_k$ težak] zadatak] b. *Jedan$_i$ strašan$_k$* je to bio [t$_i$ t$_k$ zadatak]
one frightfully is that been difficult task One frightful is that been task
'That was one frightfully difficult task.' 'That was one frightful task.'

Apart from considering the reason for this, I also discuss several other multiple LBE patterns that the analysis makes predictions about. In sum, split patterns with multiple LBE are possible, and they can provide interesting insights into the nature of LBE and locality of movement.

Focus Trigger and Sluicing in Embedded Yes/No Questions: Evidence from Russian

Sluicing is a type of ellipsis, first mentioned in [Ross, 1969], that can be found in wh-questions and illustrated by the following examples:

(1) Someone came, but I don't know who ~~came~~.
(2) She was reading, but I couldn't see what ~~she was reading~~.

The most comprehensive works on the topic are [Merchant, 2001]; [Merchant & Simpson, 2012]. However Russian shows a similar kind of ellipsis in indirect yes/no questions (further referred to as YNE – yes/no ellipsis) which has been mostly neglected in the literature (only mentioned in [Grebenyova, 2007]; [Erschler, 2015]). YNE can be found in the following sentences:

(3) Kto-to prišel, no ja ne znaju, [Petja li] ~~prišel~~.
Someone.NOM came, but I NEG know Peter.NOM whether came
"Someone came, but I don't know whether it was Peter".
(4) Ona čto-to čitaet, no ja ne znaju, [knigu li] ~~čitaet~~.
She something.ACC reads but I NEG know book.ACC whether reads
"She is reading something, but I don't know whether it is a book."

YNE shares a lot of distributional and syntactic characteristics with sluicing. For convenience, I will call the bracketed constituents in examples 3 and 4 YNE-sluices:

- No overt syntactic material of the embedded clause other than the YNE-sluice is permitted to survive ellipsis:

(5) *Someone came, but I don't know who yesterday.
(6) *Kto-to prišel, no ja ne znaju, Petya li včera.
Someone.NOM came, but I NEG know Peter.NOM whether yesterday.

- YNE can alleviate ungrammaticality of sentences with island violations. 7 and 8 are examples of Coordinate Structure Constraint violation:

(7) She brought a letter and something else. I don't know, what ~~she brought a letter and~~ _.
(8) On prinesla pis'mo i što-to ješče. Ne znaju, ručku li ~~ona prinesla pis'mo i~~ __.
She brought letter and smth else NEG know pen whether.
"She brought a letter and something else. I don't know whether it was a pen."

- YNE-sluice is case-marked by the elided verb in the embedded question; case-marking by the matrix predicate is forbidden. In example 8, the adjective *dovolen* "satisfied" assigns instrumental, while the verb *znaju* "know" assigns accusative:

(9) Peter is dissatisfied with someone, but I don't know who with /*who.(ACC).
(10) Petja dovolen kem-to, no ja ne znaju, Vasej /*Vasju li.
Peter satisfied smn.INSTR but I NEG know Vasya.INSTR /*Vasya.ACC whether
"Peter is satisfied with someone, but I don't know, whether it is with Vasya that he is satisfied".

Further comparison of YNE with sluicing has shown that these phenomena are two different kinds of the same type of ellipsis. At first glance, it would seem impossible, due to the fact that the classical sluicing analysis by [Merchant, 2001] presupposes a null C^0 as one of the licensing conditions, while in YNE C^0 is obviously occupied by the complementizer *li*.

Hence, I propose a unified analysis involving Foc^0 with a [+FOCUS] feature instead of C^0 as a licensing head for sluicing in general, see 11. This is in the vein of a number of proposals to use [+FOCUS] feature as the sluicing trigger, see [Ince, 2012] for Turkish; [Grebenyova, 2007] for Russian; [Erschler, 2015] for Georgian.

(11) [$_{CP}$ Spec $_{C'}$[C^0[+Q] $_{FocP}$[Spec $_{F'}$[F^0[+FOC] ~~IP~~]]]]

On the one hand, there are numerous works claiming that wh-words occupy the SpecFocP position, while Foc^0 in most languages is overtly silent, see, e.g., [Stepanov and Georgopoulos, 1997]; [Haida, 2007: 205]. Thus, wh-words always carry a focus-feature. If they don't, their meaning changes to a non-specific pronoun:

(12) $Wer_{focused}$ mag $was_{unfocused}$? [German]
Who wants what?
"Who wants **something**? *Who wants what?"

On the other hand, [Franks & King, 2000] propose that the Russian LI-complementizer doesn't c-select an IP but a FocP. That *li* is indeed a focus-sensitive operator, can be shown, e.g., by its incompatibility with non-specific pronouns:

(13) *Kto-nibud' li prišel?
Someone whether came?
"Did anybody come?"

Thus, both classical sluicing and YNE fit in the structure in 11 and adhere to the new unified licensing conditions with [+FOCUS] being the trigger-feature and Foc^0 the licensing head.

On the basis of this assumption a typological prediction has been formulated that whenever the indirect yes/no question marker is focus-sensitive in a language, the YNE should be possible. This prediction is borne out, as three languages, namely Japanese, Bulgarian and Turkish, have a focus-sensitive y/n-question marker and YNE is possible.

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Re-entering a state: case for *obratno*

Proposal. Well-studied repetitive and restitutive morphemes (RRMs) like *again* come with the presupposition that an eventuality that falls under a relevant event or state description had occurred before (von Stechow 1996; Beck & Johnson 2004, Bale 2005, Beck 2005, Alexiadou et al. 2014, Pedersen 2015, among others):

(1) $\| \text{again} \| = \lambda P.\ \lambda e\colon \exists e'\ [e' <_T e \wedge P(e')].\ P(e)$

The goal of this paper is make a case for another type of RRM morpheme, instantiated by the adverb *obratno* 'back, reversely' from Russian, exemplified in (2):

(2) Voda zamerzla obratno.
water froze OBRATNO
'The water froze again.'

Like *again*, *obratno* is a partial identity function. However, the presuppositional content is different. In (1), an eventuality corresponding to the existentially bound variable (e′) in the presupposition is ***distinct*** from the eventuality that comes as part of the assertive content (e). In contrast, I will argue that *obratno* describes *a re-entry into the **same** state as the relevant entity had been in before*. For *obranto*, I propose the semantics in (3):

(3) $\| \text{obratno} \| = \lambda R_{<v,<vt>>}.\ \lambda s.\lambda e : \exists s' \exists s_0\ [s' <_T s \wedge \neg\ s' \infty_T s \wedge s' \leq_S s_0 \wedge s \leq_S s_0\ ].\ R(s)(e)$
where v is the type of eventualities, "$<_T$" is the temporal precedence relation, "∞_T" is the temporal adjacency relation, and "$\leq_S$" is the cross-temporal substate relation (Landman 2008), defined as in (4):

(4) $s \leq_S s'$ iff s is a mereological part of s′ and s and s′ are cross-temporally identical, that is, count as the same state (see Landman 2008, Landman, Rothstein 2008 for details)

Obratno applies to a relation between events e and states s and, if defined, returns the same relation. The presuppositional component requires that there be a state *s′* that temporally precedes *s* and does not overlap with it. It also requires both *s* and *s′* to be **cross-temporal substates** of a state s_0. Therefore, the state from the presuppositional part (s′) and the state from the assertive part (s) form the same state s_0 , the one with temporal a gap.

Data. The motivation for the proposal comes from three facts about the differences between *obratno* and garden variety 'again', which is *opjat'* in Russian.
a. Target states, but not result states. *Obratno* is only licit if combined with an eventuality description that entails a target state (Kratzer 2000), and is incompatible with descriptions associated with result states, cf. (5a) vs. (5b).

(5) a. Volodja nakačal šiny obratno.
V. pumped.up tires OBRATNO
'Volodja pumped the tires up again'

b. ??/*Volodja dokazal teoremu obratno.
V. proved theorem OBRATNO

The same point is reinforced by the minimal pair in (6a-b):

(6) a. Context: Volodja wrote a novel, but his house caught fire, and the manuscript was lost. Then…
*Volodja napisal roman obratno.
V. wrote novel OBRATNO

b. Context: Volodja wrote a slogan on the wall. Next day somebody erased it. Then…
Volodja napisal lozung obratno.
V. wrote slogan OBRATNO
'Volodja wrote the slogan again'

That 'write a novel' patterns with result state predicates and 'write a slogan (on the wall)' with target state predicates can be seen from (7): the latter but not the former admits modification by 'still':

(7) a. *Roman ešče napisan
novel still written
'The novel is still written'

b. Lozung ešče napisan (na stene)
slogan still written on wall
'The slogan is still written (on the wall)'

b. Narrow scope with respect to indefinites. Unlike *opjat'/again*, *obratno* cannot license readings where it takes wide scope with respect to indefinites:

(8) John is in a room with two windows. Both are closed. John opens one of the windows. It is still too warm, so he opens the second window, too.

Volodja	(^{OK}opjat')	otkyl	okno	(#obratno).
V.	again	opened	window	OBRATNO

'Volodja opened a window again.'

In (8), the context does not support the ∃ > RRM scopal ordering ('there is a window that attained a state of being open twice'), hence the RRM > ∃ ordering is forced ('it so happened twice that a window attained a state of being open'). With *obratno*, unlike with *opjat'*, the sentence is judged false, suggesting that *obratno* obligatorily takes scope below ∃.

c. Restitutive reading only. Alexiadou et al 2014, Lechner et al 2015 propose that the repetitive (REP) reading of RRMs and the restitutive (RES) reading can be genuinely told apart in the context of non-monotone quantifiers. (Since REP asymmetrically entails RES, discourses like 'John had opened the window yesterday. Today he opened it again' do not argue for RRMs being associated with REP). Consider (9):

(9) Students A, B, and C are studying at the library. They want the window open, but the librarian doesn't. Student A opens the window and the librarian closes it. The same happens to students B and C. Then, A opens the window for a second time.

Rovno	odin	student	(^{OK}opjat')	otkryl	okno	(#obratno).
exactly	one	student	again	opened	window	OBRATNO

'Exactly one student opened the window again/OBRATNO.'

On the REP reading, the sentence should be true, since there is exactly one student who opened the window twice. On the RES reading, it is false, since there are three students who brought the window back into a state of being open. The judgments about (9) seem to be clear: the sentence with *obratno* is false, which means that REP is unavailable; *opjat'* is fine.

Discussion. The restriction illustrated in (5)-(7) provides the strongest argument for the proposal. Result states, unlike target states, are irreversible (Kratzer 2000 affer Parsons 1990): once an event culminates, a corresponding result state holds forever after. Such a state is impossible to exit and re-enter. If a theorem been proven, the state of having been proven cannot be discontinued. (3) captures that in a principled way. According to (3), a state *s* attained in an eventuality *e* is a cross-temporally identical substate of a larger state s_0. Another substate of s_0 is the presupposed state s′. Being both substates of the same state, s and s′ are temporally disconnected. This makes *obratno* incompatible with relations between events and result states. Target states, on the other hand, are transitory, which allows them to have temporal gaps. Unlike *obratno*, *opijat'/again* comes with the presupposition in (1), which only requires that some state that falls under a certain description had previously occurred. *Opjat'/again* is thus insensitive to the result/target state distinction.

The ∃ > *obratno* restriction follows from what it means for two states to count as a single state. If two states with different participants are necessarily distinct states (a more extensive discussion to be presented in the full version of the paper), they cannot be cross-temporally identical. This is exactly what happens in (8), where ∃ takes narrow scope and the distinctness of participants of the two states is contextually entailed. This makes (8) incompatible with *obratno*, due to (3), but not with *opjat'*.
Finally, (3) correctly predicts the difference between *opjat'* and *obratno* illustrated in (9). *Opjat'* allows for different attachment sites (von Stechow 1996 and further literature). The lowest attachment makes it target a (resultant) state description, giving rise to RES. The highest attachment yields REP by giving *again* scope over the whole complex event description. In contrast, *obratno* always targets a relation between events and states, and invariably operates on the stative component of that relation.

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The Real(is) Distinction in *Before* and *After* Clauses: A Crosslinguistic Study

Based on data from Korean, Turkish, Polish, and Romance, we argue that many attested distinctions between clausal *before* and *after* can be reduced to selection of a complement that is specified as [−realis] for *before* and [+realis] for *after*. We propose that [±realis] accounts for the difference in veridicality between *before* and *after* (agreeing with Anscombe 1964) by subsuming the proposals about the interactions of tense (Ogihara 1996, Sharvit 2013, i.a.), phrasal/clausal distinctions (Penka and von Stechow 2009), and mood distinctions (Giannakidou 2009, i.a.). Furthermore, we show that it is mood selection that plays a role in the availability of Geis-ambiguity (Geis 1970), not relativization alone (Sharvit 2013), as the accessibility of the low reading in temporal clausal PPs is closely tied to [+realis].

Data. Despite the apparent cross-linguistic variation in marking the complement of clausal *before*, languages are consistent in selecting irrealis mood. Romance languages and Greek use subjunctive (Arregui and Kusumoto 1998). Korean employs a nominalizer *-ki* (1) that also appears with non-veridical complements (Han 1996). Turkish uses *-ma/-me* (2), which is an affix that is syncretic between the non-factive nominalizer and negation (Kornfilt 1997; both of which fit our analysis).

(1) John-un [Mary-ka tochakha -**ki** ceney] ttena-ss-ta (K)
John-TOP Mary-NOM arrive *-ki* before leave-PAST-DEC

(2) John [Mary gel -**me** -den önce] git-ti. (T)
John Mary come *-me* -ABL before go-PAST
"John left before Mary arrived."

In *after*-clauses, although all languages employ different strategies, the choice of realis mood seems to be consistent. Korean (3) uses the realis relativizer *-n* (An 2014), Romance uses indicative, and Turkish (4) uses the factive nominalizer *-DIG* (Kornfilt 1997).

(3) John-un [Mary-ka tochakha -**n** hwuey] ttena-ss-ta (K)
John-TOP Mary-NOM arrive *-n* after leave-PAST-DEC

(4) John [Mary gel -**dik** -ten sonra] git-ti. (T)
John Mary come *-DIG* -ABL after go-PAST
"John left after Mary arrived."

***Before* vs. *after* as [±realis].** Yoon (2011) observed that [−realis] licences what she calls "evaluative negation", which is associated with a conventional implicature (Potts 2005). Crucially, such negation appears in *before* clauses (5) but not in *after* clauses (6).

(5) a. John-i [Mary-ka tochakha -(**cianh**) -ki ceney] cipey iss-ess-ta (K)
John-TOP Mary-NOM arrive -NEG *-ki* before home be-PAST-DEC

b. Jan był w domu [zanim Maria (**nie**) przyjechała]. (P)
Jan was at home before Mary NEG came

Intended: "John was at home before Mary arrived."

(6) a. John-un [Mary-ka tochakha -(***cianh**) -n hwuey] ttena-ss-ta (K)
John-TOP Mary-NOM arrive -NEG *-n* after leave-PAST-DEC

b. Jan był w domu [po tym jak Maria (***nie**) przyjechała]. (P)
Jan was at home after this when Mary NEG came
Intended: "John was at home after Mary arrived."

In Polish and Korean, negation is optional, but in Turkish it is obligatory, (7).

(7) John [Mary gel -***(me)** -den önce] git-ti (T)
John Mary come -NEG -ABL before go-PAST

We argue that the reason for this is that this negation in Polish or Korean is *licensed* by [−realis], but Turkish negation indicates [−realis] *itself*. This makes it syntactically higher than the modal *-(y)Abil* "can", which is why (8) is ungrammatical (but would be fine in the order MODAL-NEG).

(8) *John [Mary gel -**me** -**yebil** -den önce] git-ti (T)
John Mary come -NEG -MODAL -ABL before go-PAST

In contrast to the use of negation, subjunctive, irrealis relativizers, and non-factive nominalizers in *before* clauses, *after* clauses make use of indicative, realis relativizers, and factive nominalizers, which shows that [±realis] is the relevant contrast.

Geis-ambiguity is about marking [+realis]. Our proposal extends to the cross-linguistic variation in availability of Geis-ambiguity (Larson 1990, Sharvit 2013): the English example in (9) is ambiguous between two possibilities for the time of John's watering the flowers: either right before Mary's saying (high reading), or right before the claimed time of her arriving (low reading).

(9) John watered the flowers right before Mary said (that) she arrived.

Sharvit (2013) argues that the availability of this ambiguity depends on the type of embedding: clausal *before* often does not allow an ambiguous reading, but a relativization such as *before the time at which*, does. We argue that the crucial difference is not relativization but mood. The ambiguity can only be obtained with [+realis], which entails the truth of the embedded proposition. In Korean, the [−realis] relativizer *-l* on *say* cancels out the low reading, but with the [+realis] relativizer *-n* the low reading is accessible. (Note that in (10), *before* is phrasal, not clausal, so the appearance of [+realis] is not a problem for our proposal):

(10) John-un [Mary-ka [tochakhayss-ta-ko] malha -{**n/l**} sikan palo ceney] kkochey
John-TOP Mary-NOM arrived-DEC-C say -REL time right before flower
mwulul cwuessta. (K)
water gave

Similarly, in Polish (11) the low reading is not available if *say* is marked with subjunctive, i.e. [−realis] (see also Sharvit 2013 for the same facts from Spanish).

(11) Jan podlał kwiaty [zaraz zanim Maria **powiedziałaby** [że przyjechała]]. (P)
John watered flowers right before Mary said.SUBJ that arrived.IND

Interestingly though, with subjunctive both on *say* and *arrive*, the low reading is accessible, (12).

(12) Jan podlał kwiaty [zaraz zanim Maria **powiedziałaby** [że **przyjechałaby**]]. (P)
John watered flowers right before Mary said.SUBJ that arrived.SUBJ

This novel observation is consistent with our proposal and we suggest that in (12), the truth values must be preserved across two doxastic alternative worlds, which has a parallel effect to (10), where no alternative worlds have to be considered.

Gender agreement attraction in Russian: different profiles in production and comprehension

Background. Agreement attraction errors like (1) have been extensively studied in the last 20 years (Bock & Miller 1991; Eberhard et al. 2005; Wagers et al. 2009, among others). The phenomenon was observed in production (attraction errors are more frequent than the ones without attraction) and in comprehension (attraction errors cause smaller delays in reading times), and the results were largely parallel. In particular, only plural attractors were found to cause a significant effect, while when the head is plural and the attractor is singular, there is virtually no effect either in production or in comprehension.

(1) **The key to the cabinets were rusty* (*key* = head noun, *cabinets* = attractor).

Two major approaches have been suggested to explain agreement attraction. i) Representational approach: attraction arises due to erroneous feature percolation from the embedded DP or similar mechanisms, i.e. because the syntactic structure is built incorrectly. ii) Retrieval-based approach: attraction arises because memory retrieval is noisy, and sometimes a wrong noun is selected during dependency resolution. The asymmetry between singular and plural attractors is usually explained in terms of markedness of the plural feature: only a marked feature can cause significant disruption during structure building or retrieval (notably, in semantics there is an ongoing debate whether plural is marked, see e.g. Sauerland et al. (2005) vs. Farkas & de Swart (2010)).

With a few exceptions, previous studies focused on number agreement. So it is interesting whether the observed patterns would be confirmed for other features, e.g. for gender, especially in the systems with more than two genders. Badecker and Kuminiak (2007) and Malko and Slioussar (2013) report experiments on gender agreement attraction in production in Slovak and Russian. Gender systems in these two languages are similar. There are M, F and N genders. M is the most frequent, while N is the least frequent. N is used as default, e.g. in impersonal sentences. M nouns have zero inflection in Nom.Sg form (other case forms of M nouns and all case forms of F and N nouns have non-zero endings). Verbs are inflected for number and person in the present and future and for number and gender (only in singular) in the past. M verb forms have zero endings. Adjectives are inflected for gender in singular and always have non-zero endings (with some exceptions irrelevant for our study, like possessive adjectives). The results of production experiments were also similar: F attractors caused more errors than M ones, M ones more than N ones (the latter difference did not reach statistical significance in the Russian study).

Our study. In this paper, we present two comprehension (self-paced reading) experiments studying gender agreement attraction in Russian. Unlike in number agreement attraction studies, the results were not parallel to those obtained in the production ones.

Experiment 1. 40 Russian speakers read sentences in which a past tense predicate matched or mismatched in gender with a subject noun ('head') or a noun embedded inside a PP complement ('attractor'), following the scheme in (2). Head NPs were Nom.Sg, attractor NPs were Acc.Sg (we chose NPs for which Acc.Sg=Nom.Sg because this is known to boost attraction).

(2) NP_{HEAD} – P – NP_{ATTR} – was – Adj/Part – four additional words modifying the predicate

We manipulated grammaticality and gender match between the head and the attractor (2x2) in the following combinations of heads, attractors and predicates: MMM, MFM, MMF, MFF; MMM, MNM, MMN, MNN; FFF, FMF, FFM, FMM; NNN, NMN, NNM, NMM (every target sentence appeared in four conditions, exemplified in (3)). We had four experimental lists with 48 target and 120 filler sentences. One third of sentences were followed by forced choice comprehension questions.

(3) *Recept na porošok / maz' byl mjatym / byla mjatoj… (iz-za sil'nogo volnenija pacienta).*
'$prescription_M$ for $powder_M$ / $ointment_F$ was_M $crumpled_M$ / was_F $crumpled_F$… (due to patient's extreme nervousness)'.[1]

[1] Both the copula and the participle are marked for gender – we chose such predicates because Malko and Slioussar (2013) used them, and we wanted to compare our results to theirs.

We found a classical attraction profile in the sentences with F and N heads and M attractors: there were significantly smaller delays on the predicate in FMM and NMM ungrammatical sentences as compared to FFM and NNM ones. The main effect of grammaticality and the interaction of grammaticality and gender match (i.e. attraction) were statistically significant (RM ANOVAs were used, for all reported significant differences, $p < 0.05$ for F1 and F2). However, there was no attraction in the sentences with M heads and F and N attractors: all ungrammatical conditions caused similar delays, and only the main effect of grammaticality factor was significant.

Experiment 2. 32 Russian speakers participated. We looked at the MMM, MFM, MMF, MFF and MMM, MNM, MMN, MNN conditions again, using sentences with different lexical items. We had four experimental lists with 32 target items and 70 fillers; otherwise the design did not change. The results were essentially the same as in Experiment 1.

Discussion. The very existence of gender agreement attraction is better compatible with the retrieval-based approach: gender, unlike number, is specified for each noun in the lexicon, and hence is less likely to be erroneously assigned during structure building. In our reading experiments, we did not find any ungrammaticality illusions (delays in grammatical sentences due to interference from the attractor, see e.g. (Wagers et al. 2009) for discussion), which is also usually taken to support the retrieval account.

In number agreement studies, results from production and comprehension were largely parallel, with only plural attractors causing significant effects. Our findings are not parallel to what was earlier observed for production. Relying on the data from the production experiment from (Malko and Slioussar 2013) and from Slovak where the gender system is very similar (Badecker and Kuminiak 2007), we can conclude that N (the gender that is least frequent, but is used as grammatical default e.g. in impersonal sentences) triggers fewest errors, like singular compared to plural, while F triggers the largest number of errors. In our reading experiments, M (the gender that is most frequent and morphologically unmarked on some forms) behaves differently from N and F and, surprisingly, patterns with plural. Classical agreement attraction patterns are observed only with M attractors and F/N heads, but no effect is found with M heads and F/N attractors (like with plural heads and singular attractors). More studies are necessary to explain this difference, but prima facie it leads to conclude that different mechanisms underlie attraction in production and in comprehension, as several authors have already argued (e.g. Tanner & al., 2014). Our findings also suggest that number and gender features are processed differently (probably, this is related to the fact that, unlike number, the gender of the noun is specified in the lexicon and is semantically empty in the absolute majority of cases).

We preliminarily outline the following scenario for number vs. gender agreement attraction patterns in comprehension. In case of number, we follow the authors who believe that singular nouns are essentially unmarked, carry no feature. Therefore they cause no attraction, the parser notices only plural attractors (and tends to be fooled by them). In case of gender, all nouns carry a gender feature, no gender is represented as zero (this conclusion is also supported by production data where we see that all genders trigger attraction errors, only in different numbers, while singular attractors cause virtually no errors in production). However, the retrieval mechanism engages differently with M and F/N attractors. It performs a shallow check for the presence of an M feature, which allows it to mistake structurally inappropriate attractors for grammatical licensors. But the more prominently represented F/N nouns engage more thorough processing, leading to recognition of the structural mismatch. The difference between gender agreement attraction in production and comprehension might be connected to the difference between what is default for verbs (arguably, N used for impersonals etc.) and for nouns (potentially, M), but a proper account still has to be developed.

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Singulars looking like plurals cause more agreement attraction than genuine plurals

Background. Since Bock and Miller's (1991) study, much work has been devoted to number attraction errors in subject-verb agreement, as in (1). Among other things, it was noted that (i) only plural attractors cause a significant effect. (ii) In languages with morphological case, attraction is much stronger when the form of the attractor coincides with nominative plural, like in the German example (2a) as opposed to (2b) (Hartsuiker & al. 2003). (iii) Attraction can be observed both in production (triggering more errors) and in comprehension (making errors less noticeable, i.e. attraction errors cause smaller delays in reading times, smaller effects in EEG etc.).

(1) **The key to the cabinets were rusty* (*key* = head noun, *cabinets* = attractor).

(2) a. *die Stellungnahme gegen die Demonstrationen*'the position against the$_{\text{ACC.PL(=NOM.PL)}}$ demonstrations'
b. *die Stellungnahme zu den Demonstrationen* 'the position on the$_{\text{DAT.PL(≠NOM.PL)}}$ demonstrations'

I show that singulars can cause attraction too – if they look like Nom.Pl forms. Gen.Sg forms of some Russian nouns coincide with Nom.Pl (and Acc.Pl) forms: e.g. *večerinki* from *večerinka* 'party'. I compared them to genuine plurals in production and comprehension.

Experiment 1 was run on a PC using *Presentation* software. Participants were 32 native speakers of Russian. In every trial, participants saw a predicate, like (3a), then a subject, like (3b-c), and were asked to produce a complete sentence. Half of the predicates did not agree with the subjects in number, and participants were asked to modify such predicates. Eight protocols included 80 target items with Acc or Gen attractors in one of the 8 conditions (Sg/Pl head, attractor and predicate) and 120 fillers.

(3) a. *byla krasivoj / byli krasivymi* 'was beautiful$_{\text{SG}}$ / were beautiful$_{\text{PL}}$'[1]
b. *doroga/dorogi čerez pole/polja* 'road$_{\text{NOM.SG / PL}}$ across field$_{\text{ACC.SG(≠NOM.PL) / ACC.PL(=NOM.PL)}}$'
c. *komnata/komnaty dlja večerinki/večerinok* 'room$_{\text{NOM.SG / PL}}$ for party$_{\text{GEN.SG(=NOM.PL) / GEN.PL(≠NOM.PL)}}$'

Agreement errors occurred only with Sg heads and three attractor types: 49 errors (22.3% responses in this condition) with Acc.Pl, 13 errors (5.9%) with Gen.Sg, and 2 errors (0.9%) with Gen.Pl. A mixed-effects logistic regression model shows that the main effects of case and number and their interaction are significant ($p < 0.01$). Thus, looking like a Nom.Pl was more important than carrying a Pl feature.

Experiment 2 was run on a PC using *Presentation* software**.** 32 (different) Russian speakers participated in it. I took sentences from Experiment 1 ('N1 P N2 was/were Adj/Part') and added four words to them (PPs modifying the predicate). There were eight protocols with 80 target sentences (half ungrammatical) and 150 fillers (grammatical). I used self-paced reading method, one third of sentences were followed by forced choice comprehension questions. Average RTs are presented in Fig. 1 and 2.

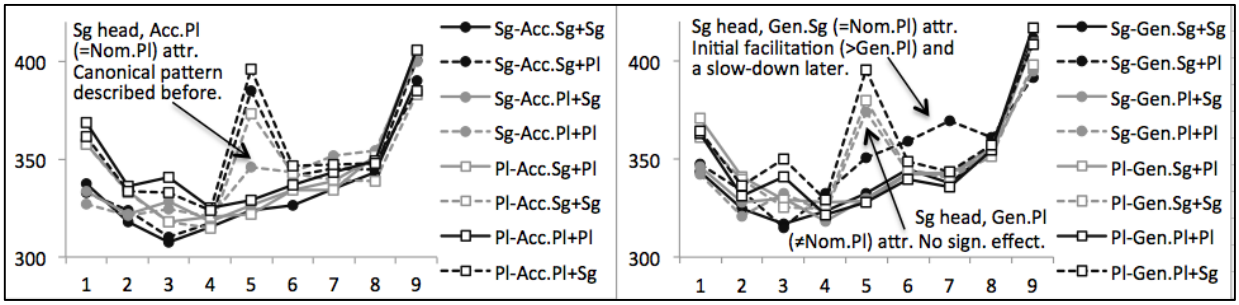

Fig. 1 and 2. Average RTs per region (in ms) in the Acc and Gen groups. Regions: $N1_1$ $Prep_2$ $N2_3$ $was/were_4$ $Adj/Part_5$ + four-word PPs. Template for condition names: 'head-attractor+predicate'.

RM ANOVAs were used to analyse RTs (for all reported significant differences, $p<0.05$ for F1 and F2). There were significant differences between conditions in regions 1-3, 5 and 7 (the latter only in the Gen group). The differences in regions 1-3 were caused by slower processing of Pl head and dependent

[1] I opted for such predicates because I wanted them to be as short as possible and not to contain any more nouns and could not come up with single-verb predicates for all stimuli.

nouns (this effect is discussed in detail by Wagers & al. (2009)). The differences in region 5 were due to agreement attraction. As Fig. 1 and 2 show, Acc.Pl and Gen.Sg attractors triggered largest effects, while the effects from other attractors are barely noticeable. The difference in region 7 reflects the slow-down in the sentences with Gen.Sg attractors. I hypothesize that the readers might come back to these errors and revise them, unlike in the Acc.Pl case, and plan to test this hypothesis in a subsequent speeded grammaticality judgment study (if it is on the right track, attraction effects with Gen.Sg nouns might be greatly diminished).

Conclusions:

- There are two major approaches to agreement attraction: representational (errors arise due to illicit feature percolation from the attractor or similar mechanisms (e.g. Franck & al. 2002; Eberhard & al. 2005)) and retrieval-based (errors arise when subject DPs are accessed to determine/recheck the number on the verb, and a wrong noun can be retrieved (e.g. Solomon & Pearlmutter 2004; Wagers & al. 2009)). My data are problematic for both because both depend on the presence of a Pl feature: this is what should percolate or is supposed to be retrieved.
- In the reading experiment, I saw no ungrammaticality illusions (delays in grammatical sentences due to interference from the attractor, which are often used to tease apart the two approaches to agreement attraction, see e.g. (Wagers & al. 2009) for discussion). For this reason and because my data are hard to reconcile with the representational account, I will argue that the error arises at the retrieval stage, but my data shed new light on the nature of the representation that is retrieved. Apparently, rather than retrieving features, we retrieve a word form.
- This study offers new insights on grammatical ambiguity processing. Unlike in the majority of cases discussed before, in this study, at the stage when we see or produce an ambiguous form we are certain about its case (defined by the preposition). Still, alternative feature sets associated with it get activated to the extent they can influence agreement.
- Previous comprehension studies never reported evidence that number agreement attraction errors might be revised. My results suggest that this might be the case when the attractor coincides with Nom.Pl, but does not contain a genuine Pl feature. Further experiments are planned to check this hypothesis. Its confirmation may indicate that retrieval happens in two stages. At the first stage, we retrieve various forms and are fooled if one of them has a Nom.Pl feature set associated with it. However, if there are actually no Pl features in the subject DP, we discover the mistake at the second stage, while if there is a Pl feature, we do not.
- Attraction with Gen.Sg forms (especially the fact that it exists in production) is harder to explain in non-lexicalist frameworks saying that syntax operates with sublexical units and word forms are inserted at the last stage.

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Balkan Slavic Comparatives

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The syntactic structure of clausal comparatives is reasonably well understood and widely agreed to involve *wh* movement of a degree operator. In Bulgarian and Macedonian, as in the other Balkan languages, this degree operator is overt, surfacing as the *wh* word *kolkoto* (Bulgarian)/*kolku* (Macedonian) 'how much'. The structure of phrasal comparatives is more controversial. Analyses of phrases like the bracketed string in *bigger* [*than Omaha*] range from a claim that they are reduced clauses (Bresnan 1973, Bacskai-Atkari 2014 and many others between), to a view that they are simply PPs (starting from Hankamer 1973), to an argument that at least some phrasal comparatives are small clauses (Pancheva 2006, 2010); or more than one of the above. In this talk I demonstrate that Balkan Slavic, with more of the comparative machinery visible, confirms that there are several types of phrasal comparatives, some derived from underlying clauses while others are not. In Balkan Slavic full clausal, reduced clausal, small clause, and PP comparatives differ in whether they require or permit the overt *wh* operator to appear, among other criteria. Subtle differences between Macedonian and Bulgarian, including the possibility in Macedonian but not Bulgarian for a complementizer also to occur in certain comparatives, help in teasing out the syntactic structure of the various kinds of comparative clauses and phrases, as do related data in Balkan languages such as Greek.

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