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From scope freezing to, well, everything: investigations into Ukrainian Syntax*

The goal of today's talk:

Methodological: to introduce the Scope Freezing Diagnostic as a probe of argument structure relations (Antonyuk 2015; 2020; under review), its scope and limitations.

Empirical: demonstrate the SFD as applied to a range of Ukrainian constructions and the type of insights this provides.

Theoretical: incorporate the findings due to the SFD into the syntactic theory.

1. Introduction: quantifier scope and scope freezing.[1]

1.1 Our starting point

Doubly quantifier sentences like (1) in most languages show quantifier scope ambiguity:

(1) Some boy saw every cat.
Surface scope: for some boy x, for every cat y, x saw y (the 'same boy' scenario).
Inverse Scope: for every cat x, for some boy y, x was seen by y (different cat-boy pairings possible).

Such ambiguity, widely taken to be due to a covert syntactic movement operation, Quantifier Raising (QR), is clause-bounded:

(2) Some boy says that he saw every cat.
Surface scope: for some boy x, for every cat y, x says x saw y (the 'same boy' scenario).
***Inverse Scope:** for every cat x, for some boy y, y says x was seen by y (different cat-boy pairings possible).

(3) a. $[_{TP}$ QP2 QP1 $]$ scopally ambiguous if QP2 = ∃ and QP1 =∀
b. $[_{TP}$ QP2 $[_{CP}[_{TP}$ QP1$]]]$ surface scope only

Our premise: in the absence of restrictions on syntactic movement (e.g., a clause boundary, an island) quantifier scope ambiguity (and not its absence) is the norm in ∃ > ∀ clauses.

* Parts of research reported on here have been carried out at Stony Brook University, University of Vienna, University of Connecticut, and University of Graz. This research is now continued at the University of Graz as part of an FWF Lise Meitner Grant M 3361 "Deriving Discourse Configurationality of (East) Slavic".
[1] The original finding of frozen surface scope in the English DOC is reported in Larson (1990), attributed to David Lebeaux (p.c.). Larson credits the finding of frozen surface scope in the *Spray-Load* Alternation to Schneider-Zioga (1988).

⇨ **The absence of such scope ambiguity in contexts where it is expected needs to be explained.**

1.2 Quantifier scope distribution patterns in Argument Structure Alternations.

Ditransitive Alternation

(4) a. Mike gave a toy to his cat. Prepositional Dative (PPD)
b. Mike gave his cat a toy. Double Object Construction (DOC)

(5) a. Mike gave some toy to every cat.
Surface scope: for some toy x, for every cat y, Mike gave x to y (e.g., this week);
Inverse Scope: for every cat x, for some toy y, Mike gave y x (different cat-toy pairings possible).

b. Mike gave some cat every toy. **(frozen surface scope)**
Surface scope: for some cat x, for every toy y, x received y from Mike (i.e., 'one happy cat' scenario);
***Inverse scope:** for every toy x, for some cat y, x was given to y (different toy-cat pairings possible).

The *Spray-Load* Alternation

(6) a. Mike planted the flowers in the garden. **Locative frame**
b. Mike planted the garden with flowers. **the *with*-frame**

(7) a. Mike planted some sort of flowers in every garden.
Surface scope: for some sort of flowers x, for every garden y, Mike planted x in y;
Inverse scope: for every garden x, for some sort of flowers y, Mike planted y in x.

b. Mike planted some garden with every sort of flowers. **(frozen surface scope)**
Surface scope: for some garden x, for every sort of flowers y, Mike planted x with y.
***Inverse scope:** for every sort of flowers x, for some garden y, Mike planted x in y.

These appear to be the only two constructions in English that exhibit frozen surface scope.

Q: Why should we care about this phenomenon?

- Scope freezing is the only property of the Ditransitive Alternation (DA) where the mirror-image behavior of the two frames breaks down with respect to the Barrs-Lasnik (1986) diagnostics (Harley and Miyagawa 2017).[2]

[2] Barss and Lasnik (1986) showed that the first object in each frame asymmetrically c-commands the second object using a series of syntactic tests (i.e., anaphor binding, variable binding, weak crossover and NPI licensing).

- As a field, we lack understanding of what causes scope freezing and thus cannot predict where else we might expect to find it.[3]
- Many of the diagnostics relied upon in argument structure alternations research have been used to provide support for opposing accounts of the same phenomena. I argue the SFD is asymmetric in this regard, as well as internally consistent and reliable.

- The Ditransitive Alternation which exhibits the phenomenon of scope freezing has long been recognized for its potential to impinge on issues of locality, especially locality of A-movement (den Dikken 1995; 2005).

I will argue that the SFD provides non-trivial insights into matters of argument structure, locality, information structure and the theory of phases.

2. Scope freezing in Ukrainian: the empirical domain

The phenomenon of fixed surface scope (= "surface scope freezing") is found in Slavic languages as well, and in a much broader range of constructions than in English (Antonyuk 2015).[4] What all these constructions have in common is the pattern whereby one order of internal arguments is scopally ambiguous while the opposite relative order of arguments in the postverbal field is surface scope frozen (i.e., only allows a scope interpretation that corresponds to overt c-command relations).

2.1 QP scope distribution patterns in Ukrainian:

Ditransitive Alternation[5]

(8) a. Myhajlo po-daruvav jakus' igrašku kožnij kišci.
Mike PO-gift$_{PST.PRF}$ some toy$_{ACC}$ every cat$_{DAT}$
'Mike gifted some toy to every cat'
Surface scope: for some toy x, for every cat y, Mike gifted x to y (i.e., same toy);
Inverse scope: for every cat x, for some toy y, Mike gifted x y (i.e., diff. cat-toy pairs).

[3] Though see Antonyuk (2015; under review); Antonyuk and Mykhaylyk (2022); Bobaljik and Wurmbrand (2012); Bruening (2001; 2010) and Wu and Larson (under review) for some proposals.
[4] The phenomena discussed here are observed in many Slavic languages across the subgroups. See Antonyuk (2015; 2019; 2020) and Bonnet and Nash (2017) on Russian. See Antonyuk and Mykhaylyk (2022) on the interaction of quantification and Object Shift in Ukrainian and Antonyuk (under review) for much of what is discussed here based on Ukrainian and Russian data. See also Marvin and Stegovec (2012) for a brief discussion of scope freezing in Slovenian DOCs and Abels and Grabska (under review) for a detailed discussion of scope distribution in Polish ditransitives. The same facts appear to hold for BCMS (Boban Arsenijević, p.c.)
[5] See esp. Bailyn (2004; 2009; 2012) and Dyakonova (2007/2009) on the Russian ditransitives and the discussion of the nature of the relation between the two linearizations. Both authors agree they instantiate the two frames of the Ditransitive Alternation.

b. Myhajlo po-daruvav jakijs' kišci kožnu igrašku.
Mike PO$gift_{PST.PRF}$ some cat_{DAT} every toy_{ACC}
'Mike gifted some cat every toy'
Surface scope: for some cat x, for every toy y, Mike gifted x y.
***Inverse scope**: for every toy x, for some cat y, Mike gifted x to y.

The *Spray-Load* Alternation

(9) a. Myhajlo za-lyv [jakyjs' vyd pal'noho] [v kožen bak].
Michael ZA$fill_{PST.PRF}$ [some type]$_{ACC}$ gas_{GEN} [**PP** into [every tank]$_{ACC}$]
'Michael filled some type of gas into every tank.'
Surface scope: for some type of gas x, for every tank y, Mike filled x into y;
Inverse scope: for every tank x, for some type of gas y, Mike filled x with y (i.e., possibly different type of gas for each tank)

b. Myhajlo za-lyv [jakyjs' bak] [kožnym vydom pal'noho].
Michael ZA$fill_{PST.PRF}$ [some tank] $_{ACC}$ [[every type]instr gas_{GEN}]
'Michael filled some tank with every type of gas.'
Surface scope: for some tank x, for every type of gas y, Michael filled x with y.
***Inverse scope**: for every type of gas x, for some tank y, Michael filled x into y.

Reflexive verbs

(10) a. Likar infikuvav-sja jakojus' xvoroboju vid kožnoho pacijenta.
Doctor $infect_{PST.REFL}$ some $illness_{INSTR}$ from every $patient_{GEN}$
'=The doctor got infected from every patient with some illness'
Surface scope: for some illness x, for every patient y, the doc got infected with x from y.
Inverse scope: for every patient x, for some illness y, the doc got inflected by x with y.

b. Likar infikuvavsja vid jakohos' pacijenta kožnoju hvoroboju.
Doctor $infect_{PST.REFL}$ from some $patient_{GEN}$ every $illness_{INSTR}$
'=The doctor got infected with some illness from every patient'
Surface scope: for some patient x, for every illness y, the doctor got infected by x with y.
***Inverse scope**: for every illness x, for some patient y, the doc got infected with x by y.

Causative verbs

(11) a. Likar infikuvav jakojus' xvoroboju kožnoho pacijenta.
Doctor $infect_{PST}$ some $illness_{INSTR}$ every $patient_{ACC}$
'The doctor infected every patient with some illness'
Surface scope: for some illness x, for every patient y, the doctor infected with x y.
Inverse scope: for every patient x, for some illness y, the doctor infected x with y.

b. Likar infikuvav jakohos' pacijenta kožnoju hvoroboju.
Doctor $infect_{PST}$ some $patient_{ACC}$ every $illness_{INSTR}$
'The doctor infected some patient with every illness'

Surface scope: for some patient x, for every illness y, the doctor infected x with y.
***Inverse scope**: for every illness x, for some patient y, the doctor infected with x y.

(12)

The change in available scope interpretations tracks the change in overt word order.

(13) **The Scope Freezing Generalization (SFG)** per Antonyuk (2015).
Scope freezing obtains when one QP raises overtly across another to a c-commanding position as a result of a single instance of movement within the vp/VP.

2.2 Scope freezing is a vP-internal phenomenon.

2.2.1 No scope freezing b/w subject and object QPs:[6]

Simple SVO transitives: no scope freezing

(14) Jakas' divčynka na-hoduvala kožnu kišku.
Some girl$_{NOM}$ NA-feed$_{PST.PRF}$ every cat$_{ACC}$
'Some girl fed every cat'
Surface scope: for some girl x, for every cat y, x fed y.
Inverse scope: for every cat x, for some girl y, y was fed by x.

OSV (locally scrambled) clauses: no scope freezing

(15) Jakus' kišku kožna divčynka nahoduvala.
Some cat$_{ACC}$ every girl$_{NOM}$ NA-feed$_{PST.PRF}$
'Some cat, every girl fed'
Surface scope: for some cat x, for every girl y, x was fed by y.
Inverse scope: for every girl x, for some cat y, x fed y.

OVS clauses: no scope freezing

(16) Jakus' kišku nahoduvala kožna divčynka.
Some cat$_{ACC}$ NA-feed$_{PST.PRF}$ every girl$_{NOM}$
'Some cat was fed by every girl'
Surface scope: for some cat x, for every girl y, x was fed by y.
Inverse scope: for every girl x, for some cat y, x fed every y.

2.2.2 Scope freezing is preserved in Argument Structure Nominalizations

(17) a. Zalyv-annja jakohos' vydu pal'noho v kožen bak
ZA-pour-annja$_{NOM}$ [some type gas]$_{GEN}$ into every tank
'The pouring of some type of gas into every tank'

[6] See Bruening (2001) on the relative nature of scope freezing (i.e., holding between the two internal argument QPs only) in the English Ditransitive Alternation and the *Spray-Load* Alternation.

Surface scope: for some type of gas x, for every tank y, Mike filled x into y;
Inverse scope: for every tank x, for some type of gas y, Michael filled x with y (i.e., possibly different type of gas for each tank)

b. Zalyvannja jakohos' baku koždnym vydom pal'noho
ZApour-annja$_{NOM}$ [some tank]$_{GEN}$ [every type]$_{INSTR}$ gas$_{GEN}$
'The pouring of some tank with every type of gas'
Surface scope: for some tank x, for every type of gas y, Michael filled x with y.
***Inverse scope**: for every type of gas x, for some tank y, Michael filled x into y.

The SFG clearly points to the derivational nature of scope freezing, resulting from an overt instance of A movement I will call Argument Inversion (AI, following Antonyuk and Mykhaylyk 2022):

Argument Inversion leads to new binding relations[7]

(18) a. Dolja po-daruvala nas odyn odnomu
Fate$_{NOM}$ po-gift$_{PST.PRF}$ us$_{ACC}$ each other$_{DAT}$
'Fate gifted us to each other'

b. Dolja po-daruvala nam odyn odnoho
Fate$_{NOM}$ po-gift$_{PST.PRF}$ us$_{DAT}$ each other$_{ACC}$
'Fate gifted us each other'

(19) **Surface scope freezing, schematized:**

[$_{TP}$ ExtA [$_{vP}$ <ExtA> V+v [$_{XP}$ QP1 [$_{VP}$ QP2 <V> <QP1>]]]]

(20)

The Scope Freezing Diagnostic: frozen surface scope implicates a derived order of arguments.

3. Insights obtained due to the Scope Freezing Diagnostic (SFD)

3.1 The *Spray-Load* Alternation

The immediate result seems to be that (8b)-(11b) are all derived from (8a-11a) respectively. No. One of the immediate insights of the SFD (taken together the fact that AI is available) is that while the frozen *with*-frame in (9b) is indeed derived, it is not derived from the locative frame in (9a), but from the permutation of arguments within this frame.

[7] The original examples are due to Asarina (2005), cited in Bailyn (2012).

Instrumental/*with*-frame

(21) a. Myhailo **za**-lyv jakyjs' bak kožnym vydom pal'noho.
Michael ZAfill$_{PST.PRF}$ some tank$_{ACC}$ every type gas$_{INS}$
Lit: 'Michael filled some tank with every type of gas.'
Surface scope (∃>∀): for some tank x, for every type of gas y, Michael filled x with y.
***Inverse scope (∀>∃)**: for every type of gas x, for some tank y, Michael filled x into y.

b. Myhailo **za**-lyv jakymos' vydom pal'noho kožen bak.
Michael ZAfill$_{PST.PRF}$ some type$_{INSTR}$ gas$_{GEN}$ every tank$_{ACC}$
Lit: 'Michael filled with some type of gas every tank.'
Surface scope (∃>∀): for some type of gas x, for every tank y, Michael filled x into y.
Inverse scope (∀>∃): for every tank x, for some type of gas y, Michael filled x with y.

⇒ **NP$_{INSTR}$ > NP$_{ACC}$** is the argument order at Merge within the Instrumental/*with* frame.

Locative frame

(22) a. Myhajlo za-lyv [jakyjs' vyd pal'noho] [v kožen bak].
Michael ZAfill$_{PST.PRF}$ [some type]$_{ACC}$ gas$_{GEN}$ [$_{PP}$ into [every tank]gen]
'Michael filled some type of gas into every tank.'
Surface scope: for some type of gas x, for every tank y, Mike filled x into y;
Inverse scope: for every tank x, for some type of gas y, Mike filled x with y.

b. Myhajlo za-lyv v jakyjs' bak kožen vyd pal'noho
Michael ZAfill$_{PST.PRF}$ in some tank [every type]$_{ACC}$ gas$_{GEN}$
'Michael filled into some tank every type of gas'
Surface scope: for some tank x, for every type of gas y, Mike filled x with y.
??**Inverse scope**: for every type of gas, for some tank, Mike filled y into x.[8]

⇒ **NP$_{ACC}$ > PP** is the argument order at Merge within the locative frame.

(23)

The two frames of the *Spray-Load* Alternation are not derivationally related. The frozen *with*-frame (NP$_{ACC}$ >> NP$_{INSTR}$) is indeed derived, i.e., from V NP$_{INSTR}$ >> NP$_{ACC}$.

[8] Ditransitives with a directional/locative PP never show categorical scope freezing, only surface scope *bias*, i.e., very strong preference for surface scope (see Antonyuk 2015; 2020). This matters for the analyses of predicative possessor phrases as human locations (Freeze 1992): u-PPs in Ukrainian and Russian do show frozen surface scope on the [V u-PP >> NP$_{NOM}$] order of arguments, i.e., by SFG, they are derived from V NP$_{NOM}$ >> u-PP. See ex. (35-36) Furthermore, they behave differently from true locatives regarding scope distribution patterns (even though structurally both are merged in the most embedded position relative to their co-arguments).

3.2 The Animacy Restriction on the DOC

Green (1974) and Oehrle (1976): there is a restriction on the first object of the DOC.

(24) a. The editor sent the article to Sue. (Harley 1994)
b. The editor sent the article to Philadelphia.
c. The editor sent Sue the article.
d. ??The editor sent Philadelphia the article.

A common interpretation of such data in 'independent projection'/non-derivational accounts of the Ditransitive Alternation: while the 'to'-object in the PPD is ambiguous between a Goal and a Location interpretation, the first object in the DOC requires an animate referent, and therefore only allows a Goal interpretation. The conclusion drawn is that the two constructions must differ in the thematic roles assigned to the internal arguments after all, which in turn necessitates positing different base structures for the PP Dative and the DOC frames of the Ditransitive Alternation.

The existence of the Animacy Restriction on the DOC (and its absence in PPDs) is widely seen as the crucial *semantic* difference (i.e., a difference in Logical Form) between the two frames that cannot properly be captured in a derivational analysis (see e.g., Harley and Miyagawa 2017).

Applying the SFD to a yet broader range of constructions reveals a pattern that provides an insight into the nature of the Animacy Restriction.[9]

Experiencer verbs

(25) Sestru nudylo vid ryby. (modeled on Preslar 1998)
Sister$_{ACC}$ nauseate$_{NON\text{-}AGR}$ from fish$_{GEN}$
'Sister was feeling nauseous from the fish'

(26) a. Jakus' divčynu nudylo vid kožnoji stravy.
Some girl$_{ACC}$ nauseate$_{NON\text{-}AGR}$ from every dish$_{GEN}$
'Some girl was nauseous from every dish'
Surface scope: for some girl x, for every dish y, x was feeling nauseous from y.
***Inverse scope**: for every dish x, for some girl y, x was making y nauseous.

b. Vid jakojis' stravy nudylo kožnu divčynu.
From some dish$_{GEN}$ nauseate$_{NON\text{-}AGR}$ every girl$_{ACC}$
'Some girl was nauseous from every dish'
Surface scope (∃>∀): for some dish x, for every girl y, x was making y nauseous.
Inverse scope (∀>∃): for every girl x, for some dish y, x was feeling nauseous from y.

⇨ Base order: V PP$_{GEN}$ >> NP$_{ACC}$

[9] See Antonyuk (forthcoming; under review) for a discussion of the findings presented here.

"distant placement [of the DO from the verb]"

Bailyn (2012) discusses an interesting type of examples from traditional Russian literature, namely Sirotinina's (1965/2003) examples involving "distant placement [of the DO from the verb]".

Bailyn motivates the analysis of the bracketed PPs in (27a-c) as modificational rather than argumental, based on the fact that (i) the bracketed constituent is optional (in contrast to the direct object) and (ii) the PP is fairly free syntactically, with both preverbal and clause-final positions possible. In fact, Bailyn notes, the vP/VP-internal position of the PP as in (27) is much harder to account for, on the assumption that modificational PPs are vP-attached

(27) a. vosproizvodit' [u krolikov] arterioskleroz Sirotinina's (1965/2003)
create [in rabbits] arterial sclerosis$_{ACC}$
'create arterial sclerosis in rabbits'

b. Pozval [k sebe] syna.
called [to self] son$_{ACC}$
'He called hiss on [over] to him'

c. dostal [iz karmana] rasčesku
got [from pocket] comb$_{ACC}$
'took a comb out of his pocket'

(28) a. Včeni vid-tvoryly jakes' zaxvorjuvannja v kožnoji porody.
scientist$_{PL}$ $_{VID}$create$_{PST.PRF}$ some illness$_{ACC}$ to every breed
'Scientists created some illness in every breed'
Surface scope for some illness x, for every breed y, scientists created x in y.
Inverse scope: for every breed x, for some illness y, scientists created in x y.

b. Včeni vid-tvoryly v jakojis' porody kožne zaxvorjuvannja.
scientist$_{PL}$ $_{VID}$create$_{PST.PRF}$ to some breed$_{GEN}$ every illness$_{ACC}$
'=Scientists created in some breed every illness'
Surface scope: for some breed x, for every illness y, scientists created in x y.
***Inverse scope**: for every illness x, for some breed y, scientists created x in y.

⇨ Base order: V NP$_{ACC}$ >> PP[10]

Non-agreeing accusatives

(29) a. Soldata po-ranylo/začepylo kuleju. (modeled on Lavine and Freidin 2002)
soldier$_{ACC}$ $_{PO}$wound/graze$_{PST.PRF}$ bullet$_{INSTR}$
'A soldier was wounded/grazed by a bullet'

[10] The results thus provide independent support for rightward descending analyses of adjunction (e.g., Larson 2004; 2014).

b. Kuleju po-ranulo/začepylo soldata.
bullet$_{INSTR}$ $_{PO}$wound/graze$_{PST.PRF}$ soldier$_{ACC}$
'A soldier was wounded/grazed by a bullet'

(30) a. Jakohos' soldata po-ranylo/začepylo kožnoju kuleju.
Some soldier$_{ACC}$ $_{PO}$wound $_{PO}$wound/graze$_{PST.PRF}$ every bullet$_{INSTR}$
'Some soldier was wounded/grazed by every bullet'
Surface scope: for some soldier x, for every bullet y, x was wounded with y.
***Inverse scope**: for every bullet x, for some soldier y,

b. Jakojus' kuleju poranulo/začepylo kožnoho soldata.
Some bullet$_{INSTR}$ wound/graze$_{PST.PRF}$ every soldier$_{ACC}$
'A soldier was wounded/grazed by a bullet'
Surface scope: for some bullet x, for every soldier y, x wounded y.
Inverse scope: for every soldier x, for some bullet y, x was sounded with y.

⇨ Base order: V NP$_{INSTR}$ >> NP$_{ACC}$

(31) a. Xlopcevi vidrizalo palec' na ruci.
Boy$_{DAT}$ severed$_{NON-AGR}$ finger$_{ACC}$ on hand
'The boy's finger was severed'

b. Palec' na ruci vidrizalo xlopcevi.
Finger on hand severed boy
'A finger on hand was severed from a guy's hand'

(32) a. Jakomus' xlopcevi vidrizalo kožen palec' (na ruci)
some guy$_{DAT}$ severed$_{NON-AGR}$ everyfinger$_{ACC}$ (on hand)
'Some boy got every one of his fingers severed'
Surface scope: for some boy x, for every finger y, x had y severed.
***Inverse scope:** for every finger x, for some boy y, x was severed from y's hand.

b. Jakyjs' palec' (na ruci) vidrizalo kožnomu xlopcevi.
some finger$_{ACC}$ (on hand) severed every boy$_{DAT}$
'Some finger was severed from every boy's hand'
#Surface scope: for some finger x, for every boy y, x was severed from y's hand.
Inverse scope: for every boy x, for some finger y, x was severed from y's hand.

⇨ Base order: V NP$_{ACC}$ >> NP$_{DAT}$

The no-to construction

(33) a. Cerkvu bulo spaleno blyskavkoju. (Lavine and Freidin 2002)
Church$_{ACC}$ was burnt$_{NON-AGR}$ lightning$_{INSTR}$
'The church was burnt down by a lightning'

(34) a. Jakus' cerkvu bulo spaleno kožnoju blyskavkoju/z blyskavok.
Some church$_{ACC}$ was burnt$_{NON-AGR}$ every lightning$_{INSTR}$ /from lightning$_{GEN.PL}$
'Some church was burnt down by every lighting'
#**Surface scope**: for some church x, for every lightning y, x was burnt down by y.
***Inverse scope**: for every lightning x, for some church y, x burnt down y.

b. Jakojus' blyskavkoju bulo spaleno kožnu cerkvu.
Some lightning$_{INSTR}$ was burnt every church$_{ACC}$
'Some church was burnt down by every lightning'
Surface scope: for some lightning x, for every church y, x burnt down y.
Inverse scope: for every church x, for some lightning y, x was burnt down by y.

⇨ Base order: V NP_{INSTR} >> NP_{ACC}[11]

U-PP predicative possession

(35) a. V mene je vsi vypusky cjoho žurnalu.
To me is all issues this magazine.
'I have all the issues of this journal'

(36) a. Jakys' vypusk cjoho žurnalu je u kožnoho vykladača našoho instytutu.
Some issue$_{NOM}$ this magazine$_{GEN}$ is to every instructor our institute$_{GEN}$
'Some issue of this magazine is owned by every instructor at our institute'
Surface: for some magazine issue x, for every instructor y, x is owned by y.
Inverse: for every instructor x, for some magazine issue y, x owns y.

b. U jakohos' vykladača našoho instytutu je kožen vypusk cjoho žurnalu.
To some instructor our institute$_{GEN}$ is every issue$_{NOM}$ this magazine$_{GEN}$
'Some instructor of our institute has every issue of our journal'
Surface: for some instructor x, for every magazine issue y, x owns y.
***Inverse:** for every magazine issue x, for some instructor y, x is owned by y.

⇨ Base order: NP_{NOM} >> u-PP

[11] The SFG thus provides independent support for Lavine's (2021) non-passive analysis of the no-to construction (Cf. Legate 2014): passives, while showing preference for surface scope, are nevertheless not surface scope frozen (Cf. Chomsky 1957).

(37) A schematic representation of our findings so far:

Construction	**Frozen** =>	**Basic**
DOC	V NP_{DAT} >> NP_{ACC}	V NP_{ACC} >> NP_{DAT}
with-frame of S-LA	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Reflexive verbs	V from-PP >> NP_{INSTR}	V NP_{INSTR} >> from **PP**
Causative verbs	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Non-AGR from-PP predic.	V NP_{ACC} >> from-PP	V from-PP >> NP_{ACC}
Non-AGR Dative verbs	V NP_{DAT} >> NP_{ACC}	V NP_{ACC} >> NP_{DAT}
Distant placement of DO	V u-PP >> NP_{ACC}	V NP_{ACC} >> u-PP
Non-AGR NP_{INSTR} predicates	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Non-AGR predicates	V NP_{DAT} >> NP_{INSTR}	V NP $_{INSTR}$ >> NP_{DAT}
U-PP possessives	u-PP >> NP_{NOM}	NP_{NOM} >> u-**PP**

According to the SFD, almost all of the constructions we have examined involve a base structure where the most deeply embedded argument is thematically specified as [+Animate].

(38) **the SFD on the Animacy Restriction:**

A [+Animate] internal argument XP is merged in the most deeply embedded layer of the structure, achieving its 'canonical' position in structures such as the DOC via overt syntactic movement, thus deriving the Animacy Restriction.

3.3 The clash of the diagnostics

A widely shared belief, grounded in empirical observations and native speaker intuitions: discourse neutral orders are the more basic ones in that they occur in a greater number of contexts than the non-discourse neutral orders and also do not require special discourse licensing (Isačenko 1966; Sirotinina 1965/2003; Bailyn 1995; Franks 1995; Junghanns & Zybatow 1997, Slioussar 2007, Yokoyama 1986, i.a.).

Discourse Neutrality (DN) is thus widely believed to indicate base generation as far as the linearization of arguments is concerned and is therefore routinely used as a diagnostic tool for probing argument structure relations.

I posit, however, that the heuristic underlying such tests, namely 'discourse neutrality = non-derived word order' is not always correct, thus not a reliable diagnostic on its own.

(39) **The Clash between SFD and Discourse Neutrality:**

V DP_{DAT} >> DP_{ACC}	**scope frozen**	**<= must be derived**
V DP_{DAT} >> DP_{ACC}	**DN**	**<= must be basic/non-derived!**

Ditransitive Alternation: scope relations

(40) a. Myhajlo po-daruvav jakus' igrašku kožnij kišci. **(∃>∀), (∀>∃)**
Mike PO$gift_{PST.PRF}$ some toy_{ACC} every cat_{DAT}
'Mike gifted some toy to every cat'

b. Myhajlo po-daruvav jakijs' kišci kožnu igrašku. **(∃>∀), *(∀>∃)**
Mike PO$gift_{PST.PRF}$ some cat_{DAT} every toy_{ACC}
'Mike gifted some cat every toy'

Ditransitive Alternation: discourse relations

(41) a. Myhajlo po-daruvav igrašku kišci.
Mike PO$gift_{PST.PRF}$ toy_{ACC} cat_{DAT}
'He gifted some toy to every cat'
#What did Mike do today? He looks so happy.
✓*Who did Mike give a toy to?*

b. Myhajlo po-daruvav kišci igrašku. **DN**
Mike PO$gift_{PST.PRF}$ cat_{DAT} toy_{ACC}
'Mike gifted some cat every toy'
✓*What did Mike do today? He looks so happy.*
✓*What did Mike give to the cat?*

The diagnostic relying on DN/Focus Projection has been extremely widely relied upon in syntactic research on Slavic languages, suggesting the above clash is bad news for the SFD.

There is, however, a different way to look at this.

As the examples in 3.2 have demonstrated, in the structures containing [+Animate] internal argument, said argument is merged low but routinely undergoes movement so as to precede and c-command its co-argument in the postverbal field. It is this derived position which native speakers perceive as the DN one. Thus, the SFD suggests that Argument Inversion of a [+Animate] internal argument *derives* a linearization that evokes intuitions of Discourse Neutrality on the part of native speakers. This, in turn, (at the very least) suggests that Animacy represents a very highly ranked constraint (to put it in OT terms)[12].

(42) a. Sestru nudyt' vid' ryby. **DN**
$sister_{ACC}$ $nauseate_{NON-AGR}$ from $fish_{GEN}$
'The sister is being nauseous because of the fish'
✓*Ščo tut vidbuvajet'sja? What's going on here?*
✓*Vid čoho nudyt' sestru? What is the sister being nauseous from?*

[12] See esp. Glushan (2013) on the important role of Animacy in Russian syntax.

b. Vid ryby nudyt' sestru.
From fish nauseate$_{NON\text{-}AGR}$ sister$_{ACC}$
'The sister is being nauseous because of the fish'
*/??*Ščo tut vidbuvajet'sja? What's going on here?*
✓*Koho nudyt' vid ryby? Who is being nauseous from the fish?*

(43) a. Jakijs' ljudyni vidrizalo palec' na ruci **DN**
Some person$_{DAT}$ sever $_{PST.NON\text{-}AGR}$ finger$_{ACC}$ on hand
'Some person got a finger on their hand severed'
✓*Šco ce za natovp na zavodi? What's that crowd in the factory?*
✓*Ščo vidrizalo tij ljudyni? What was severed to that person?*

b. (Jakyjs') palec' na ruci vidrizalo jakijs'ljudyni.
(Some) finger$_{ACC}$ on hand sever$_{PST.NON\text{-}AGR}$ some person$_{DAT}$
**Šco ce za natovp na zavodi? What's that crowd in the factory?*
Komu vidrizalo palec' na ruci? Whose finger was severed?

Gradation in the DN effect – appears to be strongest with constructions that are known to exhibit the Animacy restriction (i.e., DOC, predicative possession) vs the *Spray-Load* Alternation (which does not involve +Animate objects):

(44) a. U mene vid sjohodni/teper je košenja!
To me since today/now is kitten
'I have a kitten now/since today!'
✓*Pryvit, jaki novyny? Hi, what's new?*
✓*Ščo v tebe je vid sjohodni? What have you got today?*

b. Košenja vid sjohodni/teper je v meine!
Kitten since today/now is to me
'I have a kitten now/since today!'
**Pryvit, jaki novyny? Hi, what's new/what's the news?*
✓*V koho vid sjohodni je kosenja? Who's got a kitten today?*

(45) a. Marijka zasadyla ljubystkom pole
Mary.$_{NOM}$ planted lovage.$_{INSTR}$ field$_{ACC}$
'Mary planted lovage in the field.'

b. Marijka zasadyla pole ljubystkom **DN**
Mary$_{NOM}$ planted field$_{ACC}$ lovage$_{INSTR}$
'Mary planted the field with lovage.'

4. Methodological take-away

While the SFD has provided us with a great number of insights, we need to keep in mind what it is, i.e., a probe of relative argument order at Merge. It does not tell us what the exact structural position of the arguments in question is. For instance, (46) (repeated from 37) does not tell us what the structural positions of any of these NP_{ACC} objects are, i.e., whether it is the same Merge position or not.

(46) A schematic representation of our findings:

Construction	**Frozen** =>	**Basic**
DOC	V NP_{DAT} >> NP_{ACC}	V NP_{ACC} >> NP_{DAT}
with-frame of S-LA	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Reflexive verbs	V from-PP >> NP_{INSTR}	V NP_{INSTR} >> from **PP**
Causative verbs	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Non-AGR from-PP predic.	V NP_{ACC} >> from-PP	V from-PP >> NP_{ACC}
Non-AGR Dative verbs	V NP_{DAT} >> NP_{ACC}	V NP_{ACC} >> NP_{DAT}
Distant placement of DO	V u-PP >> NP_{ACC}	V NP_{ACC} >> u-PP
Non-AGR NP_{INSTR} predicates	V NP_{ACC} >> NP_{INSTR}	V NP_{INSTR} >> NP_{ACC}
Non-AGR predicates	V NP_{DAT} >> NP_{INSTR}	V NP $_{INSTR}$ >> NP_{DAT}
U-PP possessives	u-PP >> NP_{NOM}	NP_{NOM} >> u-**PP**

There is evidence to suggest it might not be the same position:

(42) *Kuleju po-ranulo po soldatu.
bullet$_{INSTR}$ PO wound PO soldier$_{DAT}$
'A bullet wounded every soldier'

(43) ??/*Vid cijeji stravy nudylo po divčyni (za kožnym stolom)
From this dish nauseate$_{NON-AGR}$ PO girl$_{DAT}$ (at each table)
'A girl was nauseous from this dish (at every table)'

(44) a. ✓Včeni vid-tvoryly po zaxvorjuvannju v kožnoji porody.
scientist$_{PL}$ VID create$_{PST.PRF}$ PO illness$_{DAT}$ to every breed
'Scientists created one illness in every breed'

(45) Marijka napysala po slohanu na kožnij stini.
Mary wrote PO slogan$_{DAT}$ on every wall.
'Mary wrote a slogan on every wall'

(46) a. Marijka napysala jakyjs' slohan na kožnij stini. **(∃>∀), (∀>∃)**
Mary wrote some slohan on every wall.
'Mary wrote a slogan on every wall'

b. Marijka napysala na jakijs' stini kožen slohan. **(∃>∀), ??(∀>∃)**
Mary wrote on some wall every slogan
'Mary wrote on some wall every slogan'

⇨ Base order V NP_{ACC} >> PP_{LOC}
⇨ Conclusion: this NP_{ACC} is the canonical DO.[13]

Relatedly, the summary table presents the results as rather flat: it provides no gauge as to how much structure there is in each case (e.g., evidence to suggest the *Spray-Load* Alternation contains more structure than the DA).

The key contributions of the SFD: (1) it provides the relative order at Merge, thus significantly limiting the theoretical domain within which an account is to be given; (2) it is remarkably internally consistent.

A note of caution: reason to believe there is more than one type of scope freezing (not in Slavic though; but see Wu and Larson under review on Mandarin Chinese categorical subject simple transitives). I posit that the scope freezing discussed here is different in being a first-phase syntax phenomenon. Until we have a general theory of scope freezing it is important to maintain taxonomic distinctions so as not to potentially confuse one phenomenon for another.[14]

5. Putting it all together

⇨ Scope freezing is the result of local A-movement that inverts the relative order of the internal arguments in the postverbal field.

⇨ Scope freezing is relative, i.e., holding only between the internal arguments while either or both internal argument QPs maintain the ability to undergo further movement, so long as the lower QP stays in the scope of the higher one (Bruening 2001; Antonyuk and Mykhaylyk 2022).

⇨ Clear patterns and remarkable generality observed in the data.

[13] This is an example of surface scope bias referenced earlier: while surface scope is strongly preferred, inverse scope is still discernable in the right discourse context/with appropriate prosody. Frozen surface scope, on the other hand, is a categorical phenomenon, which makes it easier to work with. Still, under the logic followed here, surface scope bias is also indicative of a derived status of the linearization of internal arguments in question and can be relied on as a diagnostic tool. Antonyuk (2020) argues that the lack of categorical scope freezing is due to the nature of movement a locative/directional QP_{PP} undergoes in such constructions, namely light predicate raising (Larson 1989; 2014). In Antonyuk (in preparation) I explore the idea that the movement in question is smuggling (Collins 2005), which capitalizes on the observation of parallelism in scope possibilities between passives and V QP_{ACC} >>QP_{PP} sentences such as (46).

[14] See Antonyuk (under review) for a detailed discussion.

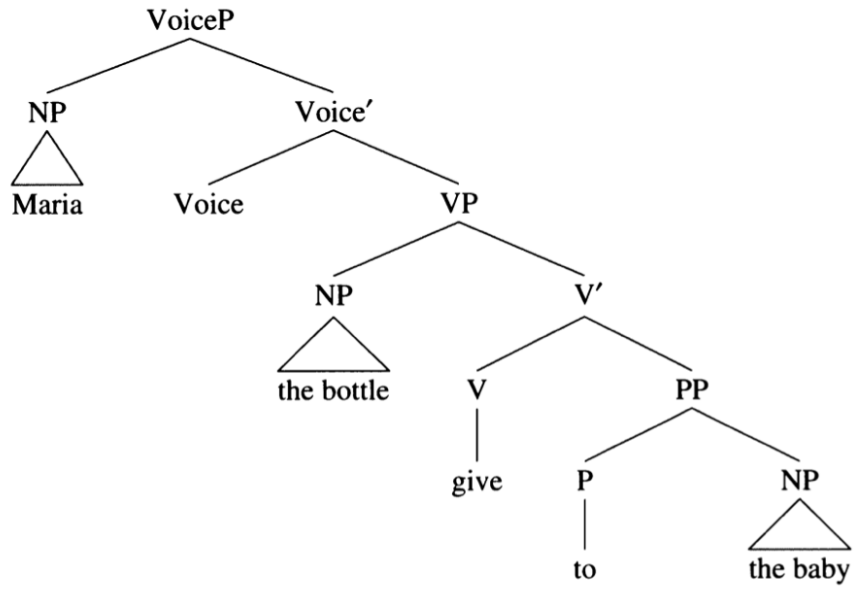
⇨ Application of the SFD has yielded the following insights:

- Argument Inversion (which results in scope freezing) inverts the [+Animate] argument to a structurally more prominent position, deriving the Animacy Restriction.
- Argument Inversion affects discourse relations, deriving Discourse Neutrality/Focus Spreading via syntactic movement (and the SFD implicates Animacy as an important factor).
- Above all, SFD suggests that there is a great deal of derivationality in phrase structure, especially evident in Slavic languages, as demonstrated with Ukrainian data here. This is something that is all but ignored by many theoretical accounts of argument structure.

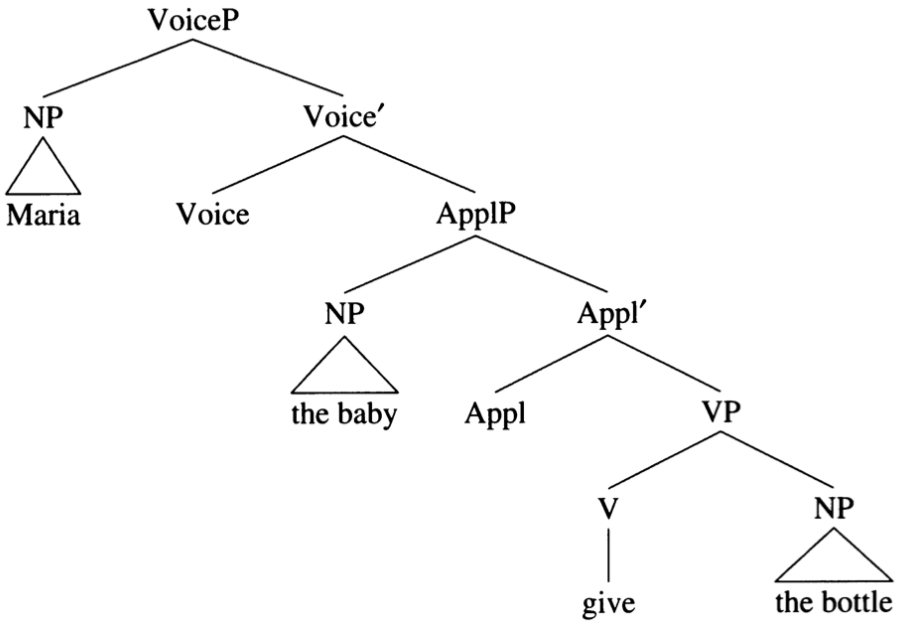
In the meantime, if one accepts evidence of derivationality and incorporates it into our current frameworks (e.g., Distributed Morphology, Halle and Maranz 1993; 1994), a great deal of convergence becomes possible.

Consider the following structure from Bruening (2010) that follows structural proposals of Marantz (1993):

(46) a. Maria gave the bottle to the baby.

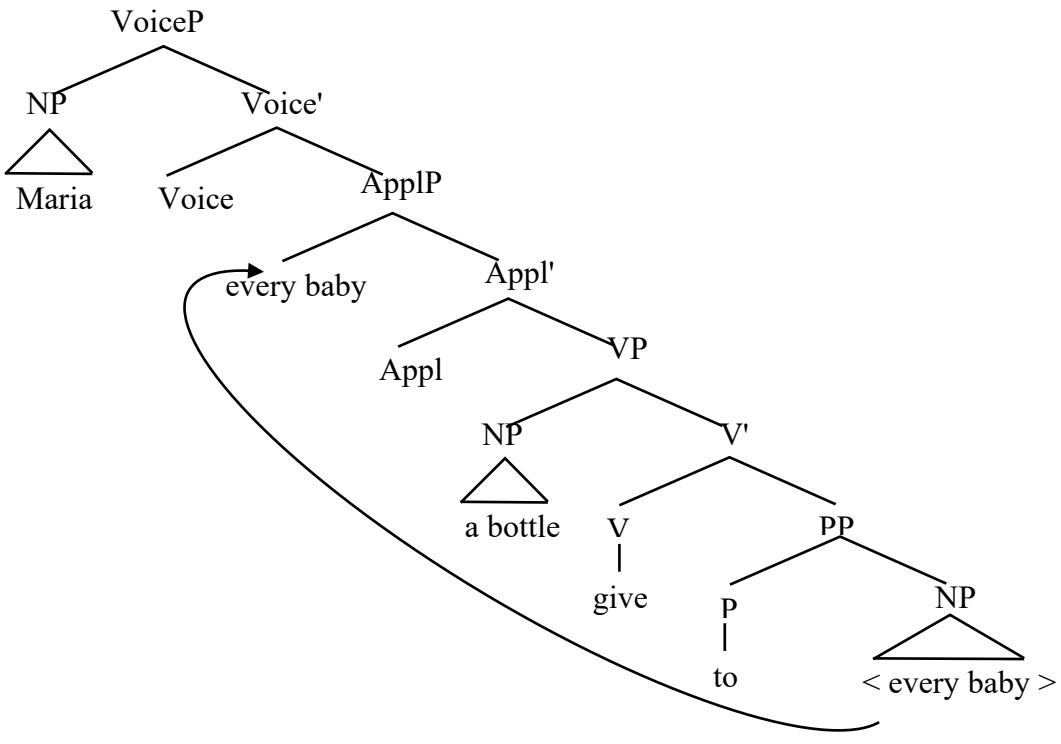


(46) b. Maria gave the baby the bottle.



A proposed derivation of the Double Object Construction (Bruening's 2010 (46a) + Argument Inversion).[15]

(47)



[15] See also Georgala, E. Waltraud P. & J. Whitman (2008); Georgala (2012) and Larson (2014).

My proposal for deriving the phenomenon of scope freezing:

- Let's assume the highest phrase in the extended projection defines a phase (Boškovič 2014) => covert movement QR will be able to apply within this phase (constrained by Shortest Move and Scope Economy, per Fox 2000), affecting scope relations/deriving scope ambiguity in the expected way.

- I propose that Argument Inversion (i.e., overt raising into Spec, XP) also defines a phase: the highest phrase in the extended projection of VP no longer defines a phase, instead the complement of the projection that the lower QP raises into now defines a phase that gets spelled out.

    - ⇨ the lower of the two QPs will now be 'trapped' within this phase, e.g., it will only be able to undergo QR within this phase upon its Spell out.
    - ⇨ The two QPs will thus end up in two different phases, which is highly reminiscent of the clause-bounded nature of QR we observed at the beginning.

- The lower QP should still be able to move <u>overtly</u> into the higher phase iff it is at the phase edge at Spell out, thus accounting for the observation that the lower QP is still able to move.

- The totality of facts discussed here provide new evidence for the contextuality of phases (Bobaljik and Wurmbrand 2005, Bošković 2005, 2013b, 2014a,b, 2017, den Dikken 2007 i.a.)

- Two theoretical possibilities to explore:

    - ⇨ Argument Inversion somehow defines a phase.
        - **Q: why?**

    - ⇨ Raising a QP into a Specifier of a particular functional projection defines a phase (see esp. McGinnis 2001 on Event Applicatives/High Applicatives per Pylkännen 2008, being a phase).
        - **Q: is this indeed the head in question for Slavic?**

- ⇨ Implications for the syntax/phonology/IS interface

How do we handle quantification in phase theory? What are the implications of the contextual approach to phases for our understanding of the syntax of quantification and vice versa?

Selected References

Abels, K. & D. Grabska (under review) On the Distribution of Scope Ambiguities in Polish. Ms. University College London

Anagnostopoulou, E. (2003) *The Syntax of Ditransitives: evidence from clitics*. Studies in generative grammar 54. Moton de Gruyter: Berlin/New York.

Antonyuk, S. (2015) Quantifier Scope and Scope Freezing in Russian. Ph.D. Dissertation, Stony Brook University

Antonyuk, S., and R. Larson (2016) Scope Freezing in PP Dative Constructions? Presentation given at *Formal Description of Slavic Languages* 12 (FDSL), Humboldt University, Berlin, Germany

Antonyuk, S. (2019) Quantifier Scope in Russian. *Glossa: a journal of general linguistics* 4(1): 54. 1–27. DOI: https://doi.org/10.5334/gjgl.562

Antonyuk, S. (2020) The puzzle of Russian ditransitives. In Anna Pineda & Jaume Mateu (eds.), *Dative constructions in Romance and beyond*, 43–74. Berlin: Language Science Press. DOI:10.5281/zenodo.377653

Antonyuk, S. (2021) Russian OVS: towards a Better Understanding of the Construction's Properties and Significance. *Journal of Slavic Linguistics* 29: FASL extra issue. http://ojs.ung.si/index.php/JSL/article/view/156

Antonyuk, S. & R. Mykhaylyk (2022) Scope freezing and object shift in Ukrainian: Does Superiority matter?. *Syntax*. 00:1–25. https://doi.org/10.1111/synt.12229

Arad, M. (2007) The *Spray-Load* Alternation. In The Blackwell Companion to Syntax. DOI: 10.1002/9780470996591.ch63

Asarina, Alevtina. 2005. Russian binding theory: Two improved movement approaches. Unpublished paper. Work conducted at: Massachusetts Institute of Technology.

Bailyn, John Frederick. 2010. What's inside VP? New (and old) evidence from Russian. **In:** Wayles Browne, editor. *Annual workshop on Formal Approaches to Slavic Linguistics: The second Cornell meeting*. Ann Arbor, MI: Michigan Slavic Publications. 21–37.

Bailyn, John Frederick. 2012. *The syntax of Russian*. Cambridge, United Kingdom: Cambridge University Press.

Baker, M. C. (1997) Thematic Roles and Syntactic Structure. In *Elements of Grammar*, edited by Liliane Haegeman, 73–137. Dordrecht: Kluwer.

Bobaljik, J. D. and S. Wurmbrand (2012) Word order and scope: trans- parent interfaces and the 3/4 signature. *Linguistic Inquiry* 43(2). 371–421.

Boneh, Nora & Léa Nash. 2017. The syntax and semantics of dative DPs in Russian ditransitives. *Natural Language and Linguistic Theory* 35. 899–953. https://doi.org/10.1007/sl11049-017-9360-5.

Bošković, Ž. 2014. 'More on the edge of the edge,' Formal Approaches to Slavic Linguistics: The MacMaster Meeting, 2013, 44-66. Michigan Slavic Publications, Ann Arbor.

Bošković, Ž 2014**.** 'Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis', Linguistic Inquiry 45, 27-89.

Bošković, Ž. 2015. 'From the Complex NP Constraint to everything: Deep extractions across categories'. The Linguistic Review (GLOW issue) 32, 603-669.

Bošković**,** Ž. 2016. Contextual phasehood and the ban on extraction from complements of lexical heads: When does X become a phase? In M. Yasui and M. Mizuguchi (eds.) Phase theory and its consequences, 5-39. Kaitakusha, Tokyo.

Bošković, Ž. 2018. On movement out of moved elements, labels, and phases. *Linguistic Inquiry* 49, 247-282.

Bresnan, J. & T. Nikitina (2009) The gradience of the dative alternation. In Linda Uyechi and Lian Hee Wee, editors, *Reality Exploration and Discovery: Pattern Interaction in Language and Life*. CSLI Publications, pages 161–184.

Bruening, B. (2001) QR obeys Superiority: Frozen scope and ACD. *Linguistic Inquiry* 32:233–273.

Cinque, G. (1993). A Null Theory of Phrase and Compound Stress. *Linguistic Inquiry*, *24*(2), 239–297. http://www.jstor.org/stable/4178812

Chomsky, N. (1957). *Syntactic Structures*. The Hague/Paris: Mouton, ISBN 978-3-11-021832-9

Chomsky, N. (1995) The Minimalist program. Cambridge: MIT Press.

Cornilescu, A. (2020) Ditransitive constructions with differentially marked direct objects in Romanian. In Anna Pineda & Jaume Mateu (eds.), Da- tive constructions in Romance and beyond, 117–142. Berlin: Language Science Press. DOI:10.5281/zenodo.3776541

Cuervo, M. C. (2020) Datives as applicatives. In Anna Pineda & Jaume Mateu (eds.), Dative constructions in Romance and beyond, 1–39. Berlin: Language Science Press. DOI:10.5281/zenodo.3776531

Dikken, M. den (1995) Particles: On the syntax of verb-particle, triadic and causative constructions. Oxford/New York: Oxford University Press.

Dikken, M. den (2006) Relators and linkers: The syntax of predication, predicate inversion, and copulas. Cambridge, MA: MIT Press.

Dikken, M. den (2020). Differential object marking and the structure of transitive clauses. In L.Franco & P. Lorusso (eds), Linguistic variantion: Structure and interpretation. Berlin: Mouton de Gruyter. 217-29. Doi: 10.1515/9781501505201-013

Diesing, M. (1996) Semantic variables and object shift. In: Höskuldur Práinsson, Samuel Epstein and Steve Peter (eds.) *Studies in Comparative Germanic Syntax II,* 66-84. Dordrecht: Kluwer.

Dyakonova, M. (2009) A-phase-order. Ph.D. dissertation, Netherlands Graduate School of Linguistics.

Fox, D. (2000) *Economy and Semantic Interpretation*. Cambridge, Mass.: MIT Press.

Franks, S. (1995) Parameters of Slavic Morphosyntax. New York / Oxford: Oxford University Press.

Georgala, E. (2012) Applicatives in their structural and thematic function: A minimalist account of multitransitivity. PhD thesis, Cornell University.

Georgala, E. Waltraud P. & J. Whitman (2008) Expletive and thematic applicatives. In Proceedings of WCCFL 26, ed. Charles B. Chang & Hannah J. Haynie. Sommerville, MA: Cascadilla Press. 181–89.

Glushan, Z. (2013) The Role of Animacy in Russian Morphosyntax. *Doctoral Dissertations*. 264. University of Connecticut.

Green, G. (1974). *Semantics und syntactic regularity.* Bloomington, IN: lndiana University Press.

Halle, M. & A. Marantz (1993) Distributed morphology and the pieces of inflection. The view from building 20, ed. By S. Keyser and K. Hale, 111-76. Cambridge: MIT Press.

Halle, M. & A. Marantz. (1994) Some key features of distributed morphology. MIT working papers in linguistics 21: papers on phonology and morphology, ed. By A.Carnie, H.Harley and T.Bures, 275-88. Cambridge: MIT Working Papers in Linguistics.

Harley, H. (1995) Subjects, events and licensing. Doctoral dissertation, MIT, Cambridge, MA. Harley, Heidi. 2002. Possession and the double object construction. In *Yearbook of linguistic variation*, ed. by Pierre Pica and Johan Rooryck, 31–70. Amsterdam: John Benjamins.

Harley, H. & S. Miyagawa. (2017) Syntax of Ditransitives. In *Oxford Research Encyclopedia of Linguistics*. DOI: 10.1093/acrefore/9780199384655.013.186

Higginbotham, J. (1983) Logical Form, Binding, and Nominals. Linguistic Inquiry 14(3): 395-420

Hornstein, N. (1995) *Logical Form: From GB to Minimalism*. Generative Syntax series. Wiley-Blackwell. 288pp.

Ionin, T. (2003) The one girl who was kissed by every boy: Scope, scrambling and discourse function in Russian. In Marjo van Koppen, Joanna Sio & Mark de Vos (eds.), *Proceedings of ConSOLE* X, 65–80. Leiden: SOLE.

Isačenko, A. (1966) O grammatičeskom porjadke slov. Voprosy jazykoznanija 6: 27–34.

Junghanns, U. & G. Zybatow. (1997) Syntax and Information Structure of Russian Clauses. In Wayles Browne (ed.), Formal Approaches to Slavic Linguistics 4: The Cornell Meeting, Ann Arbor, MI: Michigan Slavic Publications, 289–319.

Kayne, R. S. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Landau, I. (2010) *The Locative Syntax of Experiencers*. Linguistic Inquiry Monograph. The MIT Press. Cambridge, Massachusetts. London, England.

Larson, R. K. (1988) On the Double Object Construction. *Linguistic Inquiry* 19*:* 335-391.

Larson, R. K. (1990) Double Objects Revisited: Reply to Jackendoff. *Linguistic Inquiry*, 21: 589–632.

Larson, R. K. (2014) *On Shell Structure*. London: Routledge.

Larson, R.K., S. Antonyuk & L. Liu. (2019). Superiority and scope freezing. *Linguistic Inquiry*. https://doi.org/10.1162/ling_a_00300

Lavine, J. E., & Freidin, R. (2002) The Subject of Defective T(ense) in Slavic. *Journal of Slavic Linguistics*, *10* (1/2), 251–287. http://www.jstor.org/stable/24599685

Levin, B. & Hovav, M. Rappaport (1995) *Unaccusativity: At the Syntax-Semantics Interface*. Cambridge, MA: MIT Press.

Marantz, A. (1984). *On the Nature of Grammatical Relations*, vol. 10 of Linguistic Inquiry Monographs. Cambridge, MA: MIT Press.

Marantz, A. (1993). Implications of asymmetries in Double Object Constructions. In: Mchmbo, Sam A. (ed.). *Theoretical Aspects of Bantu Grammar 1*. Stanford: CSLI Publications, 113-150.

Marantz, A. (1997) No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In *University of Pennsylvania Working Papers in Linguistics* 4:2. Philadelphia: University of Pennsylvania.

Marantz, A. (2013) Verbal argument structure: Events and participants. Lingua 130. 152–168. DOI:10.1016/j.lingua.2012.10.012

Marvin, T. & A. Stegovec (2012) On the Syntax of Ditransitive Sentences in Slovenian. *Acta Linguistica Hungarica, Vol. 59 (1–2), pp. 177–203 (2012) DOI: 10.1556/ALing.59.2012.1–2.8*

Mykhaylyk, R., R. Rodina & M. Anderssen (2013) Ditransitive constructions in Russian and Ukrainian: Effect of givenness on word order. Lingua 137: 271-289.

Oerhle, R. (1976). *The Grammatical Status of the English Dative Alternation*. PhD thesis, MIT, Cambridge, MA.

Ormazabal, J. & J. Romero (2010) The Derivation of Dative Alternations. In M. Duguine et al, eds. *Argument Structure and Syntactic Relations from a cross-linguistic Perspective.* Amsterdam/Philadelphia: John Benjamins, 203-232.

Pietroski, P. & N. Hornstein (2002) Does every sentence like this exhibit a scope ambiguity. In Wolfram Hinzen & Hans Rott (eds.), *Belief and Meaning: Essays at the Interface*. Deutsche Bibliothek der Wissenschaften. pp. 43--72 (2002)

Pesetsky, D (1982). *Paths and Categories*. Cambridge, MA: MIT Press.

Pesetsky, David (1995). *Zero Syntax: Experiencers and Cascades.* Cambridge, MA: MIT Press.

Preslar, M. (1998) The Subject Position in Russian Impersonal Sentences. Linguistic Analysis 28(1–2): 33–66.

Pylkkänen, Liina. 2008. Introducing arguments (Linguistic Inquiry Monographs 49). Cambridge, MA: MIT Press.

Ramchand, G. (2008) Verb Meaning and the Lexicon: A First-Phase Syntax. Cambridge: Cambridge University Press.

Selkirk, E. (1984) Phonology and Syntax: The Relation between Sound and Structure. Cambridge, Mass.: MIT Press

Selkirk, E. (1995) Sentence Prosody: Intonation, Stress, and Phrasing. in J. A. Goldsmith (ed.), The Handbook of Phonological Theory, London: Basil Blackwell, pp. 550–569

Sirotinina, I. (1965/2003) Porjadok slov v russkom jazyke. Moscow: Editorial, URSS.

Slioussar, N. (2007) Grammar and Information Structure. Ph.D. dissertation, University of Utrecht.

Schneider-Zioga, P. (1988) Double objects and small clauses. Ms., University of Southern California, Los Angeles.

Stjepanovic, S. (1999) What do second-position cliticization, scrambling and multiple wh-fronting have in common? Ph.D. Dissertation, University of Connecticut.

Szabolcsi, A. (1997) Strategies for scope taking. In *Ways of scope taking*, ed. Anna Szabolcsi, 109–155. Dordrecht: Kluwer.

de Swart, P., Monique Lamers, Sander Lestrade (2008) Animacy, argument structure, and argument encoding. *Lingua* 118(2): 131-140

von Heusinger, K. & G. A. Kaiser. (2003) Animacy, specificity, and definiteness in Spanish. In Klaus von Heusinger & Georg A. Kaiser (eds.), Proceedings of the Workshop *Semantic and Syntactic Aspects of Specificity in Romance Languages* (Arbeitspapier 113), 41–65. Universtität Konstanz

Wood, Jim & Alec Marantz. 2017. The interpretation of external arguments. In Roberta D'Alessandro, Irene Franco & Ángel J. Gallego (eds.), The verbal domain, 255–278. Oxford: Oxford University Press. DOI:10.1093/oso/9780198767886.001.0001

Wu, H. and R. K. Larson (under review) Quantifier Scope and Subjecthood in Mandarin. Ms.

Yokoyama, O. (1986) Discourse and Word Order. Philadelphia: John Benjamins.

Zanon, K. (2015) On hybrid coordination and quantifier raising in Russian. Bloomington, IN: Indiana University dissertation.

Zubizarreta, M.L. (1998) *Prosody, Focus and Word Order*. Cambridge, MA: MIT Press.