Grammatical relations in Russian:
a view from the verbal lexicon

Sergey Say

(Institute for linguistic studies, RAS / St.Petersburg State University)

serjozhka@yahoo.com

Outline of the talk

- Background and aims
- Database
- Argument selectors
- Discussion

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o **Background and aims**
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o Discussion

Previous studies

- Extensive literature on subjecthood and grammatical relations in Russian [Kozinsky 1983; Comrie 1989: 77-84; Schoorlemmer 1993; Chvany 1996; Testelec 2001: 322-344, Letuchij 2012, etc.]

- Typical approach: **canonical** vs. **non-canonical** subjects
  - canonical subjects are marked for the nominative case and are supposed to pass all or most subjecthood tests
  - non-canonical subjects are non-nominative arguments that nevertheless pass many or most subjecthood tests

Previous studies

- E.g. widely discussed "dative subjects" in the dative-infinitive construction. They can

  - bind reflexives:

(1) *Kak   serdcu   vyskazat'   sebja?*
    how heart.DAT express.INF REFL.ACC
    'How can the heart express itself?' [Kozinsky 1983]

  - trigger co-predicative agreement:

(2) *Emu   by   vernut'sja   zhivym-zdorovym   iz   Baku.*
    he.DAT SUBJ come.back   alive-healthy.**MASC**.INS.**SG** from Baku
    'If only Merjanian could return from Baku alive and well' [RNC]

  - and pass most other subjecthood tests

[Timberlake 1976; Moore & Perlmutter 2000; Bonch-Osmolovskaja 2003; Zimmerling 2009; 2012]

Previous studies

Entities that have been tested for subjecthood:

- dative nominals in the dative-infinitive construction
- instrumental agentive phrases in passive constructions
- genitival NPs in negated sentences
- several types of zeros in constructions without nominative subjects, e.g.

(3) *V   takom tone o   sebe   ∅ ne   razgovarivajut*
In   such   tone about **self.LOC**   not   talk.PRS.3PL
'One should not speak in such a tone about themselves' [Kozinsky 1983]

- "Inversion nominals" in the dative case [Moore & Perlmutter 2000] with verbs and predicatives like *nravit'sja* 'like' (lit. 'appeal to'), *zhal'* 'to regret' (lit 'to be pity to sb.') etc.

Problems

- A tacit / hidden assumption: behavioral and control properties are identical within broad classes of arguments that are identified through morphological case and, to a lesser extent, semantic/thematic role distinctions

- Conclusions are based on the analysis of nice exemplar sentences, either made-up or cherry-picked

- Inferences are being made about large classes of sentences, potentially differing from the ones tested in a number of ways:
  - ontological properties of arguments, e.g. animacy
  - referential properties of arguments
  - word order
  - verb lexeme
  - etc.

Problems

Typical argumentation:

(4) *Mal'chik$_i$ udaril   devochku   i ___$_i$ ubezhal*
      boy.NOM   hit.MASC   girl.ACC   and   ran.away.MASC
      'The boy hit the girl and ran away'

Ex. (4) is grammatical => nominative NPs can control zero anaphora in coordination reduction.

Problems

Typical argumentation:

(4) *Mal'chik$_i$ udaril   devochku i ___$_i$ ubezhal*
    boy.NOM   hit.MASC girl.ACC   and   ran.away.MASC
    'The boy hit the girl and ran away'

Ex. (4) is grammatical => nominative NPs can control zero anaphora in coordination reduction.

But is this true of **any** nominative NP? What about (5a), given that (5b) is ungrammatical?

(5a) *Devochku udaril   mal'chik*
    girl.ACC   hit.MASC boy.NOM

(5b) **Devochku udaril   mal'chik   i ___$_i$ ubezhal*
    girl.ACC   hit.MASC boy.NOM   and   ran.away.MASC

Problems

- Large classes of arguments that are often assumed on a priori grounds:

  - NOM arguments of transitive verbs

  - NOM arguments of monovalent verbs ($^\#$)

  - ACC arguments of transitive verbs

  - DAT arguments of psych verbs ("I-nominals")

  - INS agentive arguments of passive clauses

  - etc.

- Incongruences between individual verbs are looked over, ignored or interpreted as unsystematic noise

$^\#$ These are sometimes divided into "unaccusatives" and "unergatives" [Pesetsky 1982; Babyonyshev 1996, inter alia]

Objectives

- One cannot solve all these problems at once, but it is possible to make a step in that direction

- Bottom-up approach to subjecthood and GRs

- To test empirically whether arguments of individual verbs in Russian do indeed form large equivalence sets with respect to GR-relevant properties

- To this end, one has to answer questions like e.g.

  - can the DAT argument of *prinadlezhat'* 'belong' ("possessor") bind reflexives?

  - can the ACC argument of *stoit'* 'cost' be passivized?

  - etc.

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o Argument selectors
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Database

- Only b-sentences are taken into account (for passives, derived impersonals, clausal arguments etc. see elsewhere)

- Verb sample: 323 different verbs

  - covering all major verb types defined in terms of numerical valency, case frames and thematic role configurations

  - sufficiently frequent verbs (> 100 ipm)

  - including equivalents of verb meanings that figure prominently in lexical-typological studies of GRs [Nichols 2008; Valency Patterns Leipzig (ValPaL); Bickel et al. 2014; Say 2014]

- Each verb is only analyzed in one subcategorization frame, which was considered "basic" (usually, the first construction in www.framebank.ru)

Database

- Numeric valency identified for each verb: monovalent, bivalent or trivalent

Numerical valency	Generalized argument classes	No. of verbs	No. of arguments
1	S	54	54
2	A2, P	164	328
3	A3, G, T	105	315
Total		**323**	**697**

- Generalized argument classes (A2 vs. P; A3 vs. G vs. T) are tagged based on lexical entailment properties, cf. [Bickel 2011; Bickel et al. 2014]

Database

"Lexical entailments defining generalized argument classes

a. A vs. P: A accumulates more lexical entailments than P on the following properties:

- causing an event (e.g. A *hits* P, A *kisses* P, A *goes* to P, A *meets* P)
- volitional (e.g. A *hits* P, A *kisses* P)
- sentient (e.g. A *sees* P, A *looks* at P, A *loves* P, P *pleases* A)
- independently existing (e.g. A *bakes* P, A *makes* P)
- having control over another participant (e.g. A *has* P, P *belongs* to A)

b. G vs. T: G accumulates more lexical entailments than T on the following properties:

- stationary relative to movement of another participant (e.g. A gives T to G, A loads T onto G, A covers G with T, A cuts G with T)
- receiving or being exposed to an experience (e.g. A shows T to G, A tells T to G)"

Bickel, Balthasar, Taras Zakharko, Lennart Bierkandt & Alena Witzlack-Makarevich, 2014. Semantic role clustering: An empirical assessment of semantic role types in non-default case assignment. Studies in language, 38 (3). Advances in research in semantic roles. 485-511.`

Database

- The 697 verb-specific arguments are checked against 27 argument selectors:

  > … argument selectors refer to any morphosyntactic structure, process, rule, constraint or construction that selects a subset of arguments (and possibly non-arguments) and treats them differently from other arguments (or non-arguments) of the clause [Witzlack-Makarevich & Bickel 2013]

- Assigning values in the database (work in progress):
  - whenever possible, based upon (non-)occurrence of relevant constructions in the Russian National Corpus (www.ruscorpora.ru)
  - if impossible, web searches (Google)
  - last resort: intuitive grammaticality judgments

Witzlack-Makarevich, Alena & Balthasar Bickel. 2013. Handbook of grammatical relations questionnaire. http://www.autotyp.uzh.ch/projects/grhandbook/handbook-quest.html

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Argument selectors

- The crucial feature of the database is information about 27 argument selectors
- Many of these data back to subjecthood properties from [Keenan 1976] and/or are otherwise typologically relevant
- Some are language-specific, including some two or three that have not been previously discussed

Argument selectors (1): coding

- Case
- Agreement ("indexing")
- Word order

Argument selectors (2): behaviour

- Ability to host case-deficient argument (e.g. 'about 10 people')
- Addressee / omission in the imperative construction
- Relativization: active participle
- Relativization: passive participle
- Relativization: conjunction (sic! not pronoun) *chto* 'that'
- Genitive of negation
- Case in nominalizations
- Alternation with the dative in the dative + infinitive construction
- Alternation with the dative in the "feel-like" reflexive impersonal construction
- Promotion to the nominative under passivization
- Alternation with the *po* + DAT distributive phrases
- Alternation with the genitive in the comparative construction
- Ability to float quantifiers

Argument selectors (3): control

- Ability to control depictives (secondary adjectival predicates)
- Control in the infinitive construction (target, controlee)
- Obviation in dependent subjunctive clauses
- Raising
- Converb (target)
- Converb (source)
- Binding of reflexive pronouns
- Binding of reciprocal pronouns
- Coordination reduction
- Purpose infinitive (source)
- *Chtoby* (subjunctive conjunction) + infinitive dependent clauses (source)

Argument selectors: case

verb	meaning	numerical valency	1 (S, A₂, A₃)	CASE (1)	2 (P, T)	CASE (2)	3 (G)	CASE(3)	caseframe	example
…										
надевать	put.on	3	A3	NOM	T	ACC	G	na_ACC	⟨A3-NOM, T-ACC, G-na_ACC⟩	Она решила надеть на сына свитер.
надоесть	be.bored.with	2	A2	DAT	P	NOM			⟨A2-DAT, P-NOM⟩	Мальчику надоели игрушки
называть	name_smb_sth	3	A3	NOM	T	INS	G	ACC	⟨A3-NOM, T-INS, G-ACC⟩	Они назвали дочь Сашей
называться	be.called	2	A2	NOM	P	INS			⟨A2-NOM, P-INS⟩	То, что вы сказали, называется пошлостью
наказывать	punish	3	A3	NOM	T	za_ACC	G	ACC	⟨A3-NOM, T-za_ACC, G-ACC⟩	Отец наказал мальчика за непослушание
накрывать	cover	3	A3	NOM	T	INS	G	ACC	⟨A3-NOM, T-INS, G-ACC⟩	Мать накрывает ребенка одеялом.
нападать	attack	2	A2	NOM	P	na_ACC			⟨A2-NOM, P-na_ACC⟩	Разбойник напал на прохожего
наполнять	fill.TR	3	A3	NOM	T	INS	G	ACC	⟨A3-NOM, T-INS, G-ACC⟩	Мы наполнили корзинку грибами [клубникой].
напоминать	remind	3	A3	NOM	T	o_LOC	G	DAT	⟨A3-NOM, T-o_LOC, G-DAT⟩	Она напомнила отцу о приезде жениха
наслаждаться	enjoy	2	A2	NOM	P	INS			⟨A2-NOM, P-INS⟩	Я наслаждалась тишиной, солнцем, морской водой.
находить	find	2	A2	NOM	P	ACC			⟨A2-NOM, P-ACC⟩	Она нашла гриб [камешек, монету].
начинаться	begin.INTR	1	S	NOM					⟨S-NOM⟩	Начинается экзаменационная сессия
недоставать	lack	2	A2	DAT	P	GEN			⟨A2-DAT, P-GEN⟩	Ему недостает ума [мужества].
нездоровиться	feel.unwell	1	S	DAT					⟨S-DAT⟩	Зубихину в этом полку явно не фартило
ненавидеть	hate	2	A2	NOM	P	ACC			⟨A2-NOM, P-ACC⟩	Он ненавидит ее
…										

Argument selectors: case

- High diversity: 52 default subcategorization patterns among 323 verbs

	NOM	ACC	GEN	INS	DAT	u_GEN	other
A3	105						
A2	150	3			7	4	
S	49	3			2		
P	12	78	9	16	9	YES	40
T		59	2	25	1		18
G		36			17	7	45
Adjuncts		YES		YES	YES	YES	YES

Traditional subjects

Argument selectors: case

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	NOM	ACC	GEN	INS	DAT	u_GEN	other
A3	105						
A2	150	3			7	4	
S	49	3			2		
P	12	78	9	16	9	YES	40
T		59	2	25	1		18
G		36			17	7	45
Adjuncts		YES		YES	YES	YES	YES

Blanks correspond to non-attested or impossible patterns
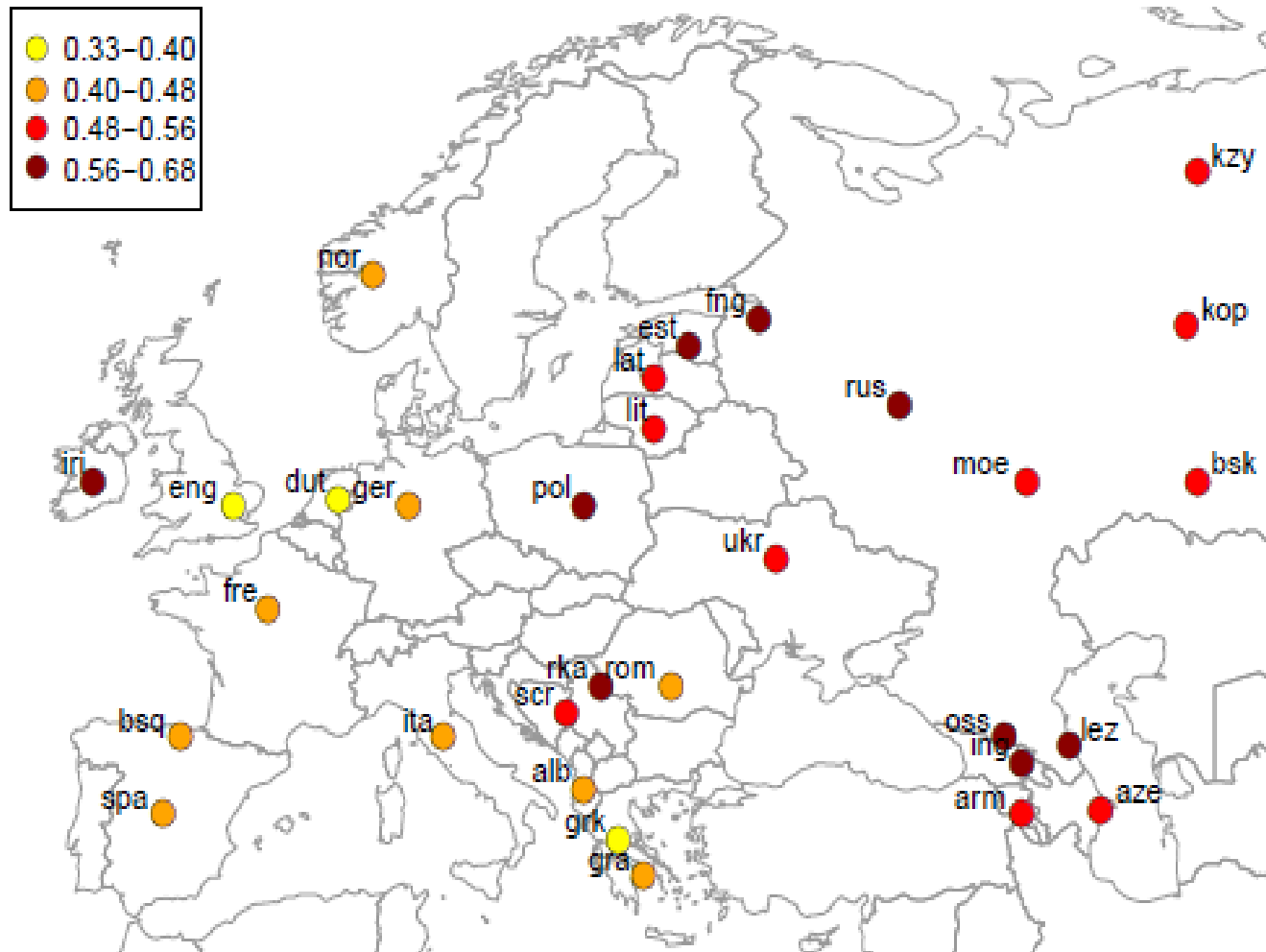
Argument selectors: case

- Entailment-based generalized argument classes (A2, S, P, etc.) cannot be directly mapped onto case marking patterns

- Monovalent verbs:
  - ⟨S-NOM⟩ is dominant;
  - ⟨S-DAT⟩ and ⟨S-ACC⟩ are attested in verbal b-sentences, but these patterns are more typical of derived and / or non-verbal constructions, outside the scope of this paper

Argument selectors: case

- Bivalent verbs
  - One of the core arguments is normally in the nominative
  - ⟨P-NOM⟩ arguments are traditionally viewed as subjects, cf. *bolet'* 'ache', *nravit'sja* 'like' (lit. 'appeal to'), *snit'sja* lit. 'come in a dream', *interesovat* 'interest'; but see below
  - High ratio of bivalent intransitives, e.g.
    - *verit'* 'believe' ⟨A2-NOM; P-DAT⟩;
    - *dostigat'* 'reach' ⟨A2-NOM; P-GEN⟩;
    - *maxat'* 'wave' ⟨A2-NOM; P-INS⟩ etc.
    - => Areal phenomenon!

- The ratio of non-transitives among bivalent verbs [Say 2014]

Argument selectors: case

- 3-argument verbs:
  - A3 is invariably in the nominative case
  - Typically, either T (59 verbs) or T (36 verbs) is in the Accusative case (9 verbs use oblique cases for both G and T)
    - ⟨T-ACC⟩ verbs: *бросать* 'throw', *платить* 'pay (sth. to sb.)', удалять 'remove', прятать 'hide', выигрывать 'win (sth. from sb.)', *просить* 'ask (lit. sth. from sb.)' etc.
    - ⟨G-ACC⟩ verbs: заворачивать, избавлять, *лишать* 'deprive of', награждать 'award', поить 'give drink to', учить 'teach'

(6) *Djadja   uchit   rebjat   russkomu   jazyku*
     uncle.NOM teach.PRS.3.SG   kids.ACC   Russian.DAT   language.DAT
     '(My) uncle teaches Russian to the kids' [RNC].

Argument selectors: agreement

- Agreement is straightforwardly related to case: nominative arguments (almost) always trigger agreement, other arguments do not

	NOM	ACC	GEN	INS	DAT	u_GEN	other
A3	**YES**						
A2	**YES**	NO			NO	NO	
S	**YES**	NO			NO		
P	**YES**	NO	NO	NO	NO	NO	NO
T		NO	NO	NO	NO		NO
G		NO			NO	NO	NO
Adjuncts		NO		NO	NO	NO	NO

Argument selectors: word order

- Sentence-level word order is "free"
- Hence, strictly speaking, word order is not an argument selector
- However, verbs can be characterized by their preferred word-order profiles
- Monovalent verbs:
  - SV is generally the dominant pattern…
  - … regardless of the case-frame: ⟨S-DAT⟩ and ⟨S-ACC⟩ arguments are normally used clause-initially
  - however, verbs differ significantly: SV-ratio ranges from almost 100% to 25%
  - VS is preferred with verbs of existence and coming into being: *pojavljat'sja* 'appear', *voznikat'* 'appear', *sushchestvovat'* 'exist', *nachat'sja* 'begin (intr.)'

Argument selectors: word order

- Bivalent verbs
  - AVP is the dominant option
  - Characterization of arguments in terms of entailments is a better predictor for word order than case; for example, ⟨A2-ACC; P-NOM⟩ verbs are more frequently found in AVP-constructions than in PVA constructions

(7)   *Moego   syna   interesuet   texnika*
       my.ACC   son.ACC   interests   technics.NOM
       A2   V   P
       'My son is interested in technics' [RNC]

Argument selectors: word order

- Trivalent verb
  - A3 favours pre-verbal position for all the verbs checked
  - Average percentage of preverbal A3s is higher than for A2s and Ss:

	preverbal	postverbal
S	59.8%	40.2%
A2	80.8%	19.2%
A3	91.2%	8.8%

  - T and G are mostly used postverbally
  - Relative order of T and G significantly varies across verbs, no dominant pattern can be found (neither in terms of case, nor in terms of T vs. G distinctions)

Argument selectors: active participles

- As suggested by their name, typically relativize on (nominative) subjects

spat' 'sleep' ⟨S-NOM⟩:
(8) *sp-jashch-ij*   *rebenok*
      sleep.ACT.PTCP-MASC.NOM.SG   'child'

- However, some ⟨P-NOM⟩ arguments in bivalent clauses are problematic

- By contrast, it is sometimes possible to relativize upon ⟨P-GEN⟩

nedostavat' 'lack' ⟨A2-DAT, **P-GEN**⟩
(9) *vynuzhden zarabatyvat' nedostajushchie   emu   dlja zhizni den'gi*
      has.to   earn   lack.PTCP.ACT.ACC he.DAT for   life   money
      ≈ 'He has to earn the money that he is in need of' [RNC]

Argument selectors: active participles

	NOM	ACC	GEN	INS	DAT	u_GEN	other
A3	YES						
A2	YES	NO			NO	NO	
S	YES	marginal			marginal		
P	YES/??	NO	NO/YES	NO	NO	NO	NO
T		NO	NO	NO	NO		NO
G		NO			NO	NO	NO
Adjunct		NO		NO	NO	NO	NO

- This selector is clearly related to the nominative case, but there are some disturbances

Argument selectors: *chto*-relativization

- A minor strategy that involves a relative conjunction (!) *chto*, 'what'
  - Does not decline for case, gender or number
  - Cannot trigger agreement
  - Can be used with both animate and inanimate relativized NPs

nadoest' 'make bored, ennyuer' ⟨A2-DAT, P-NOM⟩

(10) *... ta   rutina,   chto nadoela   mne   za   god*
    that   routine(F) that   made.bored.FEM I.DAT for   year
    ≈ 'The routine that I was made sick of' (P relativized) [RNC]

vstretit' 'meet' ⟨A2-NOM, P-ACC⟩

(11)   *...ta zhenshchina, chto ja   vstretil v   proshlom godu   v   Deli*
    that woman,   that I.NOM met   in   last   year   in   Delhi
    '... the woman that I met last year in Delhi' (P relativized) [RNC]

tošnit' 'feel sick / vomit' ⟨S-ACC⟩

(12) **malchik, chto toshnilo   vchera*
    boy,   that feel.sick.IMPERS.PST   yesterday
    expected: 'they boy that felt sick / vomited yesterday' (S relativized)

Argument selectors: chto-relativization

	NOM	ACC	GEN	INS	DAT	u_GEN	other
A3	all						
A2	all	*?			*	*	
S	all	*/???			*		
P	all	almost all	some	*	*		*
T		almost all	*	*	*		*
G		some			*	*	*
Adjunct		some		*	*	attested	---

Argument selectors: converbs

Target (controllee)

- the PRO of the clause headed by a converb ("adverbial participle) can only occupy the position of a NOM argument

- this is a necessary condition

(13a) ___$_i$ *prinadlezha pomeshchiku, Elizar*$_i$ *... rano byl vzjat na rabotu*
    ___ belong.CV landlord.DAT E. early was taken to work
    ≈ 'Elizar got a job when he was young, as he belonged to the landlord'

(13b)   * ... *prinadlezha krestjane, pomeshchik*
        belong.CV peasants.NOM lanlord

- It is not sufficient; converbs are not used for such verbs as e.g.

  - *болеть2* 'ache, feel pain' ⟨A2-u_GEN; P-NOM⟩

  - *стоить* 'cost' ⟨A2-NOM; P-ACC⟩

  - $^?$*нравиться* 'like' ⟨A2-DAT; P-NOM⟩

  - $^{??}$*сниться* 'dream (when sleeping)' ⟨A2-DAT; P-NOM⟩

SOURCE

- In prescriptive grammar it is often emphasized that only nominative subjects must control the reference of PRO in dependent converbial clauses

(14) *Astol'f$_i$ ne uvidel ego$_j$, [_____$_{i,*j}$ podxodja k domu grafa*]
A. not saw him approach.CV at house count's
'Adol'f$_i$ did not see him, when he$_i$ was approaching the count' house' [RNC]

- This restriction is often violated, though

(15) *U menja$_i$ dusha bolit,* _____$_i$ *gljadja na Veru*
at me soul aches watch.CV at V.
'My sould is aching when I look at Vera' [RNC]

- Besides, many NOM arguments never control PRO in dependent clauses (e.g. almost all inanimate NOM arguments)

Argument selectors: reciprocal pronoun

- The use of reciprocal pronouns is sensitive to case hierarchy:

    NOM > ACC > DAT > other

- If there are reciprocal relations between two arguments, than the one higher on the higher is expressed by a full-fledged NP, and the reciprocal pronouns is marked for the case associated with the lower argument

(16a) *Varja   boitsja, a   vdrug   my   poljubim drug   druga*
      Varja   fears,   and suddenly we.NOM love.FUT RECP RECP.ACC
      'Varja is anxious: what if we fell in love with each other?' [RNC]

(16b) *…nas   poljubit drug   drug?*
       we.ACC love.FUT RECP RECP.NOM

Argument selectors: reciprocal pronoun

- *predstavljat'* 'introduce' ⟨A3-NOM, T-ACC, G-DAT⟩

(17a) *Voshel   Anton   Pavlovich   i*
    entered   Anton   Pavlovich   i
    ja$_i$ *predstavila   drug   drugu*$_j$ *svoix*$_i$ *gostej*$_j$
    I,NOM   introduced   RECP   RECP.DAT   REFL.ACC   guests.ACC
    'A.P. entered the room and I introduced my guests to each other' [RNC]

(17b) *... ja   predstavila   svoim   gostjam   drug   druga*
    I.NOM   introduced   REFL.DAT   guests.DAT   RECP   RECP.ACC

- *xvatat'* 'suffice' ⟨A2-DAT, P-GEN⟩

(18a) *nam   tak   xronicheski   ne   xvatalo   drug   druga*
    we.DAT   so   chronically   NEG   sufficed.IMPERS   RECP   RECP.GEN
    ≈ 'We so constantly missed each other' [RNC]

(18b) *nas   tak   xronicheski   ne   xvatalo   drug   drugu*
    we.GEN   so   chronically   NEG   sufficed.IMPERS   RECP   RECP.DAT

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Discussion

Methodology

- For the majority of selectors there is a huge amount of variation between individual verbs

- It is not justifiable to analyze exemplar sentences and carry over the results onto the whole class of "similar" arguments

Discussion

Subject

- A few criteria converge upon the class of nominative arguments, traditional subjects:
  - agreement
  - controllee in dependent infinitival clauses
  - controllee in clauses with "adverbial participles" (converbs)
- ⟨A3-NOM⟩ show more subjecthood properties than other NOMs
- Nominative case is neither necessary nor sufficient condition for other selectors, including control of PRO
- However, no better class of arguments can be identified so that it would be relevant for several independent selectors
- Is "subject" category less relevant for Russian than for some other languages?

Discussion

Direct object

- The evidence for the direct object relation in Russian is weaker than in the case of subject.

- Accusative case is not directly linked to any syntactic selector

- In particular,
  - ⟨S-ACC⟩ are syntactically different from both ⟨P-ACC⟩ and ⟨S-NOM⟩;
  - ⟨T-ACC⟩ pattern together with ⟨P-ACC⟩ in many respects, but for ⟨G-ACC⟩ this is much less frequently so

Discussion

Indirect object

- Arguments lower than direct objects are usually not distinguished in the grammar of Russian (not Indirect object vs. Oblique distinction)

- However, the use of reciprocal pronouns is sensitive to the following case hierarchy:

  NOM > ACC > **DAT** > other

- This can be taken as evidence for the existence of the (somewhat marginal) category of indirect objects in Russian.

Thank you!

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