

Selected Topics in Slavic linguistics



Slavic languages are sufficiently similar and sufficiently different to provide an attractive research laboratory. (Corbett 1998)



^{ἑβελος} ^{ĩmbã}
Glossos
_{γλώσσα} _{tongue}

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Voice and Diathesis in Slavic



- (1)a. Devočka namazala xleb maslom.
‘The girl smeared the bread with butter’
- b. Devočka namazala maslo na xleb.
‘The girl smeared butter on the bread’

Diathetic representation of a ditransitive verb



(2)

(θ_1)	—	θ_2	θ_3
NP ₁	V	NP ₂	NP ₃

Semantic case of indirect internal argument



(3) Rabočie napolnili jamu vodoj.
workers_{NOM} filled pit_{ACC} water_{INST}

‘The workers filled the pit with water.’

Transitive impersonal *tošnit'* ('to feel nauseous')



(4)

—		θ_2
—	V	NP ₂

(5) Menja **tošnit.**
me_{ACC} nauseates

'I feel nauseous'

(6) Menja **prodolžalo** **tošnit'.**
me_{ACC} continued_{NEUTSG} to-nauseate

'I continued to feel nauseated.'



A typology of external arguments (1/2)

(7) Unergative:

1	—
NP ₁	V

(8) Unaccusative: *

—	—	2
NP ₁	V	NP ₂

* externalization of the direct internal argument is accompanied by affixation of the suffix *-sja*



A typology of external arguments (2/2)

(9) Impersonal:

—	—	2
	V	NP ₂

(cf. *tošnit'* in (4))

(10) Impersonal:

—	—	2
(NP ₁)	V	NP ₂

(cf. *korčit'* in §3.2)

(11) Auxiliary:

	V	

(12) Derived: *

1		2
—	V+af	NP ₂

* deverbal adjectives (active participles), deverbal adverbs, and subject-control infinitives

Initial impersonal verbs



(13) a. Ego **tošnilo** ot boli.
 him_{ACC} nauseated_{NEUT.SG} from pain

‘He was nauseous from the pain’/‘the pain made him nauseous’

b. Ego **korčilo** ot boli.
 him_{ACC} convulsed_{NEUT.SG} from pain

‘He was having convulsions from the pain’ = ‘the pain was giving him convulsions’

(14) a. *On **tošnilsja** ot boli.
 he_{NOM} nauseated_{MASC.SG} from pain

‘He was nauseous from the pain’

b. On **korčilsja** ot boli.
 he_{NOM} convulsed_{MASC.SG} from pain

‘He was having convulsions from the pain’



Vs. basic unacusative verbs

(15) Ruka u nego atrofirovalas' (*atrofirovala).
arm_{NOM.FEM} at him atrophied_{FEM}

'His arm atrophied'

(16) Ruka u nego atrofirovana (*atrofirovalas')
arm_{NOM.FEM} at him atrophied_{FEM}

'His arm is/has atrophied'

(17) *Ruku u nego atrofirovalo/atrofirovano.
arm_{ACC.FEM} at him atrophied_{NEUT.SG}

External cat. arg. is absent / optional / obligatory



(18)

—	—	2
NP ₁	V	NP ₂

atrofirovat'sja

(19)

—	—	2
—	V	NP ₂

tošnit'

(20)

—	—	2
(NP ₁)	—	NP ₂

korčit'

English vs. Russian



(21) a. We all remembered the old songs.

b. My vse **vspomnili** starye pesni.
we_{NOM} all remembered old songs_{ACC}

(22) a. The old songs were remembered by all of us.

b. *Starye pesni **byli vspomnjeni** vsemi nami.

(23) a. *To us remembered the old songs.

b. Nam **vspomnilis'** starye pesni.
us_{DAT} remembered+sja old songs_{NOM}

‘The old songs remembered to us’

English vs. Russian



(24)

1	—	2	remember
NP ₁	V	NP ₂	

(25)

—	—	2	3	vspomnit'
NP ₁	V	NP ₂	NP ₃	

Nonfinite verbal categories



(26) The derivation of deverbal adverbs and adjectives:

1	—	2	3
NP ₁	V	NP ₂	NP ₃

→

1	—	2	3
—	[V+af]	NP ₂	NP ₃



(27) Menja stalo/ prodolžalo/ perestalo tošnit'.
me_{ACC} began_{NEUT} continued_{NEUT} stopped_{NEUT} to-nauseate

‘I began/continued to feel nauseous / stopped feeling nauseous’

Raising vs. Control



(30) a. On **nameren** **upotrebljat'** èto lekarstvo.
'He intends to-use this medicine'

b. On **dolžen** **upotrebljat'** èto lekarstvo.
'He must use this medicine'

(31) a. *Èto lekarstvo **namereno** (im) **upotrebljat' sja**.
'This medicine intends to-be-used (by-him)'

b. Èto lekarstvo **dolžno** (im) **upotrebljat' sja**.
'This medicine must be-used (by-him)'

(32)

	V_{aux}	

(33)

1	—	2
NP_1	nameren	VP_{inf}

(34) Diathetic paradigm of *napolnit'*:

a. Rabočie **napolnili** jamu vodoj. (active voice)
workers filled pit_{ACC} with-water_{INST}

b. Jama **byla napolnena** vodoj (rabočimi). (passive voice)
pit was filled with-water_{INST} by-the-workers_{INST}

c. Jama **napolnilas'** vodoj (*rabočimi). (detransitive/middle/anticausative)
pit filled with-water_{INST}

d. Voda **napolnila** jamu (*rabočimi). (demiactive)
water_{NOM} filled pit_{ACC}

e. Jamu **napolnilo** vodoj. (impersonal: adversity)
pit_{ACC.FEM} filled_{NEUT} with-water_{INST}

'The pit got filled with water'

f. Jamu **napolnilo** voda. (hybrid impersonal=dialect only)
pit_{ACC.FEM} filled_{NEUT} water_{NOM.FEM}

g. Jamu **napolneno** vodoj. (impersonal passive=dialect only)
pit_{ACC.FEM} filled_{PARTICIPLE.NEUT} water_{INST}

'The pit was filled with water'



Diathetic paradigm

- Initial diathesis of *napolnit'* ('to fill')

(35)

(θ_1)	—	θ_2	θ_3
NP ₁	V	NP ₂	NP ₃

- Active voice (34a):**
unaltered mapping of a verb's initial diathesis onto syntactic structure

- Passivisation (34b):** lexical operation on the verb's initial diathesis

(36)

(θ_1)	—	θ_2	θ_3
NP ₁	V	NP ₂	NP ₃

→

—	θ_1	θ_2	θ_3
NP ₁	[V+af]	NP ₂	NP ₃

Diathetic paradigm



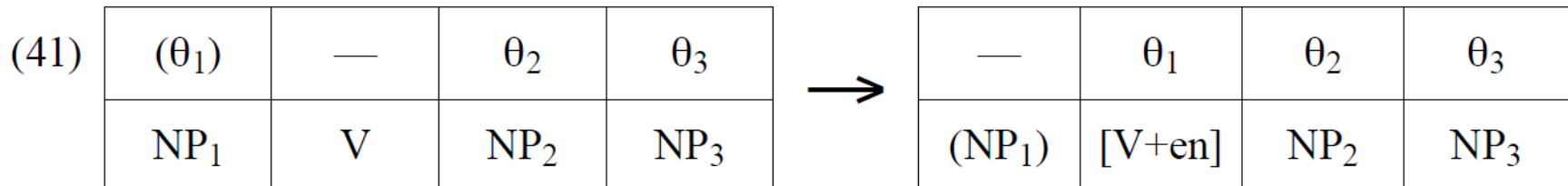
- binding of reflexives

(37) Vse oborudovanie, **privezenoe** s soboj, bylo rassovano po škafam.
 all equipment brought with self was put on shelves
 ‘All the equipment they brought with them was put on the shelves’

- transitive impersonal passives: -no/-to construction

(39) Litak **zbyto** (*zbyte). (Ukrainian)
 airplane_{ACC.MASC} shot-down_O shot-down_{NEUT}
 ‘The airplane has been shot down’

(40) Stefana **wzięto** do wołjska.²⁸ (Polish)
 Stefan_{ACC.MASC} taken_O into army
 ‘Stefan was drafted into the army’



Diathetic paradigm



- “unaccusative” adjectives

(42) a. Doroga byla vidna.
road_{NOM.FEM} was_{FEM} visible_{FEM}

b. Dorogu bylo vidno.
road_{ACC.FEM} was_{NEUT} visible_{NEUT}

‘The road was visible.’

c.

—	—	2
(NP ₁)	A-	NP ₂

Diathetic paradigm



- **Detransitivization**: middle, derived intransitive, and anti-causative (34c)

(45)

(θ_1)	—	θ_2	θ_3
NP ₁	V	NP ₂	NP ₃

→

—	—	θ_2	θ_3
NP ₁	[V+af]	NP ₂	NP ₃

- middle / detransitive

(46) Frukty bystro portjatsja.
‘Fruit spoils quickly’

(47) Frukty isportilis’.
‘The fruit spoiled’

(48) a. Frukty isporčeny.
‘The fruit is spoiled’

b. Frukty isportitlis’.
‘The fruit spoiled’

(49) a. On prostužen.
‘He has a cold’

b. On prostudilsja.
‘He caught cold’

(50) a. U nee ruki smor ščeny.
‘Her hands are wrinkled’

b. U nee ruki smorščilis’.
‘Her hands wrinkled’

Diathetic paradigm



- causative ~ anticausative alternation

(54)

θ_1	—	θ_2
NP ₁	V	NP ₂

(51) a. Kapitan **spešil** vsadnikov.

‘The captain dismounted the riders’

b. Vsadniki **spešilis’**.

‘The riders dismounted+sja’

c. Kapitan **zastavil** vsadnikov **spešit’ sja** / *spešit’

‘The captain made the riders dismount’

(52) a. On **possoril** staryx družej.

‘He quarreled the old friends (= made them quarrel)’

b. Starye druž’ja **possorilis’**.

‘The old friends quarreled+sja’

(53) a. Pastux **paset** stado.

‘The shepherd grazes the flock’

b. Stado **pasetsja**.

‘The flock is grazing+sja’



Diathetic paradigm

- All **detransitive** (34c) – **demiactive** (34d) – **impersonal** (34e) are derived from the initial diathesis of *napolnit'* with opt. ext. theta role (agent) not selected:

(55)

—	—	θ_2	θ_3
NP ₁	V	NP ₂	NP ₃

- detransitive** externalizes the direct internal theta role:

*Jama₂ napolnilas' vodoj₃ (*rabočimi)*

‘The-pit filled with-water (*by-the-workers)’

- demiactive** externalizes the indirect internal theta role:

*Voda₃ napolnila jamu₂ (*rabočimi).*
 water_{NOM} filled_{FEM} pit_{ACC} (by-the-workers)

‘Water filled the pit’

(57)

θ_3	—	θ_2
NP ₁	V	NP ₂

Diathetic paradigm



Cf. active ~ demiactive alternation

(58) a. (Oni₁) tušat₃ ogon' ₂ vodoj₃.
 'They put out fire with water'

b. Voda₃ tušit₃ ogon' ₂.
 'Water puts out fire'

- (adversity) impersonal blocks externalization of internal theta roles:

Jamu₂ napolnilo vodoj₃.
 pit_{ACC.FEM} filled_{NEUT.SG} water_{INST.FEM}

'The pit filled with water'

(66)

—	—	θ_2	θ_3
—	[V ^{+,-o}] _V	NP ₂	NP ₃

Distinguishing argument structure, syntactic dependants and valence in HPSG



(and its relevance for Slavic)

Preliminaries



- syntactically relevant representation levels
 - inherent lexical **argument structure**
 - actual syntactic **dependencies**
 - local combinatorial potential, i.e. **valence**

- encoded as list-valued features in HPSG
 - ARG-ST “arguments”
 - DEPS “grammatical relations”
 - VALENCE “grammatical functions”
 - SUBJ
 - COMPS

Summary



ARG-ST ↔ DEPS

- diathesis
- binding of reflexive pronouns
- clitic replication



Towards a theory of diathesis in HPSG

- the way in which actual syntactic dependencies relate to predicate's argument structure
- a two-tiered lexical representation of diathesis
 - a tier of **co-arguments** (ARG-ST)
 - a tier of **co-dependants** (DEPS)
- in a systematic interaction



diathesis

"syntactically selected adjuncts" [BMS'99]

ARG-ST <'arguments'>

DEPS <'diathetic grammatical relations' | 'adverbial grammatical relations'>

Diathetic paradigm construction



linking CONTENT \Leftrightarrow ARG-ST

mapping ARG-ST \Leftrightarrow DEPS

- argument preserving lexical processes
 - 'canonical' active (no diathesis alternation)
 - 'clitic doubling' (no diathesis alternation)
 - 'agentive' passive (diathesis re-arrangement)
- argument reducing lexical processes
 - reflexivisation (diathesis reduction)
 - impersonalisation (diathesis reduction)
 - 'pronominal affixation' (diathesis reduction)
 - medio-passive (diathesis re-arrangement and reduction)



General constraints

- **Argument Structure Extension (ASE) [BMS99]**
introduces an under-specified list of adverbial grammatical relations (*synsem* objects of type *adverbial*) as a suffix of the DEPS list
- **Argument Realisation (AR) [BMS99]**
defines the relationship between syntactic dependants and valence (between grammatical relations and grammatical functions)
 - the value of the SUBJ feature is a prefix of the DEPS list
 - the value of the COMPS feature contains the rest of the DEPS list
 - without the elements of type *gap-ss*
- apply to all members of the diathetic paradigm

arguments ↔ diathetic grammatical relations



- **argument conservation**

arguments are straightforwardly and trivially (i.e. preserving obliqueness) mapped to diathetic grammatical relations

- **a-subject blocking**

a-subject is not assigned a grammatical relation at all

- **a-object promotion**

a-object is mapped to the most prominent grammatical relation

- **a-subject demotion**

a-subject is mapped to a non-subject grammatical relation

- **no subject**

the value of the valence feature SUBJ must be an empty list

- **a-object conservation**

a-object is trivially mapped to direct object grammatical relation

Slavic diathetic paradigm



● How is diathesis organised depending on verb morphology?

1. active voice (in general)

$$\left[\begin{array}{l} \text{ARG-ST } \boxed{1} \\ \text{DEPS } \boxed{1} \oplus \text{list}('adverbial') \end{array} \right] \leftarrow \text{argument conservation}$$

2. reflexive middle (in general)

$$\left[\begin{array}{l} \text{ARG-ST } \langle \boxed{1} \mid \boxed{2} \rangle \\ \text{DEPS } \boxed{2} \oplus \text{list}('adverbial') \end{array} \right] \leftarrow \text{a-subject blocking}$$

3. passive participle of transitive verbs (in general) reflexive passive of transitive verbs (Russian, Bulgarian)

$$\left[\begin{array}{l} \text{ARG-ST } \langle \boxed{1}, \boxed{2} \mid \boxed{3} \rangle \\ \text{DEPS } \langle \boxed{2}, \boxed{1} \mid \boxed{3} \rangle \oplus \text{list}('adverbial') \end{array} \right] \leftarrow \text{a-object promotion \& a-subject demotion}$$



4. reflexive passive of transitive verbs (Czech)

$$\left[\begin{array}{l} \text{ARG-ST} \langle \boxed{1}, \boxed{2} \mid \boxed{3} \rangle \\ \text{DEPS} \langle \boxed{2} \mid \boxed{3} \rangle \oplus \text{list}('adverbial') \end{array} \right] \Leftarrow \text{a-object promotion \& a-subject blocking}$$

*Tady se staví továrna (*zahraniční firmou).*
here REFL builds factory-NOM (*foreign company-INSTR)
A factory is being built here (*by a foreign company).

5. reflexive impersonal of transitive verbs (Polish)

$$\left[\begin{array}{l} \text{SUBJ} \langle \rangle \\ \text{ARG-ST} \langle \boxed{1}, \boxed{2} \mid \boxed{3} \rangle \\ \text{DEPS} \langle \boxed{2} \mid \boxed{3} \rangle \oplus \text{list}('adverbial') \end{array} \right] \Leftarrow \text{a-subject blocking \& a-object conservation \& no subject}$$

Buduje się fabrykę.
builds REFL factory-ACC
A factory is being built.



6. impersonal -no/-to (Polish, Ukrainian)

$$\left[\begin{array}{l} \text{SUBJ } \langle \rangle \\ \text{ARG-ST } \langle \boxed{1} \mid \boxed{2} \rangle \\ \text{DEPS } \boxed{2} \oplus \textit{list('adverbial')} \end{array} \right] \leftarrow \text{a-subject blocking \& no subject}$$

a) *Pito herbatę.*

drink-IMPERS tea-ACC
Tea has been drunk.

b) *Nie mówiono o tym.*

not speak-IMPERS about that
It has not been spoken about that.

7. modality infinitive with dative subject (Russian, Polish)

$$\left[\begin{array}{l} \text{SUBJ } \langle \rangle \\ \text{ARG-ST } \langle \boxed{1} \mid \boxed{2} \rangle \\ \text{DEPS } \langle \boxed{1} \mid \boxed{2} \rangle \oplus \textit{list('adverbial')} \end{array} \right] \leftarrow \text{argument conservation \& a-subject demotion \& no subject}$$

R: *Tebe wystupat' na koncerte.*
you-DAT to-play at concert
You are supposed to play at the concert.

P: *Nie mnie jego sądzić.*
Not me-DAT him-DAT to-judge
It is not my task to judge him.



8. 'uncontrolled-mediated' impersonal of transitive verbs (Russian)

$$\left[\begin{array}{l} \text{SUBJ } \langle \rangle \\ \text{ARG-ST } \langle \boxed{1}, \boxed{2} \mid \boxed{3} \rangle \\ \text{DEPS } \langle \boxed{2}, \boxed{1} \mid \boxed{3} \rangle \oplus \text{list}('adverbial') \end{array} \right] \Leftarrow \text{a-subject demotion \& a-object conservation \& no subject}$$

- a) **Vetrom sbilo nas s nog.**
wind-INSTR knocked-IMPERS we-ACC from feet
The wind knocks us down.
- b) **Minoj otorvalo emu ruku.**
landmine-INSTR tore-IMPERS he-DAT arm-ACC
A landmine tore his arm.
- c) **Tečeniem uneslo lodku.**
stream-INSTR took-away-IMPERS boat-ACC
The stream took away the boat.



9. 'uncontrolled-force' impersonal (Russian)

$$\left[\begin{array}{l} \text{SUBJ } \langle \rangle \\ \text{ARG-ST } \langle \boxed{1} \mid \boxed{2} \rangle \\ \text{DEPS } \boxed{2} \oplus \textit{list('adverbial')} \end{array} \right] \leftarrow \text{a-subject blocking \& no subject}$$

Jamu napolnilo vodoj.
pit-ACC filled-IMPERS water-INSTR
The pit filled with water.



Locus of binding theory

- Ivan(1) byl priglašen Borisom(2) iz-za sebja(1/2) / v svoju(1/2) čest'.
John was invited by-Boris because-of SELF /in SELF's honour
- Eta kniga(1) byla kuplena Borisom(2) dlja sebja(2/*1 animacy restriction).
this book was bought by-Boris for SELF
- Ivan(1) byl predstavljen Borisom(2) sebe(1/2) / svoemu(1/2) novomu načal'nuku.
John was introduced by-Boris to-SELF /SELF's new boss
- Ivan(1) byl rassprošen Borisom(2) o sebe(1/?2) / o svoix(1/?2) rukopisjax.
John was interrogated by-Boris about SELF /about SELF's manuscripts

↪ flexibility needed with the concepts of:

- *obliqueness*
- *element prominence*



Locus of binding theory

- Manning: a-subject principle
 - formulated on 'nested' ARG-ST lists
- alternative: **subject-prominence principle**
 - based on a two-tiered lexical representation of diathesis
 - some anaphors must be bound by an entity that is first either on ARG-ST list (a-subject) or on DEPS list (d-subject)
- d-subject
(equivalent to the notion of 'external or externalised syntactic argument')

$$\left[\begin{array}{l} \text{SUBJ} \langle \boxed{1} \rangle \\ \text{DEPS} \langle \boxed{1} | \dots \rangle \end{array} \right]$$

- a binder of an anaphoric pronoun can be
 - the most prominent argument
 - the most prominent grammatical relation

Cliticisation and clitic replication



$$\left[\begin{array}{l} \text{'cliticized'--verb (Cz, Sk, Sn, SC, Pl)} \\ \text{ARG-ST} \left\langle \dots, \left[\begin{array}{l} \textit{clitic-ss} \\ \text{INDEX } \boxed{1} \end{array} \right], \dots \right\rangle \\ \text{DEPS } \boxed{2} \ominus \left\langle \left[\begin{array}{l} \textit{canon-ss} \\ \text{INDEX } \boxed{1} \end{array} \right] \right\rangle \end{array} \right]$$

$$\left[\begin{array}{l} \text{'cliticized'--verb (Bg, Mc)} \\ \text{ARG-ST} \left\langle \dots, \left[\begin{array}{l} \textit{ana-cl-ss} \\ \text{INDEX } \boxed{1} \end{array} \right], \dots \right\rangle \\ \text{DEPS } \boxed{2} \ominus \left\langle \left[\begin{array}{l} \textit{canon-ss} \\ \text{INDEX } \boxed{1} \end{array} \right] \right\rangle \end{array} \right]$$

$$\left[\begin{array}{l} \text{'cliticized'--verb (Bg, Mc)} \\ \text{ARG-ST} \left\langle \dots, \left[\begin{array}{l} \textit{pron-cl-ss} \\ \text{INDEX } \boxed{1} \end{array} \right], \dots \right\rangle \\ \text{DEPS} \left\langle \dots, \left[\begin{array}{l} \textit{canon-ss} \\ \text{INDEX } \boxed{1} \end{array} \right], \dots \right\rangle \end{array} \right]$$

Concluding remarks



DEPS

- structural case assignment (to adjuncts)
- pronominal resumption
- raising phenomena
- Bulgarian 'possessor raising'

DEPS ↔ VALENCE

- pro-drop effects