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6.5. CLITICS

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1. Clitics in the description of Slavonic languages

1.1. The notion of clitics.

Most linguistic theories since Zwicky (1977) incorporate a claim that prosodically deficient sentence elements labeled *clitics* have diagnostic morphological and syntactic properties opposing them both to standard word forms and to affixes, cf. Sadock (1995), Anderson (2005). Cross-linguistically, clitics are defined as functional elements with a status intermediate between roots to affixes (Aikhenvald 2002; Spencer and Luís 2012) marking categories like person, number, case, agreement, voice or discourse values like topic, focus, contrast, emphasis etc. In syntactic theory, clitics are analyzed either as head elements (Franks 2008; 2017) or as so-called non-branching elements that cannot be modified by other words (Bošković 2001; 2002; 2004; Pancheva 2005). The descriptions of Slavonic languages has made a valuable contribution to clitic studies and grammatical theory (Jakobson 1963; 1971; Zaliznjak 1985; 2008; Franks and King 2000; Rudin 1988; Dimitrova-Vulchanova 1999; Kosta and Schürcks 2009; Franks 2017). Slavonic languages make use of clitic pronouns, cf. OCS *mi, ti, si, m'a, t'a, s'a*, Cz *mi, ti, si, ho, j'se*, TAM markers, cf. Bg *šte*, Mac. *ke*, clitic auxiliaries, cf. Cz, *jsem, bych*, clitic particles, cf. BCS, Cz. *-li*, OR *li, že, bo*, Sn *pa*, Rs., Sk *by*, clitic prepositions, complementizers, cf. Sn, BCS *da*, Bg, Mc *da*, Pl *że*, and conjunctions, cf. Sn, *in*, Cz *a*, R. *i, a, no*.

The syntactic deficiency of clitics (Cardinaletti and Starke 1999) is a theoretically non-neutral notion based on two assumptions: 1) the ternary classification of morphological elements *word forms* vs *clitics* vs *affixes* holds for all languages, and 2) the special status of clitics as morphological elements always finds a correspondence in syntax. The typological validity of both claims has been challenged, since the label 'clitic' refers to a non-homogenous collection of data from different world's languages (Haspelmath 2015). Meanwhile, some aspects in the syntax of Slavonic clitics, notably the characteristics of Slavonic word order systems with clitics, seem to find empirical support, since these word order systems have external parallels outside the Slavonic area (Halpern and Zwicky 1996; Billings, Konopasky 2002; Zimmerling 2013).

1.1. Proclitics and enclitics.

The notion of clitic (in the following the ‘CL’ is used as the symbolic notation) originates from a classification of *phonetic words* i.e. segments of speech that have exactly one stress. In the Old Greek grammatical tradition, all clitics were subdivided into *proclitics*, i.e. preposed stress-less or prosodically weak elements that adjoin to stressed words from the left (CL=X) vs. *enclitics*, i.e. postposed stress-less or prosodically weak element that adjoin to stressed words from the right (X=CL).

1.2. Exoclitics and endoclitics

In recent grammatical theories, proclitics and enclitics are treated as members of the class of *exoclitics* i.e. prosodically weak elements placed externally respective to their *hosts*, i.e. word forms immediately preceding or following them. Some of the earlier generalizations advance a claim that all clitics are exoclitics, while true endoclitics, i.e. prosodically weak sentence elements inserted in the word forms hosting them (symbolic notation — $X=\downarrow CL=X$) do not exist (Klavans 1995). However, recent descriptions support the view that a number of both Indo-European and non-Indo-European languages have endoclitics. This is attested e.g. in Old Latin (Italic), European Portuguese (Romance), Pashto, Ossetic and Sorani (all — Indo-Iranian), Udi (Lezgic), Degema (Edoid), Gban and Yaure (both — Mande) (Harris 2002; Kari 2002; Spencer and Luís 2012; Zimmerling 2018a). Most clitics in modern and early Slavonic languages are exoclitics, while endoclititic insertion is attested in three modern East Slavonic languages, where prepositions are optionally or obligatorily inserted into split word forms of negative, indefinite and reciprocal pronouns, cf. R *nikto*_{NOM} ‘nobody’, *ni u kogo*_{GEN} ‘by nobody’, lit. ‘not by anybody’, **u nikogo* (Arkadiev 2016).

1.3. Prosodic classification of word forms.

In the Slavonic accentological tradition (Jakobson 1963; Dybo 1981; Zaliznjak 1985: 119) clitics are treated as word forms, cf. (Selkirk 1995). In the first step, all word forms are classified into *clitics*, i.e. defective word forms that cannot comprise a phonetic word without combining with other elements, vs. *non-clitics*, i.e. non-defective forms capable of comprising a phonetic word in isolation. In the second step, two classes of non-clitic elements are distinguished on the basis of their behaviour in combinations with clitics. So called *orthotonic words* do not yield their stress to clitics, while so called *enclinenomenal* words yield their stress over to enclitics or proclitics. In Old Russian, the locus of stress in combinations *enclinenomenon* + *clitic* is determined by a rigid rule called Vasiliev-Dolobko’s Law: the stress is placed on the rightmost enclitic or on the leftmost proclitic, if the enclitics are absent. Thus, the combination of the enclinenomenon OR *ѡз* ‘carriage’, with diverse enclitics and proclitics, gives the following possibilities:

- | | |
|----------------------|---|
| (1) a. CL=X | na = voz ‘ on the carriage’. |
| b. CL1=CL2=X | ne =na=voz ‘ not on carriage’ |
| c. CL1=CL2=CL3=X | i=ne=na=voz ‘ and not on the carriage’ |
| d. CL1=CL2=CL3=X=CL4 | i=ne=na=voz= že ‘and not on the carriage then ’ |

Similar rules of stress placement in phonetic words with Slavonic clitics and Slavonic enclitomena have been described in other old Slavonic languages on the basis on historical manuscripts with accentual markings. Stressed clitics occur in modern Slavonic languages (e.g. Bulgarian, Macedonian, Russian) as well, but the rules of stress placement in phonetic words with clitics follow generalized rhythmical patterns and do not reflect the orthotonic vs enclitomenal distinction any longer. E.g. Macedonian, a language with the postposed definite article, cf. (2a) and (2c) and phrase-level possessive clitics, cf. (2b) and (2d) has antepenultimate stress, whereby all phrase-level enclitics count as parts of the phonetic word (Mišeska Tomić 2012: 63).

- | | | | |
|----------|-------------------------------|--------|---------------------------|
| (2) Mac. | a. Bra TU čedo-t | dojde. | ‘The cousin came.’ |
| | Cousin.M-the.M.Sg come.3SgAor | | |
| | b. Bra TU čed-mi | dojde. | ‘My cousin came.’ |
| | Cousin.M-1Sg.Dat come.3SgAor | | |
| | c. Bratu ČET ka-ta | dojde. | ‘The female cousin came.’ |
| | Cousin.F-the.M.Sg come.3SgAor | | |
| | d. Bratu ČET ka-mi | dojde. | ‘My female cousin came.’ |
| | Cousin.F-1Sg.Dat come.3SgAor | | |

In Macedonian verbal clauses, clitic pronouns as *gi* ‘3Pl.Acc’ are used as verbal proclitics with the order #...CL=V...# They make up a joint phonetic word with the verbal host, cf. (3a-b), while postverbal complements are treated as separate phonetic words (Mišeska Tomić 2012: 65).

- | | | | | | | |
|-----|----|-------------------------------------|---------|---------|---------|---------------------------|
| (3) | a. | Koj | mu= | GI= | dava | ja BOL ka-ta? |
| | | who | 3Sg.Dat | 3Acc.Pl | give3Sg | apple-the.N.PL |
| | | ‘Who is giving him the apples?’ | | | | |
| | b. | Koj | ne= | mu= | GI= | dava ja BOL ka-ta? |
| | | who | 3Sg.Dat | 3Acc.Pl | give3Sg | apple-the.N.PL |
| | | ‘Who is not giving him the apples?’ | | | | |

1.4. Proclitic-enclitic sequences, clitic words and bound clitics.

In a standard case, a phonetic word in Slavonic languages consists of a stressed syntactic element optionally combined with clitics. Early Slavonic also licensed phonetic words consisting solely of proclitics and enclitics. For example, Old Church Slavonic, Old Bulgarian and Old Croatian originally licensed the clause-initial sequence *ne=li* consisting of the proclitic *ne=* ‘negation’ + the enclitic *=li* ‘yes-no question marker’ (Mihaljević 1997), Old Russian originally licensed sequences like *a=by* (<*a=* ‘and, but’ + *=by* ‘optative’), *ci=li* (Zaliznjak 1993: 289). Such proclitic-enclitic sequences were eliminated at an early stage as combinations of free clitic elements, but they can survive as *clitic words* i.e. functional elements reproduced as single lexical items. Russian developed new functional words *daby* ‘so that’ (<*da=* ‘additive’ + *=by* ‘optative’, *ibo* ‘because’ (< *i=* ‘and’ + *=bo* ‘causal’) and *ili* ‘or’ (< *i=* ‘and’ + *=li* ‘yes-no marker’), while Czech developed new functional words like *nebo* ‘or’ (< *ne* ‘negation’ + *=bo* ‘causal’), *až* ‘till’ (*a=* + *=že* ‘focus marker’). Cf. also the combination of the free proclitic *da=* ‘additive’ and a sequence of three clustering enclitics starting with *=že* ‘focus, contrast’ in the birch bark letter from the XII century (2) with the clitic word *daže* ‘even’ (<*da* + *že*) in a later text (3).

- (4) ONovR *da* *=že* *=ti₁* *=mi* boudete dŭbr[o] [Birch bark letter Smol. 12 (1100-1200)]

Comp focus affirmative 1Sg.Dat will good

‘If everything will indeed be fine with me.’

- (5) OR Upovanie bo **daže** dotolě dvižetsja, dondeže ne priidetī upovaemym vspryatīe.

[From Philipp the Hermit’s Dioptra. The conversation of Soul and Flesh (1300-1400)]

‘Since Hope **even** moves until the Hopeful reaches the perception.’

It is customary to distinguish *free* and *bound* clitics. Free clitics attach to sentence elements of a different kind and often occur in combinations with other free clitics, cf. example (2) above. Bound clitics combine with hosts of a given morphosyntactic type e.g. only with nominals or verbs or prepositions, and normally do not cluster with other clitics, cf. above the example (3). Slavonic free clitics often have side-uses as bound clitics. E.g. the common Slavonic focus particle *=že* is used in early Slavonic texts both as a free clause-level clitic and as part of the relative pronoun, cf. *i-že* ‘which’ (lit. ‘he who...’), o *něm-ž(e)* lit. ‘about him who...’. In the latter case it can be analyzed either as a bound clitic or as a bound morpheme.

A diachronically stable group of proclitic-enclitic sequences arises due to a special feature of Slavonic enclitic pronouns in the accusative case. Common Slavonic accusative clitics *m’a*, *t’a*, *s’a*, *ny*, *vy*, *na*, *na* attach both to non-clitic words and to proclitic prepositions. In the latter case, proclitic-enclitic sequences

like *na=m'a* ‘on me’, *za=s'a* ‘for oneself’ arise, which is attested in Old Church Slavonic (Vaillant 1948, § 262), Old Russian (Zaliznjak 2008: 36), other early Slavonic languages and some modern Slavonic idioms including Bosnian-Croatian-Serbian (BCS). Most bound accusative enclitics are segmentally identical to free accusative clitics, but the bound BCS form *=nj* ‘3Sg.Acc.M’ is non-identical to free accusative enclitic *=ga*.

1.5. Phonetic clitics and syntactic clitics.

Several linguists argue that classifications of clitics must be multi-dimensional, since the sets of clitics defined according to phonetic and syntactic criteria do not necessary coincide within one and the same language (Sadock 1995; Zaliznjak 2008: 8; Zimmerling 2013; Zimmerling and Kosta 2013). *Phonetic clitics* are elements incapable of forming a phonetic word without combining with other sentence elements (Jakobson 1963), while *syntactic* or ‘special’ clitics in terms of (Zwicky 1977) are elements taking syntactic positions non-available for *phrases*, i.e. multi-word constituents with head and complement elements. Phonetic clitics usually conform to specific conditions imposed on the inventory of phonemes, syllable structure, segmental length, *sandhi* phenomena, rules of accent placement like those shown above in (1) and (2) etc. Syntactic clitics, i.e. predominantly weak elements associated with a dedicated syntactic position, can be phonetically heterogeneous. A mismatch of this kind was observed by the pioneer of clitic syntax, Jacob Wackernagel, who noticed that the class of Old Greek functional words which in terms of syntax behave as second-position enclitics includes both stress-less and stressed particles (Wackernagel 1892). Slavonic languages are less problematic in this perspective, since Slavonic clitics usually do not impose rigid conditions on the inventory of phonemes. E.g. the Old Russian word form *ti* from ex. (4) can in clause-internal positions be identified as a enclitic particle *=ti₁* ‘indeed’ (Zaliznjak 1993: 282), as an enclitic dative pronoun *=ti₂* ‘you.2Sg.Dat’ or as a non-clitic pronoun *ti₃* ‘they.3Pl’. In the clause-initial position, only the third interpretation is possible.

The distinction of phonetic vs syntactic clitics is crucial, if one and the same clitic element has different phonetic properties in clauses of a different type. This phenomenon is characteristic of Macedonian, where pronominal clitics behave as proclitics in verbal clauses, cf. ex. (3) above, but as second-position enclitics in nominal clauses (Mišeska Tomić 2012: 67), cf. (6a-b) below :

- | | | | | | |
|----------|------------------------------------|------------|-------------|--------------|--------------------|
| (6) Mac. | a. NE | =si | = mu | VE ke | u Č itelka. |
| | Not | Aux.be.2Sg | 3Sg.M.Dat | already | teacher.Sg.F |
| | ‘You are not his teacher anymore.’ | | | | |
| | b. Komu | NE | =si | = mu | u Č itelka? |

Who.Dat Not Aux.be.2Sg 3Sg.M.Dat teacher.Sg.F

‘Whose teacher aren’t you?’

1.6. Clause-level clitics.

Most modern and old Slavonic languages have constraints on the placement of clause-level clitics which tend to take the post-initial position: depending on the language this position is identified either as the position after the first phonetic word, cf. Old Novgorod Russian, or the position after the first spelled-out constituent, cf. Czech, Slovak, Slovenian. BCS has both options: *Anina =im sestra nudi čokoladu* ‘Ana’s sister is offering chocolates to then’ ~ [_{NP} *Anina sestra*]=*im nudi čokoladu* ‘the same’ (Progovac 1996). This type of clitic placement is known as second-position phenomena (2P) or Wackernagel’s law (Wackernagel 1892; Jakobson 1971; Halpern and Zwicky 1996; Zaliznjak 2008; Zimmerling 2015a).

1.7. Syntactic deficiency of clitics and two series of Slavonic pronouns.

Standard definitions of syntactic deficiency predict that clitics are not used in contexts involving emphasis, contrast, enumeration and identification, so that the use of pronominal clitics in the context like ‘X gave smth to Y and Z’, ‘X gave smth to Y, but not to Z’, ‘It is X who has to do smth’ etc. yields ungrammaticality, if such meanings are regularly expressed by other forms in the same language (Zaliznjak 1993: 290-291; 2008: 129 —134; Cardinaletti and Starke 1999). This prediction holds for most Old and Modern Slavonic languages which retain two series of personal and reflexive pronouns — stressed forms vs clitics. For example, the correspondent in (7) justly applies the stressed pronoun **тобѣ** ‘2Sg.Dat’ in the context involving contrast ‘X gave gold to Y and did not give it to Z’. In the previous clause, she justly applies the enclitic pronoun **ти** ‘2Sg.Dat’ in a non-emphatic context:

(7) ONovR čemou ne vosoleši četo =**ti** =**esemo** vodala kovati ·ya dala **tobě** a nežatě ne dala
[Birch bark letter № 644 (1100-1120)]

‘Why don’t you send out the thing <gold jewelry> I gave you to forge? I gave it **to you**
and did not give it to Nežata!’

Along the same lines, what allows us to disambiguate the Old Russian example (4) above and interpret the enclitic element =*ti* used there in the cluster *da =že =ti₁ =mi boudete dūbr[o]* as the particle =*ti₁* ‘indeed’, not as its homonym =*ti₂* ‘you.2Sg.Dat’ is that the reading ‘let it be fine **both with you and me**’ is incompatible with the syntax of clitics.

Some linguists refute the criterion of deficiency, arguing that only those elements which have a segmental form non-identical to the form of the corresponding non-clitic word sharing the morphological marking with it (cf. OR *ti₂* ~ *tobě* ‘2Sg.Dat’) must be recognized as clitics in syntax, while prosodically weak elements morphologically homonymic to non-clitic words are so-called weak forms (Cardinaletti and Starke 1999). This claim is not entirely justified, since there are languages without two series of pronouns but with consistent 2P clitic placement (Mushin and Simpson 2008). The existence of pronominal clitics/bound pronominal morphemes and the placement of the latter series in positions not available for non-clitic categories are related but independent parameters of grammar. This view finds support in the history of Slavonic languages. Modern Polish preserved two series of pronouns, but the short forms (historically clitics) are no longer restricted to non-emphatic contexts. The gradual elimination of pronominal clitics in late Old Russian and the expansion of Old Russian stressed pronouns to the original zone of clitics is described in detail in Zaliznjak (2008: 129 — 220).

1.8. Clustering clitics and clitic-internal ordering.

A prominent feature of Slavonic languages and other languages with clause-level 2P clitics and Wackernagel’s law is the templatic principle of clitic-internal ordering: if a clause contains two (or more) clustering clitics *a* and *b* and they remain contiguous, they are placed in a rigid order *a* > *b* (*a* immediately precedes *b*) (Zaliznjak 1993; Franks and King 2000). The same principle holds for Slavonic languages with verb-adjacent clitics (Bulgarian, Macedonian) and for world’s languages with VP-internal clitics (French, Spanish, Italian, Romanian, Modern Greek, Albanian). On the synchronic level, clitic templates are idiosyncratic and non-predictable, since the templatic orders cannot be derived from the order of non-clitic categories. However, it is up to a certain extent possible to explain clitic templates historically (Zimmerling 2012c; 2013) and to establish the principles of the prosody-to-syntax interface underlying the templates (Billings, Konopasky 2002). For Slavonic languages, it has been shown that despite the fact that the clusters often contain clitics of more than one type — pronouns vs. auxiliaries vs. particles — no Slavonic language licenses the insertion of a clitic auxiliary into a block of clitic pronouns or vice versa. Other factors, such as cliticization time or prosodic weight, do not, in the Slavonic languages, override the principle of grouping the clustering elements into blocks of clitics sharing the same syntactic category (Franks 2008; Zimmerling and Kosta 2013; Kosta and Zimmerling 2013).

1.9. Constraints on the combinatorics of Slavonic clustering clitics.

Most, albeit not all, languages with clustering clitics have interface conditions constraining or excluding combinations of segmentally identical or nearly homophonous clitics, e.g. Spanish restructures the combination of article *le* + object pronoun *lo* to *se=lo*. Adjacent clitics in the same morphological case are often avoided too. However, Modern Czech occasionally licenses examples like (8), where the reflexive *=se* and the first dative clitic, the form *=mi* ‘1Sg.Dat’ syntactically belong to the main clause verb *nepodařilo*, while the second dative clitic *=mu* ‘3Sg.Dat.M’ and the accusative clitic *=ho* ‘3SgAcc.M-N’ syntactically belong to the embedded infinitive *poslat*.

- (8) Cz. [_{InfP} Poslat₂ kurýrem] =_{scREFL}¹ (1) **mi**_{DAT}¹ = (2) = **mu**_{DAT}² (3) =_{hoACC}² (4) dnes nepodařilo¹.
 ‘I did not succeed in sending it to him by courier today.’

Recent research on Slavonic clitics reveals one more group of constraints: sequences of two pronominal argument clitics where the second clitic stands higher in the person hierarchy are not desirable. Presumably for this reason, Bulgarian examples like (9a), where the first clitic is a 2Pers form and the second one is a 1Pers form are ill-formed, while examples like (9b), where the first clitic is in the 2Pers and the second one is in the 3Pers are well-formed.

- (9) Bg. a. *Ivan = *vi*_{2DAT}=**ni**_{1PL.ACC} predade. Intended: ‘Ivan gave us to you.’
 b. Ivan = *vi*_{2DAT}=**gi**_{3PL.ACC} predade. ‘Ivan gave them to you.’

Since pronouns cluster with the fixed order DAT, ACC in all major Slavonic languages, this type of constraints can be interpreted as a combined condition on the ordering of case and person hierarchies, Person-and-Case-Constraint (Pancheva, Zubizarreta 2017; Franks 2017: 261—303). Combinations of two adjacent personal pronouns in 1Pers and 2Pers are infrequent in text corpora and the corresponding test examples do not always sound natural.

2. Slavonic word order systems and external ordering of clitics.

Standard East Slavonic languages — Modern Russian, Modern Ukrainian and Standard Belarusian — lack clustering clitic pronouns and clustering auxiliary clitics, while the placement of fixed position clitic particles (Russ. *li*, *by*) does not constrain clause linearization to any significant extent. All other Slavonic varieties, including Old Russian, Old Ukrainian and Carpathian Ukrainian dialects (Tolstaja 2000; 2012) have clustering clitics, including clustering pronouns and auxiliaries. Slavonic languages and dialects with clustering clitics can be classified into four classes of word order systems, all which have external parallels in other world’s languages, both Indo-European and non-Indo-European.

2.1. W-systems with 2P clitics.

In standard 2P word order systems ('languages with Wackernagel's law', or W-systems as termed by Zimmerling 2013; Kosta and Zimmerling 2013), clausal 2P is the locus of clitic clustering: the constraint on clitic-verb adjacency is absent, which licenses orders like #X/XP — CL... V.... The verb can also be clause-initial and host the clitics, in which case no sentence element can appear between the verb and clitics: #V — CL, *#V — Y — CL. This group of Slavonic languages includes Czech (Hana 2007), Slovak, BSC (Progovac 1996; Radanović-Kocić 1996), Slovenian, Burgenland Croatian, Vojvodina Rusyn (Browne 2008), Carpathian Ukrainian (Tolstaja 2012a; 2012b), Old Novgorod Russian (Zaliznjak 1993), Old Czech (Zikanová 2006; Zimmerling 2014), Old Serbian (Tolstaja 1991; Pavlović 2011), Old Ukrainian and arguably most other Old Slavonic languages of the 11th-16th centuries. Most of the world's languages with 2P clitics also license clause-initial NPs (+ 2P clitics; + clause-initial NPs): a subtype tagged 'W₂-systems' in (Zimmerling 2013). The opposite combination of parameters (+2P clitics; - clause-initial NPs) tagged 'W₁-systems' is attested in some of the world's languages — Lummi (Salish), Kabile (Afro-Asiatic) — but not in the Slavonic area. As regards clitic hosts, standard Slavonic W-systems show the following three main linearization strategies and additional options:

- (i) W_{2A}-systems. Clustering clitics are placed after the first phonetic word in the clause and split the clause-initial multi-word constituent (#X — CL, *#[_{XP} X₁...X_n] — CL) — Old Novgorod Russian (obligatory), BCS, Burgenland Croatian, Vojvodina Rusyn, Carpathian Ukrainian (optionally)
- (ii) W_{2B}-systems. clustering clitics are placed after the first spelled-out constituent (#XP — CL, *[__{XP} X₁ — CL — X₂]) — Czech, Slovak, Slovenian (obligatory);
- (iii) W_{2C}-systems. Clustering clitics are placed after the first spelled-out constituent or the first phonetic word (#XP — CL ~ [__{XP} X₁ — CL — X₂]) — Old Serbian, Old Czech.

A fourth option exists in Slovenian, where clustering clitics attach both to the first non-sentential constituent or to the sentential argument, cf. (10):

- (10) Slv. [_{CP} Ko= smo=se vrnili]=**se=je=že** stemnilo.

'When we returned home, it was already dark'.

This unusual behavior of Slovenian clitics is probably related to their ability to be fronted in main clauses, which adds emphasis, cf. Slv. *Videl=sem=ga* 'I saw him' — #*Sem=ga=videl* 'Yes, I saw him, <I tell you>'. However, the placement of Slovenian clitics after sentential hosts does not seem to be triggered by *information structure* (henceforth IS) and is discourse-neutral. A similar option is attested in Bulgarian, where the clitics can attach to the right clausal edge after some types of subordinate clauses, cf. (11):

- (11) Bg [_{CP} Dokato tikvata =se peče], = **se** prigotvja kremät.

'While the pumpkin is baked, the cream is being prepared'.

A possible parallel to IS-triggered clitic fronting in Slovenian exists in Upper Sorbian, where some clustering clitics are occasionally fronted in colloquial speech (Šewc-Schuster 1976: 122):

- (12) USo A. — Kak=so dže? 'How are you?'

Modern Bulgarian is a modified or enhanced W-system (labeled a W⁺-system in Zimmerling 2012a, 2012b; Zimmerling and Kosta 2013), where the requirement on clitic-verb adjacency (V — CL ~ CL — V; *...CL — Y — V, *V — Y — CL) is imposed on the principle of 2P placement (XP — CL — V ~ V — CL, *#CL — V, *XP — Y — CL). This means that Bulgarian clustering clitics are at one and the same time 2P elements and verb-adjacent elements. When a verbal clause lacks clitics in Bulgarian, the position of the verb respective to the clausal left edge is not constrained: #...V...#. W⁺-systems with similar characteristics are attested in other areas e.g. in Philippine languages (Tagalog, Cebuano, Bikol, Masbatenyo, Tagakaulo and others, see Lee and Billings 2005) but not in the Slavonic group. In Slavonic studies, the external position of Bulgarian clitics has been described differently – either as a VP-internal clitics (Rå Hauge 1976) or as a modified 2P (Gălăbov 1951; Dimitrova-Vulchanova 1999). Bulgarian clustering pronouns, auxiliaries and the yes-no particle *li* are strict enclitics: they cannot be fronted to the clausal left edge, a condition known as the Tobler-Mussafia law (Mussafia 1886; Tobler 1912). They can attach to the general negator *ne* and the future marker *uŕe*. These elements are not parts of the Bulgarian cluster, but form so-called *clitic bases*: they can host the clustering clitics both in clause-initial position (#*He/uŕe* — CL) and clause-internal position (#XP — *ne/ŕe*+CL). The orientation of Bulgarian clitics towards the left periphery is shown by such tests as the impossibility of NP1 — NP2 — V — CL order, cf.

the pair of sentences in (14), where both nominal arguments are indexed by the pronominal clitics, but the order $*\#X_i - Y_j \text{ V} - [\text{CL } a_i \text{ } b_j]$ is blocked:

- (14) Bg. a. [Na Ivan]_i [knigata]_j=săm=mu_i=ya_j vărnal.
 ‘I have returned the book to Ivan.’
 b. *[Na Ivan] [knigata] vărnal =săm=muya.

Another test confirming the 2P-orientation of Bulgarian clustering clitics is based on the distribution of periphrastic verbal forms containing a plus perfect marker (not a clitic itself). These forms host the clitics, but do not combine with other elements in XP.

- (15) Bg. a. [Kupil bih] =ya_i knigata_i ‘I would buy that book’
 b. [Knigata_i] =ya_i bih kupil.
 c. *[knigata_i] (1) [kupil bih] (2)=ya_i.

The classification of the Macedonian word order system is a matter of debate, since Macedonian clustering clitics are verb-adjacent and can be fronted. The clitic-initial order $\#CL - V$ is discourse-neutral in Macedonian, while the verb-initial order $\#V - CL$ is avoided or marked (Mišeska Tomić 2004). Some authors analyze Macedonian as a V-system, where the clitics lack any orientation to the clausal left edge (Franks 2017). However, such a description is hard to reconcile with the Macedonian word order in nominal clauses, where the same clustering elements behave as strict 2P enclitics: *Utre=mu=e rodenden* ‘Tomorrow is his birthday’ \sim $\#Rodenden=mu=e utre$ ‘His birthday is tomorrow’, cf. $*mu=e=rodenden utre$. Macedonian participial clauses show both linearization strategies, i.e. a participial head behaves syntactically either as a verb or a nominal: *mu=e=dojden v poseta* ‘He visited him at home’ \sim *dojden=mu=e v poseta* ‘the same’ (Mišeska Tomić 2012). Therefore, Macedonian is preferably analyzed as a Bulgarian-style W^+ -system with a canceled Tobler-Mussafia requirement (Dimitrova-Vulchanova 1999). Since the Macedonian general negator *ne* and future marker *ke* do not differ in prosodic orientation from Macedonian clustering pronouns and auxiliaries, they can be recognized as parts of the clitic cluster in the verbal clauses. The comparison of the Bulgarian and Macedonian W^+ -systems shows that Bulgarian has generalized the 2P clitic placement, since the Tobler-Mussafia law holds in all types of clauses, while Macedonian is a language with so-called *clause shifting* (Zimmerling 2015b), where the linearization strategy and the prosodic orientation of clitics (proclitics vs strict enclitics vs universal clitics) crucially depend on the clause type.

2.4. W^* - and V-systems. Clitic doubling.

Several Slavonic languages, including Old Church Slavonic, Old South Russian and Modern Polish, have not developed the clitic-verb adjacency constraint, but nevertheless deviate from standard W -systems in that the 2P strategy is optional and different subsets of clitics are subject to different linearization principles. Old South Russian normally merged clustering particles and dative pronouns in 2P, while the auxiliary clitics were mostly placed VP-internally and the accusative pronouns were placed either VP-internally or in 2P (Zaliznjak 2008). In Polish, the auxiliary clitics are used either as 2P elements or as bound verbal affixes, while the short pronouns either cluster with them or are incorporated in the verb

form. This gives rise to the variation (16a—c). In (16a), both clitics cluster in 2P. In (16b), only the pronominal clitic is in 2P. In (16c), only the auxiliary is in 2P.

- (16) Pol. a. Ty=~~ś~~=**go**=widział często w parku. ‘You have often seen him in the park.’
 b. Ty=**go** widział=~~eś~~ często w parku. ‘the same.’
 c. Ty=~~ś~~ widział=~~eś~~ często w parku. ‘the same.’

Romance-type word order systems with VP-internal clitics (tagged ‘V-systems’ in Zimmerling and Kosta 2013), which lack the orientation toward the clausal left edge, have only been attested in minor Slavonic varieties like Slavomolisano, spoken in Campobasso, Italy (Breu 2018). This is a result of contact influence from Italian, where the verb and the verb-adjacent clitics do not have a fixed position defined respective to the clausal left edge: #...[CL — V]...#. It is noteworthy that the much more durable influence from the Greek, Albanian and Romanian V-systems did not lead to the reanalysis of Bulgarian and, arguably, Macedonian, clitics as pure VP-internal elements. However, Macedonian and Bulgarian share with the aforementioned non-Slavonic languages another feature characteristic of V-systems: pronominal clitic doubling (cross-referencing) of the nominal argument (Slavkov 2008; Pancheva, Zubizarreta 2017). In particular, clitic doubling facilitates the subject – object inversion ($S\ V\ O \Rightarrow O_i\ pron_i\ V\ S$) and serves as a means diagnosing the role of the inverted object in Bulgarian:

- (17) Bg. a. ^{SUB}[Mariya] ^{OBJ}[nikoj] ne celuna
 ‘Mary did not kiss anybody’
 b. [Mariya]_i, ^{SUB}[nikoj] ne=^{OBJ}_i ja_i celuna
 ‘Nobody kissed Mary’, lit. ‘Mary, nobody not her kissed’.

In the first sentence, Мария is diagnosed as subject, in the second sentence it is the extraposed topic coreferential to the direct object clitic pronoun =я. The spreading of the clitic doubling construction in Balkan Slavonic roughly corresponds to the loss of the direct morphological marking (case inflection) of Bulgarian and Macedonian subject and object argument: those Balkan Slavonic languages which retain nominal inflection (BCS, Slovenian) lack clitic doubling.

2.5. Reordering of clusters. Late clitic placement and splitting.

Most Slavonic languages with W-systems and W⁺-systems with 2P-oriented clitics have options for *late clitic placement* and *cluster splitting*, when all or some 2P clitics skip the initial constituent and end up in a clause-internal position to the right from the locus of clusterization (i.e. 2P). This mechanism known as ‘skipping’ or ‘Barrier rules’ can be explained both non-syntactically (by assuming special phonetic properties by ‘bad’ clitic hosts or prosodic breaks after the initial constituent, cf. (Zaliznjak 1993; Halpern 1996; Anderson 2005) or syntactically i.e. in terms of phrasal movement/ clause reordering, cf. Ćavar and Wilder (1999); Zimmerling and Kosta (2013). An advantage of the syntactic approach is that it captures the reordering mechanism: when the clitics do not reach 2P or move out from it, the verb takes clausal 2P and hosts the displaced clitics: #XP — CL...V \Rightarrow #XP — V — CL. This mechanism known as ‘Main clause Barrier’ is attested in BCS, Old Novgorod Russian and in Slovak. It is absent in Bulgarian main clause declaratives but possible in Bulgarian interrogatives:

- (18) Bg. {^{Topic} *A okolo formata na Vesko*} imate=*li pritesnenija*?
 ‘Concerning Vesko’s form, do you have any worries?’.

The main clause Barrier mechanism has IS-motivation. If the initial constituent in a clause containing clitics is marked as an emphatic, contrastive or discourse-new topic, the reordering takes place, cf. (19):

- (19) ONovR {^{Topic} *Na molodogŭ*} dalŭ = *esemŭ rubelŭ*
 ‘As for the salt, I gave a rouble for it’.

In some Slavonic varieties, only single initial topics cause the clitic-verb reordering, while a combination of two potential topical Barriers reconstructs the basic order XP — CL: this distribution holds in some regional varieties of BCS and Slovak (Čavar and Wilder 1999; Zimmerling 2013: 445 — 446):

- (20) BCS, Cr. a. {*U svakom slučaju*} pameten=*je*
 ‘In any case, he is intelligent’
 b {*U svakom slučaju*} {*Ivan*} = *je pameten*
 ‘In any case, Ivan is intelligent’

In Old Novgorod Russian, virtually all heavy (multi-word) initial topical NPs caused reordering in a clause with clitics. In modern Slavonic languages, the correlation between the number of phonetic words in the clause-initial NP and its status as topical Barrier is less straightforward.

The inversion of the internal order in a sequence of clustering clitics is not typical for languages with Wackernagel’s law (W-systems and W⁺-systems). If a clitic is incompatible with a certain clitic host (i.e. negative marker) with a contiguous order, the general prediction is that it will move out of the cluster and attach to the next suitable host, which will lead to cluster splitting if other clitics combine with the first host:

- (21) ORuss. *A ou korolevi* (1)=_i *=esi muža slyšal* (2)=*li o tomŭ čestnomŭ krestě*
 (Hypatian Chronicle, entry for 1152 AD).
 ‘And from that king’s (1) man, have you heard (2) about that fair cross?’.

Macedonian applies the same strategy, with the proviso that only the Mc yes-no particle=*li*, is a strict enclitic and other parts of the cluster are not: consequently, Mc =*li* has to move out if the cluster is placed clause-initially: *=*li*=*mu*=*si*=*gi dal parite*? ⇒ *mu*=*si*=*gi dal*=*li parite* ? ‘Have you given him the money?’

Bulgarian shows a typologically rare option with so-called *nu*-inversion (Rudin et al. 1999). Since the contact sequence of the clitic base *ne* ‘negation’ + *li* ‘yes-no particle’ is prohibited, the **ne*=*lisi*=*go* sequence is reordered to *ne*=*si*=*li*=*gi*, where =*li* swaps its place with the next clitic without splitting the cluster:

- (22) Bg. *Ne* =*si*=*li*=*go viždal dnes* ?
 ‘Haven’t you seen him today?’.

Bulgarian and Macedonian are the only major Slavonic languages which have developed articles. The definite article behaves as a phrase-level 2P enclitic and attaches to the first word in the NP/DP: *knigagata*, ~ *novata kniga* ‘the new book’, nova-ta= **mu** kniga ‘**his** new book’ (Schurks, Wunderlich 2003). Definite and indefinite articles are also attested in minor Slavonic languages in a non-Slavonic environment (Breu 2008; 2012). It is generally assumed that article languages have a special functional projection, DP, headed by a determiner element (D), but it is difficult to give a framework-neutral description of the NP/DP distinction in Slavonic, since there is no consensus whether the DP is a syntactic

universal or not. Some authors claim that Slavonic languages without articles lack the DP layer (Bošković 2009), while other authors, cf. (Pereltsvaig 2006) argue that the NP/DP distinction is universal and articleless Slavonic languages systematically distinguish DPs, which occur in the argument positions (subject, object) and *small nominals* (bare NPs and Q(uantifier) P(hrases)), which occur in other positions: only small nominals allow extraction, while DPs ban it and behave as *islands*. Bulgarian and Macedonian DP-level elements (enclitic articles and possessive dative pronouns) do not extract.

3.2. Slavonic endoclititics.

A typologically unusual feature of the East Slavonic phrasal syntax is that Modern Russian, Ukrainian and Belarusian license split word forms and endoclititic insertion of prepositions into oblique forms of negative, indefinite and reciprocal pronouns. Under standard assumptions, the prepositions *u* ‘by’ and *k* ‘to’ are not considered part of the negative pronoun *nikto* ‘nobody’, oblique forms *nikogo* ‘by nobody’, *nikomu* ‘to nobody’ etc., while the negative morpheme *ni* is considered part of the negative pronoun, despite it is separated from *kogo*, *komu* by the prepositions. The endoclititic insertion of prepositions into split forms is fully grammaticalized in modern East Slavonic and in some cases excludes alternative ordering with proclisis, cf. R *ni u kogo* ‘by nobody’, *ni k komu* ‘to nobody’, **u nikogo*, **k nikomu*. The split pronominal forms even license the insertion of prosodically heavy prepositions, cf. R *drug druga* ‘each other’ and *drug blagodar’a drugu* ‘thanks to each other’, lit. ‘each **thanks** to other’ (Arkadiev 2016; Zimmerling 2018b).

Endoclititics are also attested in Old Czech, where one or more clustering clitic could be inserted into split forms of the indefinite pronouns. In the example (24) quoted from (Trávníček 1956: 148) two clustering clitics — the auxiliary clitic =*sem* and the reflexive clitic =*sě* — split the indefinite *jakž –koli*.

- (24) OCz **Jakž** sem sě **koli** narodil (Hrad.)
as AUX.1SG.PRES REFL =INDEF born.PST.1SG.
‘Ever since I was born’

The data from Slavonic languages add support to the hypothesis that the insertion of clitics into morphological structure is triggered by specific features of split word forms rather than by inherent features of the clitics (Zimmerling 2018a). Slavonic endoclititics always have side-uses as proclitics and endoclititics. That means that only with specific split bases which combine the characteristics of words with some characteristics of phrases can regular proclitics or enclitics split a word form.

4. Clitic syntax in diachronic perspective.

Diachronic research into Slavonic word order mostly concentrates on the following issues: 1) changes in parameter settings for branching in binary groups; 2) shifts in the overall syntactic type of the shared clitic system, e.g. W-system → W⁺-system (from PS to Bulgarian and Macedonian), W-system → W*-system (from PS to Polish) etc.; 3) grammaticalization and modification of clitic templates, changes in the inventory of Slavonic clustering clitics; 4) trends in the ordering of functional categories, e.g. negation, wh-words; 5) the development of new word-order constraints.

4.1. Functional categories and the clitic inventory.

It is probable that all old Slavonic languages shared one and the same clitic system, since their clitic templates, especially the left-most part of the clustering particles ordered as =*že* ‘focus/contrast’(1) =*li* ‘yes-no question’ (2) =*bo* ‘causal’ (3)=*ti₁* ‘affirmative’ (4), are similar and could be inherited from PS1. The philological problem with reconstructing the PS1 clitic system is that not all old Slavonic languages are from the very beginning represented by vernacular texts with an oral dimension, while the external ordering of clitics in Old Church Slavonic liturgical texts is heavily influenced by the word order in the Greek original. In addition, blocks of clustering particles are preserved in Old Slavonic texts to an uneven degree: the combination of the free enclitics *že* =*li* is infrequent, the causal enclitic =*bo* is characteristic first and foremost for South Slavonic and Old South Russian, while the affirmative clitic =*ti₁* (homophonous to the dative 2Sg clitic =*ti₂*) has been attested only in North-West Old Russian and in Old Czech (Zaliznjak 2008; Zimmerling 2014). Other clustering particles, cf. Sk, ONovR =*by* (‘conditional’), late OR *děi* ‘hearsay’, Sn *pa* arise in the later period.

Unlike some other world languages with 2P clitics, Slavonic languages lack subject pronouns in the direct case. This gap is compensated by the fact that Slavonic auxiliary clitics (present indicative BE-forms, also BE-conditionals and future auxiliaries) are inflected for person and number and serve as agreement markers. In early Slavonic vernacular texts, the inflected form of the BE-auxiliary clitic and the subject pronoun normally do not co-occur in non-emphatic contexts (Zaliznjak 1993: 291), the same setting of the *pro-drop* parameter blocks pleonastic uses of subject pronouns with an inflected auxiliary clitic in Vojvodina Rusyn (Browne 2008).

Object clitics invariably cluster in old Slavonic languages with the order Dat-Acc. In Old Russian texts, the reflexive accusative =*sę* does not co-occur with the argument accusative clitic. At a later stage, East Slavonic languages grammaticalized the former reflexive clitic *sę* as a verbal affix and eliminated it as a free sentence element. A special slot for the reflexive clitic in Balkan Slavonic and West Slavonic is an innovation dating back to the 14th-15th centuries, which is shown by Old Serbian and Old Czech texts from this period (Tolstaja 1991; Zimmerling 2013: 478). The cliticization of the present indicative forms of the BE-auxiliary is a late process, which gives the cues for diagnosing three areal types of a clitic template.

4.2. The areal Slavonic types of a clitic template.

In the North-East Slavonic area (also in Slovak and Polish) only 1-2Pers BE-auxiliary clitics are used; overt 3Pers BE-auxiliaries have been lost in the pre-written period. In Old Novgorod Russian, 1-2Pers BE-auxiliaries are placed after clustering pronouns at the right edge of the clitic template in the AUX2 slot, which gives Formula (i):

- (i) [CliticP [PARTICLES =*že* =*li* =*bo* =*ti₁* =*by*] [PRONOUNS DAT ACC] [AUX2]]

Fig. 1. Old Novgorod/North-East Slavonic areal type of a clitic template.

In Modern West Slavonic W-systems (Czech, Slovak, Upper Sorbian, Lower Sorbian) overt 3Pers BE-auxiliaries are preserved and placed in the AUX1 slot before the clustering pronouns, which gives the formula (ii):

- (ii) [CliticP [PARTICLES =li] [AUX1] [PRONOUNS REFL DAT ACC]

Fig. 2. West Slavonic areal type of the clitic template.

The history of Czech shows that the migration of BE-auxiliaries from AUX2 to AUX1 was an innovative process, which was not completed in the 14th century (Zimmerling 2014). One of the factors facilitating the early placement of Old Czech auxiliaries was that in this period, they lacked full properties of phonetic enclitics and occasionally occurred at the clausal left edge. In Modern Czech, clitic auxiliaries obey the Tobler-Mussafia law and are strictly clause-internal.

In modern Balkan Slavonic languages — BSC, Slovenian, Burgenland Croatian, Vojvodina Rusyn, Bulgarian and Macedonian — both auxiliary slots are used. The 3Sg present indicative BE-auxiliary = *je* is placed in AUX2, while other present indicative BE-forms take AUX1.

- (iii) [CliticP [PARTICLES] [AUX1] [PRONOUNS DAT + ACC + REFL] [AUX2]

Fig. Balkan Slavonic areal type of the clitic template.

Again, the history of Balkan Slavonic languages shows that the split placement of BE-auxiliaries is a late process. In Old Serbian texts of the 14th century, the 1-2Pers and 3Pl present indicative BE-auxiliaries still could take either AUX2 or AUX1, while 3Sg = *je(cm)* and future auxiliaries (*hy*, *heu*, *he*, *hemo*, *heme*, *he*) only took AUX2; finally, conditional BE-forms (*bix*, *bi*, *bi*, *bismo*, *biste*, *bi*) took AUX1 (Tolstaja 1991; Zimmerling 2013). These facts indicate that the current pattern, with the split placement of the BE-auxiliaries in Balkan Slavonic, results from two different factors: 1) delayed cliticization of the 3Sg. form =*je*; 2) the need to incorporate new sets of clitics, i.e. future and conditional auxiliaries. In Modern BCS, Burgenland Croatian and Vojvodina Rusyn, future auxiliaries from the **xotēti* stem take AUX1, while in Modern Slovenian, future auxiliaries from the **byti* stem (*bom*, *boš*, *bo*, *bova*, *bosta*, *bosta*, *bomo*, *boste*, *bodo*) take AUX2.

4.3. Cliticization and clausal structure.

Cliticization and clustering are active processes that continue throughout the history of most Slavonic languages and are a major factor constraining word order freedom. The decline of the clitic system in Old Russian, Old Ukrainian and Old Belarusian is ascribed to the gradual loss of the distinction between the series of pronouns — marked stressed forms originally used in emphatic contexts involving negation, contrast, enumeration, emphasis etc. vs clitics, i.e. unmarked forms used in non-emphatic contexts: the stressed pronouns expand into the functional sphere of pronominal clitics, which makes the latter series redundant (Zaliznjak 2008). Modern Polish retained short forms *mi*, *mię*, *ci*, *cię*, *mu*, *go*, but they are not exclusively used in contexts diagnostic for clitics. The full-fledged series of 3Pers dative and accusative clitics doubling the series of stressed pronouns is a recent development. Early Slavonic languages lacked clitics like 3Sg.M =*mu* <*jemu*, 3Sg.F =*ho*, =*ga* <*jeho*, *jega* — the latter came into existence as shortened and phonetically reduced variants of the corresponding stressed pronouns. Meanwhile, the 1-2 p. forms

=*mi*, =*ti*, =*ny*, =*vy*, =*mę*, =*tę*, =*na*, =*va*, and the reflexives =*si*, =*sę*, cannot be derived from the corresponding stressed Slavonic pronouns by any rule: they are part of the inherited PIE pronominal inventory. Some linguists claimed that the 2P was established only after the directionality shift in the TP projection: before that shift, pronominal clitics arguably formed a complex head with V⁰ but after that moved to the left edge of TP (Pancheva 2005; Migdalsky 2009). This hypothesis faces difficulties, since Old Novgorod Russian already shows consistent 2P placement of pronominal clitics, while the auxiliary clitics (T) still stand in AUX2. Moreover, Wackernagel's law is independent of the particular syntactic category of 2P elements. Finally, there is no verifiable typological evidence of the shift from V-systems with VP-internal clitics to W-systems with 2P clitics.

5. Interaction of clitics with other functional categories.

5.1. Clitic placement in clauses with wh-fronting.

Slavonic languages have overt *wh-movement*. Structures like R {*Etu statyu ob otricanii* } **kto** *napisal*? 'Who wrote that article about negation?' lit. '{This paper about negation}, **who** wrote?' should rather be analyzed as instances of reordering/topicalization than as *covert movement* and wh-words in situ.

Multiple wh-fronting when two or more wh-words undergo fronting and form a phrase (WhP) in the clausal left periphery is an option in Macedonian and East Slavonic languages lacking clustering clitics. In Bulgarian, this pattern is grammaticalized. The fronted wh-words are placed in a rigid order (the so-called *superiority effect*), form a phrase and host the clustering enclitics (Rudin 1988):

(25) Bg a. [_{WhP} Koj (1) kakvo (2)] =**ti**=**e** kazal?

'Who told you what'?

b. *[**Kakvo** (2) koj (1)] =**ti**=**e** kazal?

c. *Koj =**ti**=**e** kakvo kazal?

d. *Kakvo =**ti**=**e** koj kazal?

Macedonian has multiple wh-fronting, but the order of the wh-words is less rigid [MišeskaTomič 2012].

(26) Mc a. [_{WhP} Koj (1) što (2) komu(3) koga(4) kako (5)] =**mu** dade?

'Who gave what to whom, when and how?'

b. [_{WhP} Koj (1) komu (3) što (2) koga (4) kako (5)] =**mu** dade?

c. [_{WhP} Koj(1) (2) koga (4) komu (2) što (3) kako (5)] =**mu** dade?

In West Slavonic and Balkan Slavonic W-systems, each fronted single wh-word counts as a host of 2P clitics, therefore orders like Wh1—Wh2—CL are ungrammatical:

(27) BCS a. **Ko** (1)=**mu**=**je** (2) **šta** (3) dao?

'Who (1) gave him (3) what (2)?'

b. ***Ko** (1) **šta** (2)=**mu**=**je** (3) dao?

Czech allows multiple wh-fronting in clauses without clustering clitics, cf. (28), but not in clauses with clitics, cf. (29b).

- (28) Cz **Kdo** (1) **kdy** (2) řekl, že je to nějaká tragédie?
‘Who (1) <and> when (2) said that it is a tragedy’
- (29) Cz a. **Komu** =jsi **co** dal?
‘Who (1) gave him (3) what (2)?’
b. ***Komu co** =jsi dal?

These facts indicate that multiple wh-fronting and the ability of the fronted WhP consisting of two or more wh-words to host the clitics are triggered by different parameters.

5. 2. General negation and clitics.

General negation is mostly preverbal. In Modern Czech (Štícha et al. 2013) and Slovak, it is realized as a verbal prefix, Cz *napsal* + *ne* ⇒ ***nenapsal***, Svk. *napísal* + *ne* ⇒ ***nenapísal***. The negative form of the verb can be fronted and host 2P clitics:

- (30) Cz [**Nenapsal**]=bych dopis.
‘I would not write the letter.’
- (31) Sk [**nenapísal**]=by=som list.
‘the same.’

The situation in modern East Slavonic can be largely explained along the same lines, although East Slavonic negation markers are usually analyzed in descriptive grammars as functional words and not as verbal morphemes. In Modern Bulgarian, the general negation marker *ne* is a fixed-position sentence element that can host the clustering clitics (Dimitrova-Vulchanova 1999). A tendency towards clause-initial placement of general negation has been attested already in Old Church Slavonic and Old Russian (Zalizniak and Paducheva 2013).

- (32) OCS Gospodi, **ne** jarostiju tvoeju obliči mene!
‘Lord, do not denounce me in your fury’, lit. ‘...**not** in your fury denounce me’,
- (33) ORuss. **Ne** obyčaji imŭ estŭ obratiti pleščŭ kogda poběženy boudutŭ.
‘They do not have a habit of turning back when defeated’, lit. ‘**not** a habit they have...’.

The yes-no marker *=li* has a wider scope than the general negator *ne*, but since the negator is a proclitic in Slavonic, while *=li* is a strict enclitic, it is merged later than *ne* in all Slavonic languages. The semantic structure in the Old Church Slavonic example (34) and in English translation of this Bible sentence, where the alternative question marker (expressed here by the *do*-auxiliary) precedes the negation (*not*), is the same, but the surface syntax is different because of the surface conditions on the placement of Slavonic *=li* and the initial placement of OCS general negation *ne*.

- (34) OCS **Ne** i mytare =li tako tvor’atŭ (Matt.5.47)
‘Do **not** even the publicans do so?’

6. Conclusions

Most Slavonic languages have fully grammaticalized constraints on the placement of clause-level clitics. The set of clustering clause-level clitics is a general characteristic of a majority of Slavonic word-order systems. The reordering of clauses with clitics can have information-structural motivation. The sets of Slavonic clitics defined according to phonetic and syntactic criteria largely coincide, with three main exceptions: 1) the same clitic elements display different phonetic properties in clauses of a different type, which is attested in Macedonian; 2) phonetic proclitics and enclitics can be inserted into split word forms and surface as endoclitics in morphosyntax, which is attested in modern East Slavonic languages and in Old Czech; 3) the contrast of long stressed emphatic pronouns vs shorter clitic pronouns can lose its functional motivation, which is attested in Modern Polish.

Abbreviations

BCS — Bosnian-Croatian-Serbian; Bg — Bulgarian; Cr — Croatian; Cz — Czech; Mc — Macedonian; OCS — Old Church Slavonic; ONovR — Old Novgorod Russian; PIE — Proto-Indo-European; Pl — Polish; PS1 — Proto-Slavonic; R — Russian; OR — Old Russian; Sk — Slovak; Sn — Slovenian; USo — Upper Sorbian.

REFERENCES

- Aikhenvald, Alexandra, 2002. Typological parameters for the study of clitics, with special reference to Tariana. In: R. M. W. Dixon, A. Y. Aikhenvald (eds.), *Word: a cross-linguistic typology* / Cambridge: CUP, 42—78.
- Anderson, Stephen P., 2005. Aspects of the theory of clitics. Oxford: Oxford University Press, 2005.
- Arkadiev, Peter, 2016. K voprosy ob endoklitikax v russkom jazyke. In: Anton V. Zimmerling, Ekaterina A. Lyutikova (eds.). *Arxitektura klauzy v parametričeskix modeljax: sintaksis, informacionnaja structura, porjadok slov*. Moscow: LRC, 2016, 325 — 331. [Romanized from Аркадьев П.А. 2016. К вопросу об эндоклитиках в русском языке. In: А.В.Циммерлинг, Е.А.Лютикова (ред.) *Архитектура клаузы в параметрических моделях: синтаксис, информационная структура, порядок слов*. М.: ЯСК, 2016, 325 — 331.)
- Avgustinova Tania, Oliva, Karel, 1997. On the Nature of the Wackernagel Position in Czech. In: U. Junghanns, G. Zybatow (eds). *Formale Slavistik*. Frankfurt am Main: Vervuert, 1997, 25—47.
- Billings, Lorren, Konopasky, Abigail, 2002. The role of morphology in ordering verb-adjacent clitics: from syntax to prosody in Bulgarian and Tagalog. In: A. Alexiadou et al. (eds). *Linguistics in Potsdam* , 19. Potsdam: Institut für Linguistik, Universität Potsdam, 2002, 1—26.
- Bošković, Željko, 2001. On the nature of the syntax-phonology interface. Amsterdam: Elsevier, 2001.

Bošković, Željko, 2002. Clitics as nonbranching elements and the linear correspondence axiom. *Linguistic Inquiry*. 33.2. 2002, 329—340.

Bošković, Željko, 2004. Clitic placement in South Slavic. *Journal of Slavic Linguistics*, 2004. Vol. 12. № 1—2, 39—90.

Bošković, Željko, 2009. More on the No-DP analysis of articleless languages. *Studia Linguistica*, 2009. 63, 187—203.

Breu, Walter, 2008. Razvitie system articles pri polnom kontakte slavyanskix menjshinstv s nemeckim i italjanskim jazykami. In: S. Kempgen, K. Gutschmidt, U. Jekutsch & L. Udolph (Hrsg.), *Deutsche Beiträge zum 14. Internationalen Slavistenkongress, Ohrid 2008*. München 2008, 75-88. [Romanized from Брой, Вальтер Развитие систем артиклей при полном контакте славянских меньшинств с немецким и итальянским языками. In: S. Kempgen, K. Gutschmidt, U. Jekutsch & L. Udolph (Hrsg.), *Deutsche Beiträge zum 14. Internationalen Slavistenkongress, Ohrid 2008*. München 2008, 75-88.]

Breu, Walter, 2012. The grammaticalization of an indefinite article in Slavic micro-languages. In: Björn Wiemer, Björn Hansen & Bernhard Wälchli (eds.), *Grammatical Replication and Borrowability in Language Contact*. (=Trends in Linguistics, Studies and Monographs 242). Berlin, Boston: De Gruyter Mouton, 275-322.

Breu, Walter, 2018. A Grammar of Molise Slavic. Lincom. (in press).

Browne, Wayles, 2008. Porjadok Klitikox u Vojvodjaskim Rusinskim. *Шветлосц*. 3. Novi Sad, 2008. P. 351—362.

Cardinaletti, Anna, Starke, Michal, 1999. The Typology of Structural Deficiency. In: H. van Riemsdijk (ed.), *Clitics in the languages of Europe* (Eurotype 20-5) / Berlin; New York: Mouton, 1999, 245—273.

Ćavar, Damir, Wilder, Chris, 1999. Clitic Third in Croatian. In: H. van Riemsdijk (ed.), *Clitics in the languages of Europe* (Eurotype 20-5). Berlin; New York: Mouton, 1999, 429—467.

Dimitrova-Vulchanova, Mila, 1999. Clitics in the Slavic languages. In: H. van Riemsdijk (ed.), *Clitics in the languages of Europe* (Eurotype 20-5). Berlin; New York: Mouton, 1999, P. 83—121.

Dybo, Vladimir I., 1981. Slavjanskaja akcentologija. Opyt rekonstrukcii sistemy akcentnyx paradigm v praslavyanskom. Moscow: Nauka, 1981. [Romanized from Дыбо В.А. Славянская акцентология. Опыт реконструкции системы акцентных парадигм в праславянском. М., 1981].

Džonova, Marina, 2003. Izrečenija sās semantičnata roli eksperienecer v sāvremennija bālgarski ezik. Phd, Sofija. [Romanized from Джонова, Марина 2003. Изречения със семантичната роли експериенцер в съвременния български език. Автореф. Дис. София].

Franks, Stephen, 2008. Clitic placement, Prosody and the Bulgarian verbal complex. *Journal of Slavic linguistics*, 16 (1). 2008, 91—137.

- Franks, Stephen, 2009. Clitics in Slavic. In: S. Kempgen, P. Kosta, T. Berger, K. Gutschmidt (eds.), *Die slavischen Sprachen. The Slavic Languages. An International Handbook of their Structure, their History and their Investigation*. I. Berlin; New York: Walter de Gruyter, 2009, 725—738.
- Franks, Stephen, 2017. *Syntax and Spell-Out in Slavic*. Bloomington: Slavica.
- Franks, Stephen, King, Tracey H., 2000. *A handbook of Slavic clitics*. New York: OUP, 2000.
- Gălăbov, Ivan, 1950. Zur Frage der bulgarischen Enklitika. *Zeitschrift für slavische Philologie*, Bd. XX. Hefte 2. 1950, 417—418.
- Halpern, Aaron L, 1996. Introduction. In: A. L. Halpern, A. M. Zwicky (eds), *Approaching second: Second position clitics and related phenomena*. Stanford: CSLI Publications, 1996, ix—xxiii.
- Halpern, Aaron L., Zwicky, Arnold M., 1996. *Approaching Second: Second Position Clitics and Related Phenomena*, A. L. Halpern, A. Zwicky (eds). Stanford: CSLI Publications, 1996.
- Haspelmath, Martin, 2015. Defining vs. diagnosing linguistic categories: A case study of clitic phenomena. // Błaszczak, Joanna & Klimek-Jankowska, Dorota & Migdalski, Krzysztof (eds.). *How categorical are categories? New approaches to the old questions of noun, verb, and adjective*, P. 273-304. Berlin: De Gruyter Mouton.
- Hana, Jiří, 2007. *Czech Clitics in Higher Order Grammar*. PhD Thesis, The Ohio State University.
- Harris, Alice C., 2002. *Endoclititics and the Origins of Udi Morphosyntax*, Oxford: Oxford University Press.
- Ivanova, Elena Yu., 2016. Bezlicnye predloženiya s objazatel'nyim mestoimennym vyraženiem eksperiencera v bolgarskom jazyke. In: Anton V. Zimmerling, Ekaterina A. Lyutikova (eds.). *Arxitektura klauzy v parametričeskix modeljax: sintaksis, informacionnaja structura, porjadok slov*. Moscow: LRC, 2016, 332 — 368. [Romanized from Иванова, Елена Ю. Безличные предложения с обязательным местоименным выражением экспериенцера в болгарском языке, In: А.В.Циммерлинг, Е.А.Лютикова (ред.) *Архитектура клаузы в параметрических моделях: синтаксис, информационная структура, порядок слов*. М.: ЯСК, 2016, 332 — 368.]
- Jacobson, Roman, 1963. Opyt fonologičeskogo podxoda k istoričeskim voprosam slavyanskoj akcentologii. In: *American Contributions to the Fifth Congress of Slavists*. The Hague, 1963. [Romanized from Якобсон, Р.Я. Опыт фонологического подхода к историческим вопросам славянской акцентологии. In: *American Contributions to the Fifth Congress of Slavists*. The Hague, 1963.]
- Jakobson, Roman, 1971. Les enclitiques slaves. In : *Selected Writings*. II: Word and Language. The Hague; Paris, 1971, 16—22.
- Kempgen, Sebastian, Kosta, Peter, Berger, Tilmann, Gutschmidt, Karl, 2009. *Die slavischen Sprachen. The Slavic Languages. An International Handbook of their Structure, their History and their Investigation* / S. Kempgen, P. Kosta, T. Berger, K. Gutschmidt (eds). Bd. I. Berlin; New York: Mouton de Gruyter, 2009.

- Kari, Ethelbert E., 2002. On Endoclititics: Some Facts from Degema // *Journal of Asian and African Studies*. 2002. № 63. P. 37–53.
- Klavans, Edith L., 1995, On Clitics and cliticization. The interaction of morphology, phonology and syntax, New York: Garland.
- Kosta, Peter, Schürcks, Lilia, 2009. Word Order in Slavic. In: S. Kempgen, P. Kosta, T. Berger, K. Gutschmidt (eds). *Die slavischen Sprachen. The Slavic Languages. An International Handbook of their Structure, their History and their Investigation* / I. Berlin; New York: Walter de Gruyter, 2009, 654—684.
- Kosta, Peter, Zimmerling, Anton, 2013. Slavic Clitic Systems in a Typological Perspective. In: L. Schürcks, U. Etxeberria, A. Giannakidou, P. Kosta (eds.). *The Structure of NP and Beyond* (Studies in Generative Grammar). Berlin; London: de Gruyter. 441 — 490.
- Ledgeway, Adam., Roberts, Ian, 2017. The Cambridge Handbook of Syntactic Change. Cambridge: CUP.
- Lee, Celesta, Billings, Lorren, 2005. Wackernagel and Verb-Adjacent Clisis in Central Philippines. *UCLA Working Papers in Linguistics*, No. 12. Proceedings of AFLA XII, Heinz & Ntelitheos (eds.).
- Lotko, Edvard, 1997. Synchronní konfrontace Češtiny a Polštiny (Soubor statí). Oloumoc, 1997.
- Madariaga, Nerea, 2017 Understanding grammars through historical change. *Frontiers in psychology*, 2017: 8.
- Migdalski, Krzysztof, 2009. Interaction between Verb Movement and Negation in South Slavic. In.: P. Kosta, L. Schürcks (eds). *Formal Description of Slavic Languages* / Frankfurt-am Main- Berlin – Bern – Bruxelles – New York – Bern: Peter Lang, 2009, 283-296.
- Mihaljević, Milan, 1997. The interaction of *li* and negation in Croatian Church Slavonic. In.: P. Kosta, L. Schürcks (eds). *Formal Description of Slavic Languages* / Frankfurt-am Main- Berlin – Bergn – Bruxelles – New York – Bern: Peter Lang, 2009, 87—92.
- Mišeska Tomić, Olga, 2004. The South Slavic Pronominal Clitics. *Journal of Slavic linguistics*, 12 (1—2), 2004, 213—248.
- Mišeska Tomić, Olga, 2012. A grammar of Macedonian. Bloomington, Indiana, 2012.
- Mushin, Ilana, Simpson, Jane, 2008. Free to Bound to Free?: Interactions Between Pragmatics and Syntax in the Development of Australian Pronominal System. *Language* 84 (3), 566 —596.
- Mussafia, Adolfo, 1886. Una particolarità sintattica della lingua italiana dei primi secoli. In [Graziadio I. Ascoli et al.], *In memoria Napoleone Caix e Ugo Angelo Canello: Miscellanea di filologia e linguistica*, 155–261 (errata: 474–475). Firenze: Successori Le Monnier.
- Pancheva, Roumyana, 2005. The Rise and Fall of Second-Position Clitics. *Natural Language and Linguistic Theory* 23 (1), 103-167.

- Pancheva, Roumyana, 2006. The position of Tense in the Old Church Slavonic Clause. In: *The 1st Meeting of the Slavic Linguistic Society*, SLS-1. Bloomington, 8—10 September 2006.
- Pancheva, Roumyana, Zubizarreta, Maria Luisa, 2017. The Person-Case Constraint. The syntactic encoding of perspective. *Natural Language and Linguistic Theory*, 2017, Vol. 36, No. 4, 1291–1337.
- Pavlović, Slobodan, 2011. Distribucija enklitika u starosrpskim poveljama i pismima XII i XIII veka. *Zbornik Matice srpske za filologiju i lingvistiku* LIV/2, 2011, 31–52.
- Pereltsvaig, Asya, 2006. Small nominal. *Natural language and linguistic theory* 24 (2); 433 – 500.
- Progovac, Liljana, 1996. Clitics in Serbian/Croatian: Comp as the second position. In: A. L. Halpern, A. M. Zwicky (eds), *Approaching second: Second position clitics and related phenomena*. Stanford: CSLI Publications, 1996, 411—428.
- Radanović-Kocić, Vesna, 1996. The placement of Serbo-Croatian clitics: A prosodic approach In: A. L. Halpern, A. M. Zwicky (eds), *Approaching second: Second position clitics and related phenomena*. Stanford: CSLI Publications, 1996, 429—448.
- Rudin, Catherine, 1988. On Multiple Questions and Multiple WH Fronting. *Natural Language and Linguistic Theory* 6, 445 — 501.
- Rudin, Catherine, Kramer C., Billings, Lorren and Baerman, Matthew, 1999. Macedonian and Bulgarian li questions: Beyond syntax. *Natural Language and Linguistic Theory* 17, 541-86.
- Rå Hauge, Kjetil, 1976. The Word Order of Predicate Clitics in Bulgarian. *Journal of Slavic Linguistics*. 7 (1). 1999, 89—137. (Originally appeared as Meddelelser 10, Oslo: Slavisk-baltisk institutt, Universitetet i Oslo, 1976).
- Sadock, Jerrold M., 1995. A multi-hierarchy view of clitics. *CLS 31*. Part 2., 1995, 258—279.
- Schürcks, Lilia, Wunderlich, Dieter, 2003. Determiner-possessor relation in the Bulgarian DP. In: M. Coene, Y. D’hulst (eds), *From NP to DP, Vol. 2: The Expression of Possession in Noun Phrases*. Amsterdam, Philadelphia: John Benjamins, 2003, 121—139.
- Selkirk, Elisabeth, 1995. The prosodic structure of function words. In: J. N. Beckman, L. Walsh Dickey, S. Urbanczyk (eds), *University of Massachusetts Occasional Papers 18: Papers in Optimality Theory* / Amherst: University of Massachusetts, 1995, 439—470.
- Slavkov, Nikolai, 2008. Formal Consequences of Dative Clitic Doubling in Bulgarian. *Journal of Slavic Linguistics*, Vol. 16. № 1. 2008, 139—165.
- Spencer, Andrew, Luís, Ana, 2012. *Clitics: An Introduction*. Cambridge: CUP.
- Šewc-Schuster, Hinz, 1976. *Grammatika hornjoserbseje řeče. 2 zwjazak – syntaksa*. Budyšin.
- Štícha, František et al, 2013. *Akademická gramatika spisovné češtiny*. Praha: Academia, 2013.

Tobler, Adolf, 1875/1912. [Review of] Jules Le Coultre, *de l'ordre des mot dan Crestien de Troyes*. Extrait du programme de Pâques 1875 du Collège Vitzthum. Dresde 1875 ... [sic]. *Göttingische gelehrte Anzeigen* 2.34:1057–1082. (Reprinted in his *Vermischte Beiträge zur französischen Grammatik* 5:395–415. Leipzig: Hirzel.)

Tolstaja, Marfa N., 1991. Sistema enklitik v serbskix gramotax XIV—XV vv. In: *Konferenzija «Slavistika, indoeuropeistika, nostratika»: k 60-letiju so dnja roždenija V.A.Dybo: Tezisy dokl.* Moscow, 1991, 201—205. [Romanized from Толстая Марфа. Н. Система энклитик в сербских грамотах XIV—XV вв. In: *Конференция «Славистика, индоевропеистика, ностратика»: К 60-летию со дня рожд. В. А. Дыбо: Тезисы докл. М., 1991. 201—205.]*

Tolstaja, Marfa N., 2000. Forma pluskvamperfekta v ukrainskix zakarpatskix govorax: mesto vspomogatelnogo glagola v predložanii. *Balto-slavyanskije issledovanija* 1988—1999, XIV. Moscow, 2000, 134—143. [Romanized from Толстая, Марфа. Н. 2000. Форма плюсквамперфекта в украинских закарпатских говорах: место вспомогательного глагола в предложении. *Балто-славянские исследования* 1988—1999. XIV. М., 2000, 134—143.]

Tolstaja, Marfa N., 2012. Karpatoukrainskie enklitiki v južnoslavyanskoj perspective. *Balto-slavyanskije issledovanija*, Moscow, 2012, 190—211. [Romanized from Толстая, Марфа Н. 2012. Карпатоукраинские энклитики в южнославянской перспективе // *Балто-славянские исследования*. М., 2012, 190—211].

Trávníček, František, 1956. Historická mluvnice česká, III. Skladba. Praha.

Vaillant, André, 1948. Manuel du Vieux Slave. Paris, 1948.

Wackernagel, Jacob, 1892. Über ein Gesetz der indogermanischen Wortstellung. *Indogermanische Forschungen*. 1, 1892, 333—436.

Zaliznjak, Andrej A., 1985. Ot praslavjanskoj akcentuacii k ruskoj. М.: Nauka, 1985. [Romanized from Зализняк Андрей А. 1985. От праславянской акцентуации к русской М: Наука, 1985]

Zaliznjak, Andrej A., 1993 K izučeniju yazyka berestyanyx gramot. In: Yanin V.L., Zalizniak A.A. *Novgorodskie gramoty na bereste iz raskopok 1984—1989*. Moscow: Nauka, 1993, 191—319. [Romanized from Зализняк Андрей А. 1993. К изучению языка берестяных грамот. In: Янин В. Л., Зализняк А. А. *Новгородские грамоты на бересте из раскопок 1984—1989*. М: Наука, 1993, 191—319.]

Zaliznjak, Andrej A., 2008. Drevnerusskie enklitiki. Moscow.: Yazyki Slavyanskoj Kultury. [Romanized from Зализняк Андрей А. 2008. Древнерусские энклитики. М.: Языки славянской культуры.]

Zaliznjak, Andrej A., Paducheva, Elena V., 2013. Ob inicialjnom otricanii v drevnerusskom i staroslavyanskom jazykah. In. Paducheva Elena B. *Russkoe otricateljnoe predloženie*. Moscow: Yazyki Slavyanskoj Kultury, 2013, 290 — 303. [Romanized from Зализняк Андрей А., Падучева Елена В. Об инициальном отрицании в древнерусском и старославянском языках // Падучева Е.В. *Русское отрицательное предложение*. М.: Языки славянской культуры, 2013, 290 — 303.]

Anton Zimmerling

Zimmerling, Anton, 2012a. Sistemy poryadka slov s klitikami v tipologičeskom aspekte. *Voprosy jazykoznanija*, 2012, № 4. 3—38. [Romanized from Циммерлинг А. В. Системы порядка слов с клитиками в типологическом аспекте. *Вопросы языкознания*, 2012, № 4, 3 —38.]

Zimmerling, Anton 2012b. Sistemy poryadka slov s klitikami v slavyanskix jazykah. *Voprosy jazykoznanija*, № 5. 2012, 3—37. [Romanized from Циммерлинг Антон В. 2012b. Системы порядка слов с клитиками в славянских языках. *Вопросы языкознания*. 2012, № 5, 3—37.]

Zimmerling, Anton 2012c. A unified analysis of clitic clusters in world's languages. *Computational linguistics and intellectual technologies*, Issue 11 (18). 2012, 726—738.

Zimmerling, Anton, 2013. Sistemy poryadka slov slavyanskix yazykov v tipologičeskom aspekte. Moscow: Yazyki slavyanskoj kultury. [Romanized from Циммерлинг Антон В. 2013. Системы порядка слов славянских языков в типологическом аспекте. Москва: Языки славянской культуры.]

Zimmerling, Anton, 2015a. Parametrizing Verb-Second Languages and Clitic-Second Languages. In: *WORLD COMP' 15. Proceedings of the 2015th International Conference on Artificial Intelligence*. Vol. 1. 2015, CSREA Press. P. 281— 287.

Zimmerling, Anton, 2015b. 1P orders in 2P languages. In: E.Lyutikova, M.Konoshenko, A.Zimmerling (eds.), *Typology of Morphosyntactic Parameters 2015*. Moscow, 2015, 459 — 483.

Zimmerling, Anton, 2018a. Exoclitics vs endoclitics. A parametric typology. In: 51st Annual Meeting of the Societas Linguistica Europaea. 29 August – 1st September 2018. Tallinn University, Estonia, 268 - 269.

Zimmerling, Anton, 2018b. Tak im i nado: nužny li endoklitiki v opisanii russkoj grammatiki? *Russkij yazyk v naučnom osveščanii*, № 36. [Romanized from Циммерлинг, Антон В. 2018 Так им и надо: нужны ли эндоклитики в описании русской грамматики? *Русский язык в научном освещении*, № 36]

Zimmerling, Anton, Kosta, Peter, 2013. Slavic Clitics: A typology. *STUF*, 66. (2013). Vol. 2, 178—214.

Zwicky, Arnold M., 1977. On Clitics. Bloomington: Indiana University Linguistics Club, 1977.

Zwicky, Arnold M., 1985. Clitics and particles. *Language*, Vol. 61. № 2. 1985.