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WORD ORDER OF REFLEXIVE *SE* IN FINITE VERB PHRASES IN THE FIRST EDITION OF THE OLD CZECH BIBLE TRANSLATION (PART II)

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Abstract

In this part of the paper, the distribution of clause positions of the reflexive pronoun *se* is analyzed statistically. Specifically, the impact of both stylistic factors and the length of the element in the initial position are investigated. The authors also discuss the possible influence of the word order of the Latin pretext (the Vulgate) on the Old Czech translation.

1. Annotation of the examples

It is clear from Part I of this paper that in order to describe the word order positions of (en)clitics, it is necessary to use a classification which combines two perspectives:

a) the position of the clitic in the clause (initial – postinitial – medial – prefinal – final); b) the position of the clitic vis-à-vis its regent (contact/preverbal – postverbal – interverbal – isolated).¹ We therefore manually annotated each example of reflexive *sě* found in the investigated Biblical texts with the above-mentioned classifications. It is important to point out that this classification is purely instrumental; it serves primarily to sort the examples extracted from the Old Czech texts (for more details see Kosek 2011: 45–49). For more details of the limitations of researching enclitics in Old and Early Modern Czech, see Kosek (2011: 44–45).

2. Results

The frequencies of annotated word order positions are presented in Table 1.

	initial	postinitial	medial	prefinal	final	Σ
Gen	0	180	16	4	5	205
%	0	87.80	7.80	1.95	2.44	
Job	0	215	35	13	18	281
%	0	76.51	12.46	4.63	6.41	
Sir	0	197	57	15	9	278
%	0	70.86	20.50	5.40	3.24	
Isa	0	151	35	4	5	195
%	0	77.44	17.95	2.05	2.56	
Mt	0	205	42	12	6	265
%	0	77.36	15.85	4.53	2.26	
Lk	0	345	22	10	8	385
%	0	89.61	5.71	2.60	2.08	
Acts	0	304	40	4	6	354
%	0	85.88	11.30	1.13	1.69	
Rev	0	83	15	1	6	105
%	0	79.05	14.29	0.95	5.71	
Σ	0	1680	262	63	63	2068

Table 1. Word order positions of *sě* in BiblOl and BiblLitTřeb.
(Abbreviations of Biblical books – see References)

¹ This annotation system was used in previous research into the word order of Czech enclitics (Kosek 2011, 2017).

The data presented in Table 1 must be approached critically. As has already been mentioned, the language of Bible texts is not a representative sample of ordinary language as spoken at the time, as it is subject to various degrees of stylization and/or the influence of the Latin source texts (indeed the stylization is often achieved by calquing the Latin source texts). A particularly prominent feature of the texts is their use of various rhetorical figures and tropes. For example, the following extract (21a.) from Isaiah demonstrates the use of parallelism after the medial postverbal position; this reinforces the figura etymologica (*potřesením* – *potřese*, *pohnutím* – *pohne*):

- (21) a. | [Neb][*próduchové s výsosti*] **otevřeli sú *sě*** | *a zrušena budú založenie zemska, | [potřesením] **potřese *sě* země** a [pohnutím] **pohne *sě* země**,... | BiblOl Isa 24,18–19
 for flood-gates_{NOM.M.PL} from on-high_{GEN.F.SG} open_{PART.PRET.ACT.M.PL} be_{AUX.PRET.3.PL} REFL_{ACC} | breaking_{INSTR.N.SG} broke_{FUT.3.SG} REFL_{ACC} earth_{NOM.F.SG} and trembling_{INSTR.N.SG} move_{FUT.3.SG} REFL_{ACC} earth_{NOM.F.SG}
 ‘for the flood-gates from on high are opened, and the foundations of the earth shall be shaken. With breaking shall the earth be broken, with trembling shall the earth be moved’*
- b. *quia cataractæ de excelsis apertæ sunt et concutientur fundamenta terræ. Confractioe confringetur terra, contritione conteretur terra* BiblVul

The final position in the following example (22a.) from Sirach can also be attributed to parallelism:

- (22) a. | [Ot tvých nepřátel] **otděl *sě*** a [k tvým přátelóm] **přiblíž *sě***, | *neb prietel věrný silná jest obrana*,... BiblOl Sir 6,13–14
 from your_{GEN.M.PL} enemy_{GEN.M.PL} separate_{IMP.2.SG} REFL_{ACC} and to your_{DAT.M.PL} friend_{DAT.M.PL} approach_{IMP.2.SG} REFL_{ACC}
 ‘Separate thyself from thy enemies, and take heed of thy friends. A faithful friend is a strong defence’
- b. *Ab inimicis tuis separare, et ab amicis tuis adtende* BiblVulClem

The text of the same book also includes an example of the influence of rhythm, as can be seen in the first clause in (23a.); this clause ends with the sequence | *řěčí *sě** | *činí mil* |, which can be interpreted as a *cursus tardus* (| áaa | áaa |):

- (23) a. | [Múdrý][*řěčí*] ***sě* činí mil**, | *ale slova bláznová budú rozlita* BiblOl Sir 20,13
 wise_{NOM.M.SG} man_{NOM.M.SG} REFL_{ACC} make_{PRS.3.SG} beloved_{NOM.M.SG}
 ‘A man wise in words shall make himself beloved: but the graces of fools shall be poured out’
- b. *Sapiens in verbis seipsum amabilem facit*... BiblVul

However, text-structural factors may also play a role in cases of postinitial position. The normative character of the text in the Book of Sirach is reflected in the high

frequency of clauses beginning with imperatives, illustrated by example (24a.), which lead to a higher frequency of examples featuring postinitial position:

- (24) a. | *Nevad' sě s mocným mužem, | a neupadneš v jeho rucě. | Nesvař sě s mužem bohatým, | at' proti tobě neustrojí jiné svády* BiblOl Sir 8,1–2

NEG1-argue_{IMP.2.SG} REFL_{ACC} with powerful_{INSTR.M.SG} man_{INSTR.M.SG} | NEG1-contend with man_{INSTR.M.SG} rich_{INSTR.M.SG}

‘Strive not with a powerful man, lest thou fall into his hands. Contend not with a rich man, lest he bring an action against thee’

- b. *Non litiges cum homine potente, {...}. Non contendas cum viro locuplete,...* BiblVul

As has already been mentioned, the Latin source text may have had an influence on the word order. The following examples – (25a.,b.) and (26a.,b.) – demonstrate that the word order position of the Old Czech reflexive *sě* sometimes corresponds with that of the Latin *se* or *te*:

- (25) a. *Blažené jsú ty panošě, kteréž přijda pán nalezne je tak bdiece; věrně pravi vám, | že opáše sě | káže jim za stuol siesti a chodě bude před ně slúžiti;...* BiblOl Lk 12,37

that gird_{IMPERFECT.3.SG} REFL_{ACC}

‘Blessed are those slaves whom their master finds alert when he returns! I tell you the truth, he will dress himself to serve, have them take their place at the table, and will come and wait on them!’

- b. *quod pręcinget se, et faciet illos discumbere, et transiens ministrabit illis* BiblVul

- (26) a. *Viz, aby nikomému nepravil, ale jdi | a ukaž sě kněží | a ofěruj dar,...* BiblOl Mt 8,4 and show_{IMP.2.SG} REFL_{ACC} priest_{DATE.SG}

‘See that you do not speak to anyone, but go, show yourself to a priest, and bring the offering’

- b. *Vide, nemini dixeris; sed vade, ostende te sacerdoti et offer munus,...* BiblVul

However, there are very few examples of such direct influence from Latin, for the following reasons:

1. The word order of the Old Czech *sě* does not always correspond with Latin word order, as is demonstrated by a comparison of the word order of *sě domní* and *putat se* in example (27a.,b.) (and likewise in examples (23a.,b.):

- (27) a. [*Muž ješitný*][*v pýchu*] *sě vyšší a* [*jako hřiebě divokého osla*][*svobodně urozeného*] *sě domní* BiblOl Job 11,12

vain_{NOM.M.SG} man_{NOM.M.SG} into pride_{ACC.F.SG} REFL_{ACC} lifte-up_{PRS.3.SG} and like colt_{ACC.N.SG} wild_{GEN.M.SG} donkey_{GEN.M.SG} free_{ADV} born_{PART.PRET.PASS.GEN.M.SG} REFL_{ACC} feel_{PRS.3.SG}

‘But an empty man will become wise, when a wild donkey’s colt is born a human being’

b. *Vir vanus in sup̄erbiam erigitur, et tamquam pullum ónagri se liberum natum putat* BiblVulClem

2. In the large majority of examples, the Old Czech *sě* does not have any direct Latin equivalent; this is demonstrated by the comparison of the analytical Old Czech reflexive verb forms with the corresponding synthetic Latin verb forms, e.g. *budeš sě modliti – adorabis* in examples (7a.,b.), *sě obořichu – inruerunt* in examples (8a.,b.) or *sě vší – erigitur* in examples (27a.,b.)

In some cases, the influence of Latin could be viewed as indirect; this concerns clauses in which *sě* occupies the position of an auxiliary verb in an analytical passive structure such as *misertus est*, as demonstrated in the clauses *Volánie Sodomských a Gomorrejských rozmnožilo sě jest – Clamor Sodomorum et Gomorrhæ multiplicatus est* in examples (17a.,b.) and example (28a.,b.):

(28) a. ... | a [přes celé léto] **obcháze**li sě | *obcijíc s sborem křesťanským* BiblLitTřeb Acts 11,26

and for whole_{ACC.N.SG} year_{ACC.N.SG} converse_{PART.PRET.ACT.M.PL} REFL_{ACC}

‘And they conversed there in the church’

b. *Et annum totum conversati sunt in ecclesia: ...* BiblVul

This word order position of *sě* can be activated particularly when the 3rd person forms *jest, sú* are used; in such cases the clitic form of the reflexive occurs together with the auxiliary in a position corresponding to the Latin source text, as illustrated in the clause *Volánie Sodomských a Gomorrejských rozmnožilo sě jest – Clamor Sodomorum et Gomorrhæ multiplicatus est* in examples (17a.,b.) and in examples (29a.,b.) or (30a.,b.) (it is evident that the decisive factor is that the reflexive and the auxiliary combine to form an (en)clitic group):

(29) a. ... a zbořenie města Davidova uzříte, | [neb] **rozmnožila sú** sě | a sebrali ste vody rybníka dolního a domy jeruzalémské ste zečtli a zkazili ste domy, abyšte zed ohradili,... BiblOl Isa 22,9–10

for multiply_{PART.PRET.ACT.M.PL} be_{AUX.PRET.3.SG} REFL_{ACC}

‘And you shall see the breaches of the city of David, and you have gathered together the waters of the lower pool, and have numbered the houses of Jerusalem, and broken down houses to fortify the wall’

b. *Et scissuras civitatis David videbitis, quia multiplicatæ sunt et congregastis aquas piscinæ inferioris,...* BiblVul

(30) a. | A [v ten čas] **narodil sě jest** Mojžieš, | *jenžto byl vzácen bohu a chován jest tři měsíce v domu otce svého* BiblLitTřeb Acts 7,20

and at that_{ACC.M.SG} time_{ACC.M.SG} arrive_{PART.PRET.ACT.M.SG} REFL_{ACC} be_{AUX.PRET.3.SG}
Moses_{NOM.M.SG}

‘At that time Moses was born, and he was beautiful to God. For three months he was brought up in his father’s house’

b. *Eodem tempore natus est Moses, et fuit gratus Deo...* BiblVul

However, other examples do not manifest any indirect influence from Latin analytical passive structures, as the clausal position of the reflexive does not correspond with the clausal position of the Latin auxiliary. Such counter-examples include the clause *hanbú sú sě zastyděli – et pudore cooperti sunt* in examples (13a.,b.) and the clause *s velikú sě náhlostí rozhněvali – repleti sunt ira* in examples (14a.,b).

The total frequencies of *sě* in the investigated word order positions (presented in Table 1) indicate that this reflexive form exhibits the characteristics of an (en)clitic because a) it never occupies the initial position, and b) it predominantly occupies the postinitial position. The results also show clear frequency differences among the individual positions (see Fig. 1) – as we have already shown with an analysis of the word order of the preterite auxiliary in the first edition of the Old Czech Bible (Kosek, Čech, Navrátilová, Mačutek [forthcoming]); these differences can be attributed to stylistic factors.

To test the significance of differences among distributions of word order positions in selected books of the Olomouc Bible, we used the χ^2 -test (Snedecor, Cochran 1989).² We found significant differences among the distributions ($\chi^2 = 83,712$, p-value < 0.001); these indicate that style is an important factor influencing the distribution.

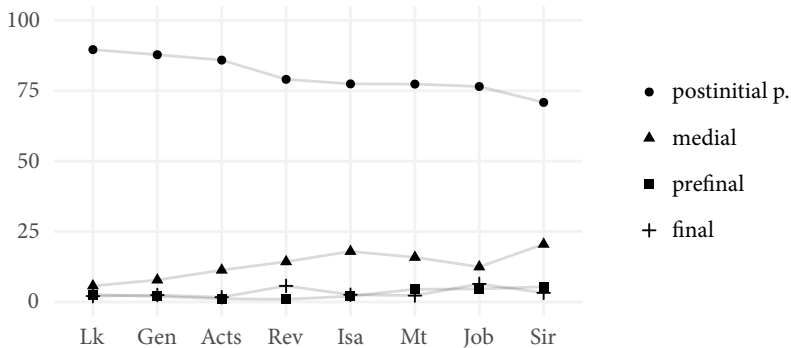


Figure 1. Proportions of positions of *sě* in selected books of the BiblOl and BiblLitTřeb. The books are ranked in descending order of frequency of post-initial position.

² Because the observed frequencies are low for some (en)clitic positions, we used simulated p-values (Ross 2006). All computations were performed in the statistical software environment R (<https://www.r-project.org/>).

However, it would be too simplistic to view the differences in the frequency distribution of the individual clausal positions of reflexive *sě* solely as a result of stylistic factors. This variability also reflects the above-mentioned competition between postinitial and contact positions of (en)clitics during the development of the language. The influence of the contact position is evident in the large majority of examples of medial, prefinal and final position (which for the sake of simplicity we subsume into the category of “non-postinitial” positions). If we focus on the position of the regent and the reflexive in these “non-postinitial” positions, it is clear that in the majority of cases this “non-postinitial” position can be attributed to the influence of contact word order. These results are shown in Table 2 below.³

		contact			
	preverbal	postverbal	interverbal	isolated	Σ
Gen	6	17	2	0	25
%	24.00	68	8.00	0	
Job	11	49	3	3	66
%	16.67	74.24	4.55	4.55	
Sir	19	55	3	4	81
%	23.46	67.90	3.70	4.94	
Isa	2	34	8	0	44
%	4.55	77.27	18.18	0	
Mt	15	41	2	2	60
%	25.00	68.33	3.33	3.33	
Lk	11	27	2	0	40
%	27.50	67.50	5.00	0	
Acts	8	41	0	1	50
%	16.00	82.00	0	2.00	
Rev	2	19	1	0	22
%	9.09	86.36	4.55	0	
Σ	74	283	21	10	388

Table 2. Position of *sě* and the regent in “non-postinitial” positions in BiblOl and BiblLitTřeb

³ It would also be possible to take into account other factors, such as text structure or the information structure in the clause; the relevance of these factors can be seen in the few examples of “non-postinitial” position, in which the initial phrase consists of a short word (usually a subjunctive), as demonstrated e.g. by the clause [ažt][zatiem] *sě uspokojí* in example (18a.). In these cases, the less usual position of the (en)clitic may serve the purpose of topicalization or contrast, as in Modern Czech (Franks, King 2000: 115–117; Lenertová 2004; Kosek 2011: 38). Due to space constraints, this is not discussed further here.

From this quantitative analysis we can conclude with a reasonable degree of confidence that 1. in Old Czech, the contact position was still a competing word order position for (en)clitics; 2. the medial isolated position is entirely marginal in terms of frequency. In view of the frequency of the postinitial and contact positions, we can deduce that in Old Czech, the basic word order position for (en)clitics was already the postinitial position; 3. style has only a weak (if any) impact on the distribution of non-postinitial positions. Specifically, the p-value of the χ^2 -test ($\chi^2 = 35.772$, p-value < 0.03)⁴ reveals that the result lay on the boundary of significance, thus it is difficult to either refute or accept the null hypothesis according to which there are no differences among the distributions in the selected books.

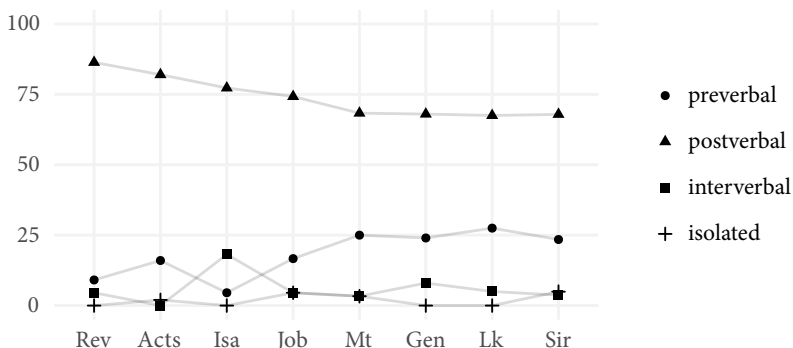


Figure 2. Proportions of non-postinitial positions of (en)clitics in selected books of BiblOl and BibLitTřeb. The books are ranked in descending order of frequency of postverbal position.

Now let us address the question of what factors may motivate the occurrence of *sě* in contact position. A detailed examination of the examples of contact word position in “non-postinitial” positions reveals that 1. this position occurs in clauses whose initial phrase consists of two or more clause elements; 2. in such cases (multi-word initial phrases), *sě* only occurs rarely in postinitial positions; this can be seen in Table 3, which lists the absolute frequencies of examples with the (en)clitic reflexive in 2W or 2D position:

	Gen	Job	Sir	Isa	Mt	Lk	Acts	Rev	Σ
2W	1	4	0	0	0	1	4	0	10
2D	1 (3) ⁵	3 (6)	0 (4)	1 (1)	0 (1)	0 (1)	2 (3)	2	9 (19)

Table 3. Competition between 2W and 2D position in BiblOl and BibLitTřeb

⁴ As we use simulated p-values, they slightly differ from one simulation to another; however, they never exceeded 0.03.

⁵ The figures given in brackets are ambiguous examples of 2D position which can also be interpreted as cases of preverbal medial or prefinal position, as in the clause *a [na ten dóm] sě obořichu* in (8a.) in Part I.

All the data indicate that in such cases – when the initial phrase in the clause consists of two or more words – the (en)clitic occurs in a contact position with its regent in “non-postinitial” positions (cf. Kosek, Čech, Navrátilová, Mačutek [forthcoming]). This behaviour can be associated with the length of the initial phrase, i.e. its duration: the length of the initial phrase causes it to become an independent prosodic unit⁶ whose boundaries are usually signalled by a pause.⁷ Because a genuine enclitic avoids the position after a pause, it is positioned after the phrase that follows the first multi-word phrase.⁸

In order to verify the validity of this postulated prosodic rule – i.e. that an enclitic avoids postinitial position if the length of the initial phrase causes a pause – we carried out a quantitative analysis taking into account the following parameters:

- the length of the initial phrase, in the case of reflexives in postinitial position,
- the length of the initial phrase, in the case of reflexives in “non-postinitial” position (e. g. in medial/prefinal/final position),
- the length of the phrase immediately preceding the reflexive, in the case of reflexives in “non-postinitial” position.⁹

If the rhythmic rule were valid (i.e. the rule forcing enclitics to cliticize after a shorter element than the long postinitial element), then:

⁶ In the Czech tradition, a relatively independent unit in the spoken production of an utterance is referred to as *promluvový úsek* (literally “section of speech”) or *kolón* (in English the term *intonation phrase* is used – Franks, King 2000: 229). In Modern Czech, the boundaries of an intonation phrase may be signalled by a pause (Palková 1994: 291). We can therefore assume that in Old Czech and Early Modern Czech the boundaries of an intonation phrase were likewise signalled by a pause – though the existence of such a pause is only an assumption. In Modern Czech, intonation phrases range from 1 to 13 syllables in length, but it is very difficult to determine the length of a phrase which causes a pause. Many factors influence the number of syllables, especially the number of phonological words in the intonation phrase and the tempo of speech. According to Palková, the average length of an intonation phrase in neutral contexts is around 6 syllables (Palková 1974: 47–53; Karlík; Nekula, Pleskalová 2016: the entry *Promluvový úsek*).

⁷ This mechanism is sometimes characterized as *heavy constituent constraint* (Radanović-Kocić 1996: 435). It was recognized already by Ertl (1924) when analyzing (en)clitic word order. Trávníček (1956: 149) and Šlosar (1967: 253) also pointed out the influence of the length of the initial phrase on the occurrence of a pause which causes Old Czech (en)clitics to appear in “non-postinitial” position.

⁸ This rule is sometimes described as the *clitic third* principle: “In general, in these constructions the initial constituent is separated by a pause from the rest of the clause and the clitics then cliticize to the second constituent. Note that the initial phrase is often topicalized or otherwise receives special discourse status” (Franks, King 2000: 229). In the Old Czech material it is not possible to explain all examples of “non-postinitial” position by means of the clitic third rule; this is because an enclitic may follow not only the second, but also the third, fourth or fifth phrase in a clause, as see in (18a.) in Part I ([*nebo*][*po Izákovi*][*tvé siemě*] *sě rozplodí*).

⁹ We analyzed all examples of “non-postinitial” position in the corpus and the same number of examples of postinitial position. Analyzing examples of postinitial position, in each book we began at the beginning of the text and analyzed each example until we reached the required number of examples (i.e. the same number as the total occurrences of “non-postinitial” position in the particular book).

- the initial phrase in postinitial positions should be shorter than the initial phrase in “non-postinitial” positions,
- the initial phrase in “non-postinitial” positions should be longer than the phrase after which the enclitic in “non-postinitial” position is positioned.

Given that it is not possible to measure the length of the investigated elements in the actual Old Czech spoken realization of a clause, the question then is how to quantify the length of these elements. In this situation we can choose other prosodically relevant units which enable us to draw conclusions about the duration of these elements on the basis of contemporary Czech. It would be possible to choose the number of syllables, as proposed in Kosek (2017); however, this would cause syllables of different lengths to be counted as if they were the same length, e.g. the monosyllabic words *stkvěl*, *vzmohl* would be quantified in the same way as *dá*, *jie*. We therefore decided to choose the grapheme as the basic unit; the contemporary Czech transcription does not take into account all the aspects of the Old Czech phonological system, nevertheless the phoneme–grapheme relation gives a fairly good level of correspondence with the phonemic structure of a word.

	Lk	Sir	Isa	Gen	Mt	Rev	Acts	Job
L _i P	6.94	6.41	6.23	5.91	5.58	5.45	5.4	4.9
L _i N	9.1	9.02	10	10.45	11.01	10.01	9.96	8.02
L _n N	5.75	6.52	8.18	6.48	6.23	7.77	7.06	6.74

Table 4. Average length of a) the initial phrase in cases when the (en)clitic occurs in the post-initial position (L_iP); b) the initial phrase in cases when the (en)clitic does not occur in the post-initial position (L_iN); c) the non-initial phrase to which the (en)clitic is connected (L_nN) in cases when it is not in the post-initial position

The results confirm the validity of the investigated hypotheses:

1. In the entire corpus, the average length of the initial phrase in cases when the (en)clitic is in postinitial position is L_iP = 5.8 graphemes, while the average length of the initial phrase in cases of “non-postinitial” positions is L_iN = 9.5 graphemes. From this we can deduce that the contact position is indeed dependent on the prosodic characteristics of the (en)clitic *sě*, which avoids the position after a pause; it can be assumed that a pause is more likely to follow a phrase with an average length of 9.5 graphemes than a phrase with an average length of 5.8 graphemes.
2. The average length of the initial phrase in cases when the (en)clitic is in “non-postinitial” positions (value L_nN = 6.8 graphemes) is greater than the average length of phrases after which (en)clitics in postinitial positions occur (value L_iP = 5.8 graphemes). From this we can deduce that “non-postinitial” positions

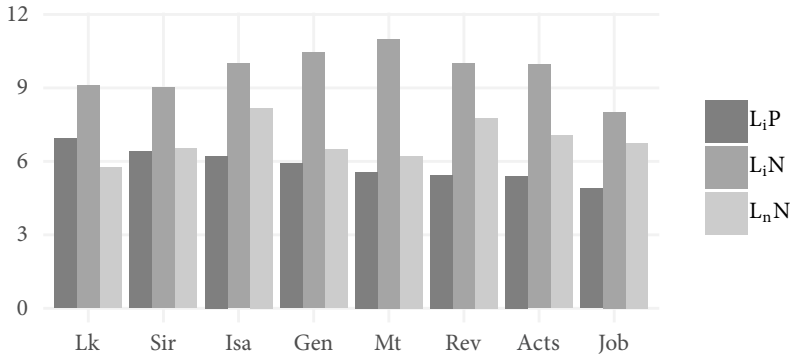


Figure 3. Average length of phrases presented in Table 4

are less dependent on the prosodic rule forcing an (en)clitic to avoid the position after a pause than postinitial positions; it indicates that in cases of contact position, other factors besides merely prosodic factors are in play – including both stylistic factors and the historically unproductive nature of the contact position of clitics.

3. Conclusion

The analysis reveals dominant position of postinitial position of *sě* in the oldest Czech bible translation. The contact position is less frequent position and it is motivated not only by the grammatical rule which forces (en)clitics to occupy a position immediately adjacent to their regent; it is also motivated by prosodic factors: if the initial phrase is long, it is followed by a pause. However, an (en)clitic cannot follow a pause directly, because it requires its host to occupy this position. In such cases, the (en)clitic must thus encliticize in a different position. If these rhythmic conditions (which enable enclitics to occur in postinitial position) are breached, the historically unproductive rule of contact position is activated.

Besides this interplay of prosodic and grammatical factors, stylistic factors also influence the number of examples of contact position: a quantitative data analysis revealed that the differences in the distribution of (en)clitics among different clausal positions may be due to the different styles of the individual books (though in the case of the distribution of different types of “non-postinitial” positions the results of the quantitative analysis are not sufficiently conclusive).

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Abbreviations of Biblical books

Acts = Acts of the Apostles; **Gen** = Genesis; **Isa** = Isaiah; **Job** = Job; **Lk** = Gospel of Luke; **Mt** = Gospel of Matthew; **Rev** = Revelation; **Sir** = Sirach

References

- BiblLitTřeb = *Litoměřice-Třeboň Bible (Bible litoměřicko-třeboňská)*. See Part I.
- BiblOL = *Olomouc Bible (Bible olomoucká)*. See Part I.
- BiblVul = (1) Wordsworth J., White H.J. (eds.). 1889–1898, 1954. *Nouum testamentum domini nostri Iesu Christi Latine*. [vols. 1–3]. Oxford; (2) *Biblia sacra iuxta vulgatam versionem ad codicum fidem iussu Pii PP. XI. Librum Genesis*. [vols. 1–11]. 1926–1957. Rome.
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