

Auxiliary clitics in Polish*

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Abstract

Polish auxiliary clitics constitute an interesting set of data which draws attention to cross-linguistic differences among Slavic languages. A general principle for clitic placement in Indo-European languages is the one described by Jacob Wackernagel in his 1892 work. He concluded that clitics appeared in the second position in the clause, after the first word in a sentence. This pattern was true to some degree in Old Church Slavonic¹ and still holds for a number of contemporary Slavic languages e.g. Serbo-Croatian, Slovene, Czech and Slovak which have second position clitics. Bulgarian and Macedonian have verb adjacent pronominal clitics and Polish has auxiliary clitics (Migdalski 2007, 2010, Pancheva 2005). Also in the older versions of Polish language the above mentioned tendency was strong.

In Modern Polish auxiliary clitics attach to the *l*-participle most frequently. However, one of the unusual properties they possess is the ability to choose almost every clausal element for their host. Polish auxiliary clitics can trigger morphophonological alternations on their hosts, which is an affix-like property; however, at the same time they display clearly clitic-like behaviour when they attach freely to words of any lexical class.

The aim of this paper is to present and analyze the morpho-syntactic properties of two kinds of auxiliary clitics: bound and free. The bound clitics carry person-number agreement markers for past tense (the so called 'floating' or 'mobile' inflections). The free clitic is the morpheme *by* used for conditional and subjunctive mood.

Keywords: clitics, Slavic languages, inflection

1. Introduction

One of the first attempts to classify clitic systems cross-linguistically was Wackernagel's (1982) study on Indo-European word-order. He analysed the behaviour of unstressed elements in Ancient Greek, Sanskrit Latin and Germanic and concluded that they show a strong preference

* This research was funded by Ministry of Education, Youth and Sports of the Czech Republic (MŠMT in Czech), grant IGA_FF_2017_003 (Mezinárodní kontext pro angloamerickou literaturu, lingvistiku a translatologii) and IGA_2018_012 (Internacionalizace v oblasti angloamerické literární vědy, lingvistiky a translatologie).

I would like to thank two anonymous reviewers for comments and suggestions. All the remaining mistakes are mine.

¹ Migdalski (2007, 2010) reports that the Wackernagel type of clitics did not have an entirely uniform distribution in OCS, and that the clearer case of second position clitics in this language was the operator clitic.

for second position in the clause, after the first constituent. Second position, however, may mean different things in different languages – this is either following the first word in a sentence (Tagalog), the first word or the first constituent of any sort (Serbo-Croatian) or the first constituent as long as it is immediately dominated by S (Walbiri).

Slavic languages constitute a rich field for research as they exhibit different cliticization patterns. The majority of South and West Slavic languages have second position cliticization. Polish has weak pronouns and auxiliary clitics. Bulgarian and Macedonian, similarly to Germanic and Romance languages, have verb-adjacent clitics which means that the verb is always a host for a clitic (Migdalski 2007, 2010, 2016, Pancheva 2005, Van Riemsdijk 1999).

Another typology created from a cross-linguistic perspective based on data from many unrelated languages comes from Zwicky (1977) and analyses clitics as phonologically-weak elements which differ in syntax and in the relationship to their full forms. He introduced a two-way distinction between simple and special clitics. Simple clitics have regular distribution (identical to their free, stressed counterparts), are phonologically-weak and must adjoin to another word in order to get the prosodic support. Special clitics exhibit a more idiosyncratic distribution.

Migdalski (2016) came out with yet another classification. He divided clitics into generalized clitics and operator clitics. Generalized second position clitics comprise auxiliary clitics and pronominals. Operator clitics are a special group of Wackernagel clitics. They form a distinct class because all of them share one property, namely expressing the illocutionary force of a clause. Operator clitics are attested in all Slavic languages, irrespective of whether they have other second position clitics, verb-adjacent clitics, weak pronouns or no other clitics at all. Some of the examples of operator clitics are: Czech *prý*, which is used to report non-witnessed events; interrogative complementizer *li* (present in many contemporary Slavic languages such as Bulgarian, Macedonian, Russian, Serbo-Croatian); and operator clitic *že* in Czech and Russian, and *że* in Polish which mark the focus of a sentence.

1.1. Polish auxiliary clitics

Polish has an interesting set of auxiliary clitics which do not exhibit the Wackernagel's second position behaviour (Migdalski 2016). They can attach to various elements in the clause and do not require second position distribution (for more detailed description of their distribution see section 3.1 in this paper). For those reasons they are sometimes called in the related literature 'floating inflections' (Spencer 2000). Polish bound auxiliary clitics carry person and number features, and when affixed to the *l*-participle, they agree with the subject of the clause. This is why they are also called Person-Number Agreement (Embick 1995) or simply 'clitic auxiliaries' (Borsley and Rivero 1994). To illustrate the pattern of how the auxiliary clitics attach to the verb, I present Table 1 below which shows the past tense forms of the verb 'to be' in Polish together with the appropriate endings:

Table 1: Past tense of verb *być* – ‘to be’.

SG			
Person	MSC	FEM	NT
1. ‘I was’	<i>by-ł-e-m</i>	<i>by-ł-a-m</i>	-
2. ‘You were’	<i>by-ł-e-ś</i>	<i>by-ł-a-ś</i>	-
3. ‘He/she/it was’	<i>by-ł</i>	<i>by-ł-a</i>	<i>by-ł-o</i>
PL			
Person	MSC personal	Non-MSC personal	
1. ‘We were’	<i>by-l-i-śmy</i>	<i>by-ł-y-śmy</i>	
2. ‘You were’	<i>by-l-i-ście</i>	<i>by-ł-y-ście</i>	
3. ‘They were’	<i>by-l-i</i>	<i>by-ł-y</i>	

In *Table 1* we can see that the past form of a verb is formed by adding *-l-* or *-ł-* to the root after deleting the infinitival ending *-ć*. This newly created form is called the *l*-participle. It is followed by gender markers *-e-*, *-a-* and *-o-* (for masculine, feminine and neuter gender respectively), *-i-* and *-y-* (for masculine personal and non-masculine personal gender), and by a person markers *-m*, *-ś-* and zero (for first, second and third person singular), *-śmy*, *-ście* and zero (for first, second and third person plural) (Sadowska 2012: 393).

The following paper consists of 6 sections in which I discuss two types of clitics in Polish: bound auxiliary clitics and free conditional morpheme *by*. In section 2 the diachronic development of Polish auxiliary clitics is presented as it is important to sketch the origin of modern clitic forms used in the contemporary language. Section 3 concentrates on the distribution of both kinds of clitics in Present-day Polish. In section 4, the Polish operator clitic *że* is introduced and discussed. Section 5 is devoted to the analysis of structural position of Polish auxiliary clitics. Section 6 is a short summary of the paper.

2. The diachronic development of Polish auxiliary clitics

In this section I will briefly sketch the origin of Polish past tense auxiliary clitics and conditional auxiliary clitic. We will have a look at verbal paradigms of past tense and conditional forms of the verb ‘to be’ which gave rise to the contemporary auxiliaries as clitics.

2.1. Past tense auxiliaries

What we call today ‘mobile’ or ‘floating’ past tense inflection arose as a consequence of a diachronic change from analytic to synthetic verbal structures, in particular the reanalysis of the auxiliary verb ‘to be’ as a person-number affix attached to the *l*-participle. Table 2 below presents the Old Polish orthotonic forms of the auxiliary verb ‘to be’ compared with Modern Polish forms of the copula verb ‘to be’ with the person-number agreement on each of them (Bąk 1984: 337):

Table 2: The old and the present day paradigm of verb 'to be' in the present tense.

Old Polish		Present day Polish	
SG	PL	SG	PL
1. <i>jeś-m</i>	1. <i>jes-my</i>	1. <i>jest-em</i>	1. <i>jest-eśmy</i>
2. <i>jeś-</i>	2. <i>jeś-cie</i>	2. <i>jest-eś</i>	2. <i>jest-eście</i>
3. <i>jest/ je/ jeść</i>	3. <i>są</i>	3. <i>jest</i>	3. <i>są</i>
1. DUAL <i>jeswa</i>		-	
2. DUAL <i>jesta</i>		-	
3. DUAL <i>jesta</i>		-	

The old paradigm was based on two different roots: *jeś-*, *jes-* and *są*, the second root occurred only in the third person plural. Interestingly, there was no ending in the second person singular. The dual forms disappeared in the 16th century, however, they can still be found in some dialects (Długosz-Kurbaczowa & Dubisz 2001: 305-308).

The Old Polish forms of the verb 'to be' in the present tense, presented in Table 2, and a verb in the past participle form with the thematic ending *-l-* or *-ł-* (so called *l*-participle) and gender inflection, formed the periphrastic past tense, which was the default form for speaking about past activities. As an example of the periphrastic construction, consider the data in Table 3 and Table 4 of the past tense for the verb *brać* 'to take' (Klemensiewicz et al. 1955: 367-373):

Table 3: Periphrastic past tense forms for the verb *brać* – 'to take'.

SG			
MSC	FEM	NT	
1. <i>ja jeśm brał</i>	1. <i>ja jeśm brała</i>	-	
2. <i>ty jeś brał</i>	2. <i>ty jeś brała</i>	-	
3. <i>on jest brał</i>	3. <i>ona jest brała</i>	3. <i>ono jest brało</i>	

Table 4: Periphrastic past tense forms for the verb *brać*- 'to take'.

PL	
MSC personal	Non-MSC personal
1. <i>my jesmy brali</i>	1. <i>my jesmy brały</i>
2. <i>wy jeście brali</i>	2. <i>wy jeście brały</i>
3. <i>oni są brali</i>	3. <i>one są brały</i>

The auxiliary could as well follow the past participle, as exemplified in Table 5 and 6 below:

Table 5: Periphrastic past tense forms for the verb *brać*- 'to take'.

SG			
MSC	FEM	NT	
1. <i>ja brał jeśm</i>	1. <i>ja brała jeśm</i>	-	
2. <i>ty brał jeś</i>	2. <i>ty brała jeś</i>	-	
3. <i>on brał jest²</i>	3. <i>ona brała jest</i>	3. <i>ono brało jest</i>	

² An anonymous reviewer wonders whether the pattern 'Subject-participle-auxiliary' was really attested in Old Polish texts because, as this reviewer points out, in the counterparts of such structures in South Slavic languages, the subject cannot be present if the participle precedes the auxiliary. The following are sentences from Old Polish biblical texts:

Table 6: Periphrastic past tense forms for the verb *brać*- 'to take'.

PL	
MSC personal	Non-MSC personal
1. <i>my brali jesmy</i>	1. <i>my brały jesmy</i>
2. <i>wy brali jeście</i>	2. <i>wy brały jeście</i>
3. <i>oni brali są</i>	3. <i>one brały są</i>

In 14th and 15th century both orderings of periphrastic past tense were alive (Klemensiewicz et al. 1955: 371):

- (1) a. *wyszedł jeśm* *jeśm wywiódł*
 I(masc) went out I(masc) led
 b. *dała jeśm* *jeśm dała*
 I(fem) gave I(fem) gave

Bąk (1984: 337) notes that at the beginning of the 14th century the auxiliary verbs *jest* in 3rd singular and *są* in 3rd plural start to disappear, and the finite forms *jeśm*, *jeś*, *jesmy*, *jeście* begin to reduce their length (see data (2) to (6) below) and they ended up as what we call today 'movable' endings. Długosz-Kurbaczowa & Dubisz (2001: 307) also notice that the periphrastic past tense verbal forms started to evolve into shorter ones. They list the following processes which took part in the gradual change from the periphrastic past tense construction into the synthetic verbal forms which we have now. Consider also the following examples (2) to (6) which come from Długosz-Kurbaczowa & Dubisz (2001: 307).

1. In 3rd person singular and plural the auxiliaries *jest* and *są* started to disappear, what was left was only the *l*-participle.

- (2) a. *uciekał jest* changed into: *uciekał*
 'he ran away'
 b. *uciekała jest* changed into: *uciekała*
 'she ran away'
 c. *uciekało jest* changed into: *uciekało*
 'it ran away'

2. In 1st person singular the auxiliary was shortened to the form of *-eśm/ -śm* and it was attached to either the *l*-participle or some other word in a sentence, e.g.:

- (3) a. *padł jeśm* changed into: *padleśm*
 'I (masc) fell down'

a) *I uczynił jest* *dzierzadła modrej barwy na kraju opony jednej na obu boku a na kraju opony drugiej także* (BZ Ex36,11).

b) *...wszedł jest* *za mężem israelskim do domu niepoczesnego i przekłół* *obu społu, męża *też i żonę, przez jich trzosła* (BZ Num 25, 8)

c) *...jichże to wszystko czysło* *beło jest* *dwadzieścia a dwa tysiącow a dwieście* (BZ Num 26,14).

In the examples (a) to (c) above we can see that the *l*-participle precedes the auxiliary in the sentence. In (a) and (b) the subject pronouns are omitted but in (c) the subject is overtly pronounced. The sentences in (a), (b) and (c) come from Słoboda (2012: 39, 50, 174).

- b. *gdy jeśm szedł* changed into: *gdysm szedł*
 ‘when I (masc) walked’
3. In 2nd person singular the auxiliary was shortened to *-eś/-ś*, e.g.:
- (4) a. *przysiągł jeś* changed into: *przysiągłeś*
 ‘you (masc) promised’
 b. *jakoż jeś osiadł* changed into: *jakożeś osiadł*
 ‘as you (masc) settled’
4. In 1st person plural the auxiliary was shortened to *-smy*, which later became similar in pronunciation to the endings in 1st and 2nd person singular. Therefore, there was *-śmy* because of *-eśm/-śm* and *-eś/-ś*. Consider (10):
- (5) *przyszli jesmy* changed into: 1. *przyszliśmy* – 2. *przyszliśmy*
 ‘we came’
5. In 2nd person plural the auxiliary was shortened to *-ście*, e.g.:
- (6) *weseliły jeście* changed into: *weseliłyście*
 ‘you (fem) enjoyed’

(Długosz-Kurbaczowa & Dubisz 2001: 307)

Długosz-Kurbaczowa & Dubisz (2001: 307) claim that the origin of the synthetic past tense verb form was due to the tendency for economy and simplification of the articulation effort as well as the need to fill in the gap with new synthetic constructions after the loss of the old simple past tenses (aorist and imperfectum).³

2.2. The development of conditional auxiliary *by*

The present-day Polish conditional mood auxiliary comes from an aorist form of the verb *być* ‘to be’. Consider the following paradigm in (7) (Długosz-Kurbaczowa & Dubisz 2001: 315-316):

Old Polish aorist forms:		Present-day Polish conditional <i>by</i>	
SG	PL	SG	PL
1. <i>bych</i>	1. <i>bychom</i>	1. <i>bym</i>	1. <i>byśmy</i>
2. <i>by</i>	2. <i>byście</i>	2. <i>byś</i>	2. <i>byście</i>
3. <i>by</i>	3. <i>bychą</i>	3. <i>by</i>	3. <i>by</i>

The conditional mood construction was formed with the *l*-participle and the auxiliary *być* in the aorist form. The following examples (8)–(12) show the distribution of the conditional morpheme. It could either attach to the *l*-participle as in (8) and (11), precede it as in (9) and (10) or follow it as in (12):

³ One of the anonymous reviewers points out that aorist and imperfectum were lost in Serbo-Croatian and Czech, too, but the auxiliaries were not reduced in those languages. So the reasoning in Długosz-Kurbaczowa & Dubisz (2001: 307) is only speculative. Another possible explanation given by this reviewer is the shift of lexical stress from the initial to the penultimate syllable in Polish (e.g. Migdalski 2006: 40).

- (8) *zabiłbych* 'I (masc) would kill'
 (9) *bych spadł* 'I (masc) would fall'
 (10) *bychom zmarli* 'we would die'
 (11) *opuścilibyście* 'you (pl.masc) would leave'
 (12) *słyszeli bychą* 'they (masc) would hear'

(Długosz-Kurbaczowa & Dubisz 2001: 315-316)

Since the beginning of the 15th century, the aorist forms of the verb *być* started to resemble the Present-day Polish past tense form of this verb (specified in the brackets).

- (13) SG PL
 1. *bych* --> *bym* (<--*byłem*) 1. *bychom* --> *byśmy* (<--*byliśmy*)
 2. *by* --> *byś* (<--*byłeś*) 2. *byście*
 3. *by* 3. *bychą* --> *by* (<--*byli*)

(Długosz-Kurbaczowa & Dubisz 2001: 315-316)

Notice that in Present-day Polish the forms of 3rd person singular and 2nd person plural remained the same as in 15th century (consider data in (7) and (13)).

3. Distribution of Polish auxiliary clitics

Polish has two types of auxiliary clitics: bound (used in a simple past tense) and a free morpheme *by* used to form the conditional mood. The paradigm for the perfect auxiliary clitics aligns with person-number inflection for the Modern Polish verb 'to be'. As shown in Table 7 below, the singular and plural morphemes for the 3rd person perfect auxiliary are morphologically null, and the 3rd person conditional morpheme does not have any person-number inflection. Conditional morpheme *by*, when encliticized to the *l*-participle, takes the auxiliary clitics to its right and they together form the conditional construction.

Table 7: Polish past tense auxiliary clitics and conditional morpheme *by*.

Past tense auxiliary		Conditional morpheme <i>-by</i>	
SG	PL	SG	PL
1. <i>-m</i>	1. <i>-śmy</i>	1. <i>by-m</i>	1. <i>by-śmy</i>
2. <i>-ś</i>	2. <i>-ście</i>	2. <i>by-ś</i>	2. <i>by-ście</i>
3. -	3. -	3. <i>by</i>	3. <i>by</i>

The following sections will analyse the synchronic distribution of the two kinds of Polish auxiliaries within a clause. In section 3.1 the syntax of perfect auxiliaries will be presented. Section 3.2 will deal with conditional morpheme *by*. Section 3.3 will show the differences in morpho-phonological behaviour between the auxiliary clitics and the *by* morpheme.

3.1. Mobile inflectional endings

Inflectional endings for present and past tense in Polish can attach to a variety of elements within the clause. However, the word that the inflectional ending is attached to has to precede the verb or to be the verb itself.

- (14) a. *Ale się wyspałam!*
 but reflexive to sleep well.part.1st.sg.fem
 'I slept so well!'
 b. *Alem się wyspała!*

In (14a) the past tense inflection is visible on the *l*-participle, which is the most common situation, whereas in (14b) it is attached to the conjunction *ale*, here used in a function of interjection. Similarly, in (15b) below the inflection is attached to a *wh*-word at the beginning of a question.

- (15) a. *Kiedy wrócilesz?*
 when come back.part.2.sg.masc
 'When did you come back?'
 b. *Kiedyś wrócił?*

The inflectional ending can also be separated from the copula verb in the present tense. In such a case, the rest of the verb is usually omitted.⁴ Consider (16a) and (16b):

- (16) a. *Głodny jesteś?*
 hungry.nom.sg.masc be.pres.2.sg
 'Are you hungry?'
Głodnyś?
 b. SG PL
 1. *Głodnym.* 1. *Głodniśmy.*
 2. *Głodnyś.* 2. *Głodniście.*
 3. - 3. -

(Bańko 2002:50)

In the following examples (17) – (24) different clausal elements have been shown to attract the past tense inflection.

- (17) a. *Ty widziałeś.*
 you.sg see.part.2.sg.masc
 'You saw.'
 b. *Tyś widział.* - subject pronoun
- (18) *Ty jegoś widział.* - object pronoun
 you.sg him see.part.2.sg.masc
 'You saw him'
- (19) a. *Ewy książkę czytałeś.*
 Ewa.gen.sg book.acc.fem.sg read.part.3.sg.masc
 'You have read Eva's book.'
 b. *Ewy-ś książkę czytał.* - inside the possessive DP
- (20) a. *Janek powiedział, że pojechałeś do Warszawy.*
 Janek said that go.part.2.sg.masc to Warsaw. - complementizer *że*
 b. *Janek powiedział, żeś pojechał do Warszawy.*

⁴ This is true only for present tense copula verb 'to be' and only for first and second person singular and plural.

- (21) *Tego chłopcaś lubiła.* - direct object (DP)
 that boy like.part.2.sg.fem
 'You liked that boy.'
- (22) *Ty mamieś kwiaty dał.* -indirect object (DP)
 you.sg mother.dat.sg.fem flowers.nom.pl give.part.2.sg.masc
 'You gave flowers to mother'
- (23) *Daleko-m poszła.* -adverb (AP)
 far walk.part.1.sg.fem
 'I went far away.'
- (24) *Świdomyś był tych problemów.* -adjective (AP)
 aware be.part.2.sg.masc these problems.gen.pl
 'You were aware of these problems.'

Interestingly, some conjunctions and particles must take inflectional endings obligatorily.⁵ Consider data in (25a-d):

- (25) a. *Mama prosiła, abyśmy posprząтали.*
 mother.nom.sg ask.part.3.sg.fem to tidy up.part.3.pl.masc
 'Mother asked us to tidy up.'
- b. **Mama prosiła, aby posprzątaliśmy.*
- c. *Czyżbyś zapomniał?*
 question particle forget.part.2.sg.masc
 'Is that so you forgot?'
- d. **Czyżby zapomniałeś?*

Bańko (2002: 51) notices that the attachment of inflectional endings to different elements in a clause is not completely free and is subject to some phonological (see example in (30)) or syntactic (see (29)) constraints. Sentences where the past tense inflection is separated from the verb are now most common in colloquial contexts. Some speakers may even have doubts whether that kind of constructions is grammatical. They may claim that they belong to some subdialect variety and not to a standard language. Bańko (2002) considers this a good judgement, since as he notices, elements which are remnants of archaic constructions are better preserved in a colloquial than in a standard language.

One of the most characteristic phenomena of Polish colloquial speech is adding the inflectional endings to the particle *że-*, as presented in (26a).

- (26) a. *Dziewczynę żeś zranił.*
 girl.acc.sg.fem that hurt.part.2.sg.masc
 'You hurt a girl.'
- b. **Dziewczynę że zraniłeś.*
- c. *Dziewczyneś zranił. / Dziewczynę zraniłeś.*

⁵ The full list of these conjunctions is the following: *aby* 'for', 'in order to', *ażeby* 'in order to', *bodaj* 'perhaps', *bodajby* 'maybe', *bodajże* 'perhaps', *by* 'in order to', *byle* 'as long as', *byleby* 'so that', *choć* 'even if', *choćby* 'even if', *czyżby* 'is that so?', *gdyby* 'if', *izby* 'that', *jakby* 'as if', *jakoby* 'as if', *jakżeby* 'so that', *jeśliby* 'if', *jeżeli* 'if', *niechby* 'let', *niźliby* 'than', *niźby* 'than', *niźliby* 'than', *oby* 'may, hope so', *toby*, *żeby* 'in order to' (Bańko 2002:50).

In (26c) we can see that the inflection can be attached to an object of a sentence or to a *l*-participle. If the particle *że-* is deprived of inflection, the sentence ends up ungrammatical, as shown in (26b). This is not true for a complementizer *że* 'that'. It can but does not have to carry the inflection. Consider (27a) and (27b):

- (27) a. *Powiedziano mi, żeś przyjechał.*
 b. *Powiedziano mi, że przyjechałeś.*
 'I was told that you came'

As was mentioned earlier, the distribution of floating inflections is not completely free. Although it may seem that they can be used everywhere in a clause, there are a few constraints. First of all, the word which carries the inflectional ending has to be the verb (participle) *or* to precede the verb in a clause. However, it does not have to precede it directly, as in (28a):

- (28) a. *Daleko-m (od domu w ten piękny wiosenny dzień) poszła.*
 'I went far away (from home on this beautiful spring day.)'
 b. **Poszła daleko-m.*
 'I went far away.'

In (28b) the sentence is not grammatical because the adverb which carries the inflectional ending follows the verb.

The inflectional ending cannot be attached to a transitive preposition, as in (29a) but it can be attached to a demonstrative pronoun, as in (29b):

- (29) a. **Do-ś kina poszedłeś*
 to cinema.gen.sg go.part.2.sg.masc
 'You went to the cinema.'
 b. *Tego-ś zadania nie wykonał.*
 this task not do.part.2.sg.masc
 'You did not do this task.'

In (30) below, a phonetic constraint disables the auxiliary clitic to attach to the previous word as there are two nasal sounds in immediate neighborhood which hinder the pronunciation of a string:

- (30) **Ramięm zwichnął.*
 arm.acc.sg.neut break.part.1.sg.masc
 'I broke my arm.'

3.2. Conditional morpheme *by* + person-number agreement

When *-by* is affixed to the *l*-participle, the clause has the conditional (irrealis) meaning, similar to the meaning of English *would*. This morpheme can attach to the *l*-participle or stand on its own, as shown in (31a-b). However, when alone, it can only appear to the left of the *l*-participle in the clause. It carries the inflectional ending for person-number distinction.

- (31) a. *Nigdy nie zrobiłabyś tego.*
 never neg.partic. do.part.2.sg.fem this
 'You would never do this.'
 b. *Nigdy byś tego nie zrobiła.*

Both in (31a) and (31b) the inflectional ending moves together with the *by* morpheme. The choice between these two variants depends mostly on prosodic factors. The *by* morpheme is an enclitic, so it attaches to the preceding word and it can neither occur at the beginning of a sentence, nor at the end. These restrictions do not apply to the conjunction *by* which can appear at the beginning of a sentence. Consider (32):

- (32) *By tyle wiedzieć, trzeba dużo czytać*
 that much know.inf. one should a lot read.inf.
 'To know that much, one has to read a lot.'

The *by* morpheme, when it stands on its own, can appear in basically any place in a clause, except for the very first and the very last position. And the place right after the adverb seems to sound best for the sentence like in (33). Consider sentence (33) below:

- (33) *(*By) Nasza Marysia (by) chętnie by dzisiaj poszła(by) do (*by) kina (*by).*
 our Mary eagerly today go.part.3.sg.fem to the cinema
 'Our Mary is keen on going to the cinema today.'

Also the distribution of the *l*-participle with the *by* morpheme affixed to it is considerably free. In this case the *l*-participle plus auxiliary may appear even at the very beginning and at the very end of a clause.

- (34) *(Poszłaby) Nasza Marysia (poszłaby) chętnie dzisiaj poszłaby do kina (poszłaby).*
 our Mary eagerly today go.part.3.sg.fem to the cinema
 'Our Mary is keen on going to the cinema today.'

The distribution of the *l*-participle in a sentence without the morpheme *by* attached to it, is the same as with the morpheme *by*.

3.3. Auxiliary clitics and the morpheme *by*

Whereas the auxiliary clitics can attach to basically any element of any word category in a clause, the morpheme *by* does not exhibit that property. It can either stand on its own or be attached to the *l*-participle, and no other element.

- (35) *Ty jutro(*byś) poszedł(byś) do kina(*byś).*
 you tomorrow go.part.2.sg.masc to the cinema
 'You would go to the cinema tomorrow.'

From (35) above we can see that the morpheme *by* cannot be attached to other element different than the *l*-participle. This is different from the properties of the auxiliary clitics, which when affixed to the word, constitute one phonological element with it.

The auxiliary clitics and the conditional morpheme *by*, when it stands on its own in the clause, behave similarly in the sense that they both can appear almost in every position in a clause. However, they are different with respect to what they can attach to – auxiliary clitics can attach to a wide range of elements, and the *by* morpheme can attach only to the *l*-participle.

4. Force-marking second position clitics

Second position clitics do not form a natural class in morpho-syntactic terms, as they include pronouns, adverbs, modals and sentential particles – the only property that unifies them is their prosodic deficiency and dependency. Operator clitics (Migdalski 2016), which are a special subgroup of Wackernagel clitics, are attested in all Slavic languages, irrespective of whether they have other second position clitics, verb-adjacent, weak pronouns or no other clitics at all. They mark Force-related contexts in languages like Bulgarian, Macedonian and Polish, which do not have other Wackernagel clitics.

The following section will deal with a distribution of the operator clitic *že* (subsection 4.1), its function and characteristics. Subsection 4.2 will present the auxiliary clitic *by* and its distribution in the subjunctive and conditional mood.

4.1. Operator clitic *že*

The operator clitic *že* is used to mark focus on the preceding word. Migdalski (2009: 150) notices that the operator clitics are instances of the Wackernagel type of cliticization. He also suggests that they form a natural class by specifying the Illocutionary Force of a clause. Other examples of operator clitics are: Czech *prý*, which is used to report non-witnessed events; interrogative complementizer *li* (present in many contemporary Slavic languages such as Bulgarian, Macedonian, Russian, Serbo-Croatian); and operator clitic *že* in Czech and Russian.

In (36) below we can see the clitic *že* attached to the imperative verbal form. In this particular case it is used to mark stress on the element that precedes it.

- (36) *Chodźże tutaj!*
 come+Foc here
 'Come here!'

(Migdalski 2016: 156)

In some cases, the clitic *že* may be used without the semantics of Focus for PF reasons. This situation happens when the clitic *že* appears with the auxiliary clitic on its right edge (Bański 2000, in Migdalski 2016: 156). The *že* insertion makes the sentence in (37b) grammatical because it enables the pronunciation of two nasal sounds which previously were in immediate neighbourhood as in (37a).

- (37) a. **Ramięm zwichnął.*
 arm.acc.sg.neut break.part.1.sg.masc
 'I broke my arm.'
 b. *Ramię-że-m zwichnął.*

Bański (2000) observes that *że* insertion can occur only when the auxiliary clitic needs to be prosodically supported, and it does not happen otherwise. So in a sentence such as (38c) it is possible to have double *że*. In this case, one of them is a complementizer and the other is a particle inserted for PF purposes (similarly to (37b) above). If the auxiliary clitic attaches to the *l*-participle and does not need any prosodic support, only one *że* may occur. Consider (38d) below:

- (38) a. *Powiedziano mi, żeś przyjechał.*
 b. *Powiedziano mi, że przyjechałeś.*
 'I was told that you came.'
 c. *Powiedziano mi, że żeś przyjechał.*
 d. **Powiedziano mi, że że przyjechałeś.*

In (38a) the auxiliary clitic attaches to the complementizer *że* in a subordinate clause. (38b) shows that the auxiliary clitic is attached to the *l*-participle which goes after the complementizer. In (38c) we can see a complementizer *że* and the operator clitic *że* to which the auxiliary is attached. The sentence in (38d) is ungrammatical because when the auxiliary attaches to the *l*-participle, only one *że* can appear, and this is the complementizer *że*.

4.2. Auxiliary *by*

The morpheme *by* when attached to the *l*-participle has the conditional (irrealis) meaning, similar to the meaning of English *would*. The affixation is not obligatory as *by* may precede the *l*-participle. The meaning and interpretation in such a case stay the same.

In a subordinate clause with the conditional or subjunctive mood the auxiliary is affixed to the complementizer and must occur in the second position in the embedded clause. This is similar to the structures with the operator clitic *że* in Polish, which also appears second. We have seen so far that Polish auxiliary clitics do not show second position cliticization patterns, the only exceptions are the operator clitic and auxiliary *by* in subordinate clauses (Migdalski 2016: 168). Consider the sentences in (39) below:

- (39) a. *Chcę, żebyś pożyczył mu książkę.*
 want.1.sg.pres that lend.part.2.sg.masc him book
 'I want you to lend him a book.'
 b. **Chcę że pożyczylbyś mu książkę.*

(Migdalski 2016: 168)

Migdalski (2016) presents the data which shows that auxiliary clitics in Polish are second position clitics only in Force-marking contexts, these are contexts with subjunctive and conditional meaning used in subordinate clauses, like the one exemplified in (39a). Otherwise they are affixed to the *l*-participle.

5. The structural position of Polish auxiliary clitics

For the structural analysis I follow Veselovská and Emonds' (2015) model for IP projection where both the past tense and conditional auxiliaries occupy the I head with [-Modal] = Realis or [+Modal] = Irrealis features. The participle occupies the V head position.

Similarly to Veselovská and Emonds' (2015: 281-286) analysis of Czech, I assume that Polish past tense and conditional auxiliaries fit the conditions for being located in the head I. Like in Czech and English, Polish sentence negation particle *nie* occurs between I and VP. Consider the data in (40):

- (40) a. Ja nie czekałam na autobus tamtego dnia.
I not wait.past part.sg.fem for a bus that day
'I was not waiting for a bus that day.'
- b) Ja bym nie czekała na autobus tamtego dnia.
I aux+1.sg not wait.past part.sg.fem for a bus that day
'I would not wait for a bus that day.'
- c) *Ja nie bym czekała na autobus tamtego dnia.
- d) Ja czekałam nie na autobus tamtego dnia, ale na tramwaj.
'I was waiting not for a bus but for a tram.'

In (40c) we can see that the negative particle cannot occur before the conditional auxiliary *by*, and example (40d) shows that the sentence is acceptable but only as partial negation, and not as a sentence negation.

As it was presented earlier, the *by* morpheme, when it stands on its own, can appear in basically any place in a clause, except for the very first and the very last position. Consider:

- (41) Nasza Marysia (by) chętnie by dzisiaj poszła(by) do kina (*by).
our Mary eagerly today go.part.3.sg.fem to the cinema
'Our Mary is keen on going to the cinema today.'

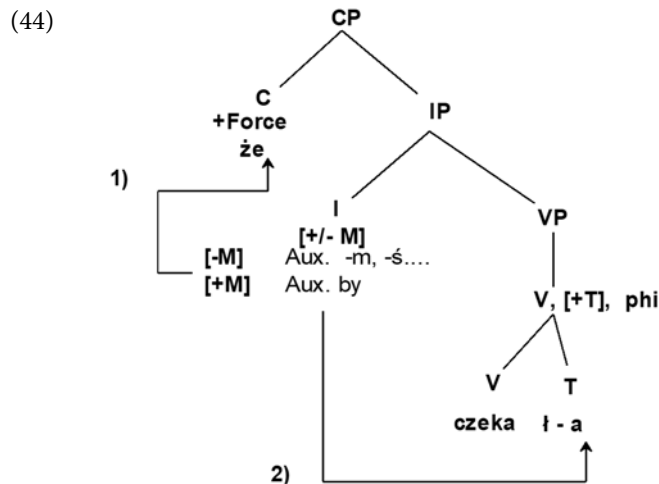
Also the distribution of the *l*-participle with the *by* morpheme affixed to it is considerably free. In this case the *l*-participle plus auxiliary may appear even at the very beginning and at the very end of a clause. See (42) below:

- (42) (Poszłaby)Nasza Marysia (poszłaby) chętnie dzisiaj poszłaby do kina (poszłaby).
our Mary eagerly today go.part.3.sg.fem to the cinema
'Our Mary is keen on going to the cinema today.'

However, it is not possible for the conditional auxiliary *by* and the past tense auxiliary to occur in the initial position of a clause. See (43a) and (43b) below:

- (43) a. *By/poszła nasza Marysia chętnie dzisiaj do kina (poszłaby).
go.part.3.sg.fem our Mary eagerly today to the cinema
'Our Mary is keen on going to the cinema today.'
- b. *śposzła chętnie dzisiaj do kina
aux.2.sg, go.part.fem eagerly today to the cinema
'You were keen on going to the cinema today.'

Assuming that the position for both of the auxiliaries is in the head I, the past tense auxiliaries and the conditional morpheme *by* (when suffixed to a participle) move down in the structure and attach to the *l*-participle under V. This is marked by an arrow number (2) in the syntactic tree (44). The arrow number (1) shows movement whenever the Illocutionary Force related contexts appear (e.g. the conditional and subjunctive mood).



Below there are the two types of movement exemplified in sample sentences. Consider (45):

- (45) M1. *Jan powiedział, żebyś czekała na niego w salonie.*
 John said that.aux-aux.2.sg wait.part.sg.fem in the living room
 'John said that you should wait for him in the living room.'
- M2. *Ty czekałabyś na niego nawet sto lat.*
 you wait.part.fem.aux-aux.2.sg for him even a hundred years
 'You would wait for him even for a hundred years.'

In (45) the M1 sentence refers to the movement marked by arrow number 1 in (44). This is the movement of auxiliaries (in this case both of them: the auxiliary clitics and the auxiliary *by*) to the C head position motivated by the +Force feature where they attach to *że*. The other kind of movement marked by arrow number 2 in (44) is exemplified in the sentence M2. This is the movement of auxiliaries from I to V where they attach to the *l*-participle.

6. Summary

Polish auxiliary clitics do not show the Wackernagel second position behaviour in general. The only exception is the auxiliary clitic *by* in Force-marking contexts, so in the conditional and subjunctive mood, when they are encliticized to the particle *że* or some temporal adverbs, like *gdy* 'when' or clause initial conjunctions and complementizers (*jakby* 'as if', *oby* 'I wish that...'). The clausal negation and word order within a sentence allow to analyse the structural position of Polish auxiliaries as the head I of the IP projection.

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