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L2 effects on L1 in foreign language learners: an exploratory study on object pronouns and verb placement in wh-questions in Polish*

Wpływ języka obcego na język ojczysty: badanie eksploracyjne
zaimków dopełnieniowych i pozycji czasownika w pytaniach
szczegółowych w języku polskim

Abstrakt

Niniejsza praca koncentruje się na wpływie języka obcego na język ojczysty na poziomie gramatycznym. W ramach badania poprzecznego przeprowadzono test akceptowalności gramatycznej, w którym wzięło udział 25 Polaków uczących się języków niemieckiego i angielskiego oraz grupa kontrolna 16 jednojęzycznych Polaków. Test obejmował dwa zjawiska gramatyczne: zaimki anaforyczne wewnątrz zdania w funkcji dopełnienia (zjawisko na styku składni i pragmatyki) oraz pozycję czasownika w pytaniach szczegółowych (zjawisko należące do ścisłej składni). Wyniki ukazują, że zaimki anaforyczne, które nie mogą przyjąć formy anafory zerowej wewnątrz zdania w językach niemieckim i angielskim, są istotnie częściej akceptowane przez wielojęzycznych uczniów niż przez jednojęzyczną grupę kontrolną. Zaimki dopełnieniowe w języku ojczystym zdają się być zatem zjawiskiem podatnym na wpływ języka obcego w przeciwieństwie do właściwości o charakterze czysto składniowym. Niniejsze badanie nie tylko stanowi potwierdzenie tezy, według której zjawiska na styku modułów językowych są bardziej podatne na wpływy międzyjęzykowe niż zjawiska należące do ścisłej składni, ale również rozszerza ją na wpływ języka obcego na język ojczysty.

Słowa kluczowe: wpływ języka obcego na język ojczysty, wpływy międzyjęzykowe, zaimki dopełnieniowe, pytania szczegółowe, V2, język polski

Abstract

This study investigates L2 effects on L1 grammar in foreign language learners. As part of a cross-sectional study, 25 Polish native speakers learning English and German, and 16 Polish monolingual speakers participated in an acceptability judgment test in Polish.

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The test involved two grammatical phenomena: anaphoric object pronouns which lie at the syntax-pragmatics interface, and verb placement in *wh*-questions, which is a property of narrow syntax. The analysis shows that multilingual learners accepted overt anaphoric object pronouns in a sentence-internal position significantly more frequently than monolingual speakers from the control group. Object pronouns in the native language seem to be an element open to the influence of a foreign language, in contrast to linguistic properties which are solely syntactic. This study thus confirms that interface phenomena are more prone to cross-linguistic influence than purely syntactic features, but it also extends this thesis to include L2 effect on L1.

Key words: L2 effects, cross-linguistic influence, object pronouns, *wh*-questions, V2, Polish

1. Introduction

A central finding that has been consistently demonstrated in psycholinguistic research on bilingualism is that both languages of a bilingual remain active to varying degrees, even in contexts where only one language is used (e.g., Bialystok 2011). Consequently, the languages present in the bilingual mind can influence each other in a variety of ways.

Research into cross-linguistic influence (CLI) has traditionally focused on various effects of L1 on L2, and more recently on the role of previous languages during L3 acquisition (e.g., Rothman et al. 2019, for an overview). However, the question of how additional languages may affect L1 continues to be understudied (but see Kecskes & Papp 2000; Cook 2003; Długosz 2021, among others). The intent of the present investigation is to fill this research gap and to contribute to the ongoing debate concerning the vulnerability of narrow syntax and interfaces to influences across and between languages.

The current work is an exploratory study that seeks to determine whether L1 Polish can be subject to the influence of late acquired non-native languages, in this case English and German, in the grammatical domain. To this end, two grammatical phenomena are investigated in an offline grammaticality judgment task: V2 in *wh*-questions that resides in core syntax, and referential object pronouns that are located at the interface between syntax and pragmatics. Previous research has suggested that linguistic properties in which the syntax interfaces with other domains, such as pragmatics, are more prone to cross-linguistic influence than purely syntactic features (e.g., Müller & Hulk 2001). Analysing the chosen properties enables us to test this hypothesis in the L2-to-L1 direction and, more generally, to identify those phenomena in L1 that are susceptible to the influence of L2, even in offline processing. Due to its exploratory character,

this study intends to set future directions for examining L2 effects on L1 Polish both in production and online comprehension rather than to provide any far-reaching conclusions.

The present work is only concerned with foreign language learning that takes place in classroom conditions and that is accompanied by explicit instruction. L2 acquisition in a natural context lies outside the scope of this study. Thus, in what follows, the term L2 will refer to a non-native language acquired in instructed settings.

2. Cross-linguistic influence in multilingual acquisition

The term “cross-linguistic influence” was coined by Sharwood-Smith (1983) and Kellerman (1984) as a theory-neutral umbrella term for various types of interactions between languages in the mind. One of those types is linguistic transfer, which refers to “[...] reduplication of a representation from previously acquired linguistic representations, as an initial hypothesis for a given domain (literally, a copy) while acquiring a new target language” (Rothman et al. 2019: 24). This definition is particularly important given that the descriptions of L2/L3 influence on L1 in the relevant literature always make mention of transfer, namely “reverse transfer”, “backward transfer”, and “regressive transfer” (e.g., Jarvis & Pavlenko 2008). The term “transfer” alone, however, only pertains to one specific type of cross-linguistic influence among others, thus being too narrow to denote all kinds of interactions between L2 and L1, which can in principle be the same as those from L1 to L2.

A considerable number of studies offer proof that adult L1 competence may be vulnerable to change in the process of L2 learning (e.g., Pavlenko 2000, for an extensive discussion). Such L2 induced changes in the apparently stable L1 could be found in all language subsystems. Despite robust evidence of L2 effects on L1 grammar, the question of how an L2 acquired in instructed settings affects the distribution of object pronouns and the verb placement in *wh*-questions in L1 has not been discussed so far.

In this study, a narrow-syntax property, i.e., V2 in *wh*-questions, is juxtaposed with referential object pronouns, which are located at the interface between syntax and pragmatics. In the research on bilingualism, it has been claimed that the reason for the vulnerability of interfaces to cross-linguistic influence is the inherent complexity of the phenomena at them, since they require the integration of various types information (e.g., Rothman 2009). In this sense, the term “interface” has been used to refer to a component that links subsystems of language, e.g., syntax and

pragmatics/discourse (e.g., Sorace & Serratrice 2009). According to Tsimplici and Sorace (2006), the syntax-discourse interface entails pragmatic conditions that are responsible for appropriateness in a given context. Accordingly, violations at the syntax-pragmatics interface generally do not give rise to ungrammaticality, but instead they lie at a gradient of acceptability (e.g., Sorace & Serratrice 2009: 197).

The vulnerability of interface phenomena has been particularly well illustrated by subject pronouns. Numerous studies have shown that bilinguals of all ages speaking different null-subject languages overaccept overt subject pronouns in their null-subject language in the situation in which their other language allows for overt subject pronouns (e.g., Sorace 2011, for an overview). There is also some evidence of cross-linguistic influence at the level of object pronouns. Mishina-Mori (2020), for example, demonstrated that Japanese/English simultaneous bilinguals may temporarily overuse overt object pronouns in Japanese due to the impact of English. In a similar vein, Zhou et al. (2021) gave a demonstration of cross-linguistic influence in the realisation of objects among Cantonese–English bilingual children. They showed bidirectional cross-linguistic influence in the form of non-target-like uses of object pronouns in both languages, which were unattested in corresponding monolinguals. It follows that overuse and overacceptance of certain features can be treated as manifestations of cross-linguistic influence.

In contrast to interface phenomena, purely syntactic properties, i.e., properties that do not interact with anything else, are claimed to be resistant to change. Many generative scholars assume that narrow syntax is virtually invulnerable once established (e.g., Tsimplici & Sorace 2006). Rothman et al. (2019: 252), however, advocate the view whereby nothing is truly invulnerable, and all domains of grammar may change over lifespan. As to cross-linguistic influence in the domain of *wh*-questions, the results of the existing studies, conducted predominantly in the context of child bilingualism, are inconclusive. For example, Sopata (2013) observed that Polish children learning German as their L2 go through a phase of transferring V3 from Polish into German *wh*-questions. In contrast, Strik (2012) did not find evidence for influence of Dutch in the development of *wh*-questions in French among bilingual children. In adult language acquisition, transfer of verb placement patterns, including V2, has been found in many studies on different language pairs (e.g., Bohnacker 2006, Rankin 2012). Taken together, previous research has clearly shown that cross-linguistic influence can be operative within both interface and purely syntactic phenomena. Hence, the location of the phenomenon at the syntax-pragmatics interface alone is an insufficient factor to cause cross-linguistic influence (see Kupisch 2014).

Numerous studies on the effect of L1 on L2 are based on the notion of “multi-competence” which describes “the compound state of a mind with two grammars” (Cook 1991: 112). According to Cook (1991, 2016), an L2 user possesses an independent language system of their own, not a combination of two monolingual systems. This is actually what Grosjean (1989) suggested when he postulated that a bilingual is not the sum of two monolinguals. The notion of multi-competence brings to the fore the totality of L1 and interlanguage in the mind of a bilingual, and emphasises the interrelationship between them, both at the level of representation and processing (Cook 2016). Under this view, influence of L2 on L1 is expected, since multi-competence affects the whole mind.

Considering possible interactions from L2 to L1, it is of particular importance to identify the conditions under which these interactions take place. Pavlenko (2000: 196) provides an extensive list of specific factors that constrain L2 influence. In brief, L2 should affect L1 in learners who (1) are young rather than old, (2) are attempting to become members of their L2 communities, (3) are highly proficient rather than beginners, (4) actively interact with L2 speakers in an L2 environment, and (5) have intensive exposure to L2 and reduced exposure to L1 speech. Pavlenko (2000: 197) also points to language-related factors which include language level and typological similarity. Accordingly, the influence of L2 should be most pronounced in phonology and in the lexicon, and between typologically proximate languages.

The existing evidence appears to support the view that grammatical knowledge in a stable L1 can be affected by foreign language learning. In his case study, Jarvis (2003) analysed different types of data to explore the effect of L2 English on L1 Finnish in an English-speaking environment. Using a metalinguistic judgment task based on deviant structures identified in the participant’s natural-use data, Jarvis (2003) demonstrated that L2 can influence L1 in the syntactic domain, in that the rigidity of English word order was imposed on the participant’s knowledge of Finnish. This study, however, only concerns an individual case, and should not be generalised to all L2 speakers. L2 effects on L1 have also been found for written language production. For example, Kecskes (1998) explored L2-to-L1 interactions in the writing competence of native speakers of Hungarian learning English, French, or Russian in classroom circumstances. As far as syntax is concerned, the use of L1 showed a strong developmental tendency in the direction of more sophisticated use of certain constructions. With increasing exposure to L2, subordinate clauses were better constructed, and embedded sentences were more frequently produced, and they were more complex. In the domain of syntactic processing, Dussias and Sagarra (2007) offered

proof that significant exposure to L2-speaking environments may result in adopting the parsing strategies of L2 to sentence processing in L1.

The studies of Jarvis (2003) and Dussias and Sagarra (2007) approached the effect of L2 on L1 from the perspective of changes in L1 resulting from immersion in an L2 environment. Clearly, L2 effects on the L1 grammar of non-native L2 learners living in an L1 environment are different in nature. Hence, the extent to which this line of research contributes to understanding the role of an L2 acquired in classroom conditions on L1 in an L1-speaking environment is limited.

Further, there is at least one study devoted to L2 effects on the L1 grammar among Polish native speakers learning German, English or French. Ewert (2008) undertook an exploration of L1 syntactic competence of bilingual teenagers studying French and English by means of a grammaticality judgment task and found that there were several kinds of differences between monolinguals and bilinguals. Most of all, bilinguals displayed sharper linguistic judgments, which might be attributed to the “more native than the native speaker effect” (Ewert & Bromberek-Dyzman 2008: 46). As Ewert (2008) convincingly concluded, “this decisiveness in L1 judgements may be due to higher metalinguistic awareness resulting from conscious attention to L2 structure in a formal school setting” (Ewert 2008: 59). It follows that it is being bilingual, and not L2 transfer that may have a global effect on metalinguistic judgments in L1.

It is apparent from the investigations outlined above that L2-to-L1 interactions are still understudied. To the best of my knowledge, this work is the first attempt to investigate the influence of English and German as L2s on L1 Polish in the domain of V2 in *wh*-questions and object pronouns.

3. Verb placement and distribution of object pronouns in the relevant languages

In what follows, the phenomena under investigation are briefly discussed, i.e., verb placement and the realisation of object pronouns, in that order.

German is analysed as a V2 language, as finite verbs rise to the second position in main clauses. Because of the fact that German has a head-final Verbal Phrase, it is regarded as an OV language (e.g., Grewendorf 2002). In *wh*-questions, the *wh*-word occupies the Spec CP and the subject is placed in postverbal position. The finite verb is thus obligatorily placed in V2 (see Examples 1, 2).

- (1) *Wo schreibt Jan den Brief?*
where writes Jan the letter
(2) **Wo Jan schreibt der Brief?*
where Jan writes the letter
'Where does Jan write the letter?'

Modern English is traditionally considered an SVO language lacking generalised V2. The V2 property is sometimes applied in declaratives with some fronted constituents which can often be classified as fixed expressions. Crucially, V2 occurs in questions as a rule inverting subjects and auxiliaries (e.g., Roberts 1996) (see Examples 3, 4).

- (3) *Where does Jan write the letter?*
(4) **Where Jan does write the letter?*

Being an SVO language, Polish does not exhibit the V2 property. The word order, however, is free, if compared to German, and finite verbs can occur in various positions depending on pragmatic factors or requirements of information structure (Mecner 2005). Regarding wh-questions, the verb can be located either in V2 or in V3, depending again on pragmatic factors. In wh-questions with overt subject pronouns and subject NPs, the V3 position option is unmarked (see Examples 5, 6).

- (5) *Gdzie Jan pisze list?*
where Jan writes letter
(6) *Gdzie pisze Jan list?*
where writes Jan letter
'Where does Jan write the letter?'

Referential expressions in natural language discourse range from indefinite descriptions through definite NPs, to pronouns and null arguments. Object pronouns are situated at the syntax-pragmatics interface. On the one hand, factors which contribute to the distribution of overt vs. null arguments are syntactic in nature. On the other hand, the choice of referential expressions is pragmatically determined by the representation of the discourse model, including the referent's information status (e.g., Sopata 2016). Considerable differences between the three languages can be found with regards to the distribution of objects, which are investigated in this study.

German is analysed in the relevant literature as a semi *pro drop* language (see Grewendorf 1989, for a discussion). Referential null objects are allowed in spoken German. Importantly, they are restricted to topic position. Thus, an overt object pronoun is required in clause-internal position (see Example 7).

- (7) *Was hast du mit dem Kuchen gemacht?*
'What did you do with the cake?'

- a. *Ich habe ihn gegessen.*
I have it eaten
'I ate it.'
- b. *Ø hab ich gegessen.*
have I eaten
'I ate it.'
- c. **Ich habe Ø gegessen.*
I have eaten
'I ate it.'

In the context of null objects in English, Ruda (2014: 339) points to “the phenomenon of missing objects, that is objects that are present in the logical representation of a sentence but are absent from its phonetic form, interpreted as definite”. There are some verbs that are lexically specified for licensing definite missing objects (see Groefsema 1995, for a discussion), yet definite null objects usually give rise to ungrammaticality (see Example 8).

- (8) *What did you do with the cake?*
- a. *I ate it.*
- b. **I ate Ø.*

Polish allows for referential null objects (see Example 9). The mechanism for dropping objects in Polish is *discourse drop*. Null objects in Polish are not constrained to the topic position. Null objects are easily dropped in spoken language (e.g., Mykhaylyk & Sopata 2016). Sopata (2016) shows that in contexts in which the referent is available through discourse immediately prior to it, adult speakers of Polish use all three direct object types: pronouns, lexical NPs and null elements. Clitics clearly dominate, but the rate of null objects is also high.

- (9) *Co zrobiłeś z ciastem?*
'What did you do with the cake?'
- a. *Ø Zjadłem Ø.*
ate
- b. *Zjadłem je.*
ate it
'I ate it.'

Since this study is only concerned with simple insertion/omission of object pronouns, the exact nature of null arguments, including pragmatic and syntactic mechanisms underlying dropping objects in Polish, German, and English, are not further described here (see Sopata 2016, 2017, for a discussion on Polish and German, Cote 1996, for a discussion on English).

The usage and interpretation of null vs. overt object pronouns in native speakers of the respective languages, however, cannot be applied to non-native learners unconditionally. This is caused by the fact that adult learners of German and English do not receive explicit instruction on the use of null

arguments. The usage of null objects is usually not included in grammar textbooks used at school or at university, or, it is mentioned only marginally by a teacher, at best. Learners are therefore not provided with knowledge of null arguments. From the very beginning of language learning, students are instructed to use overt object pronouns. As a result, they don't use null objects in German and in English. In fact, the opposite is the case¹.

The following table summarises the investigated phenomena in the three languages from the perspective of a learner, rather than according to the prescriptive norms.

Table 1. Comparison of Polish, German, and English with respect to the phenomena in focus

Phenomenon	Polish	English	German
V2 in wh-questions	possible	obligatory	obligatory
overt object pronoun in clause-internal position	possible	obligatory	obligatory

It is evident from the above comparison that English and German are very similar to each other, and, at the same time, much more restrictive than Polish with respect to verb placement and overt object pronouns.

4. Research questions, hypotheses and predictions

Bearing the previous discussion in mind, the main research questions are as follows:

RQ1 Does L2 acquired in instructed settings later in life affect L1 grammar?

RQ2 Are there differences between V2 in wh-questions and referential object pronouns in terms of L2 influence on L1?

In accordance with the studies reviewed in Section 2, I predict that L2, in this study German and English, will affect L1 Polish grammar to some extent. The robustness of L2 influence, however, should differ depending on the phenomena under investigation, as evidenced by numerous publications on cross-linguistic influence in bilingual acquisition and use. The realisation

¹To test this assumption, I conducted a small-scale study with 10 Polish adult learners of German. They were tested using an oral translation task from Polish to German in which they had to translate 5 sentences including null objects. The results showed that the learners inserted overt object pronouns in 88% of the sentences. In the remaining 12%, they used null objects in clause-internal position, which is incorrect in German. Given the parallels between teaching German and English in the scenario described above, these results would probably be replicated in English.

of referential object pronouns might be prone to cross-linguistic influence due to the fact that they lie at the interface between syntax and pragmatics, as opposed to V2 in *wh*-questions (see Section 2). By contrast, cross-linguistic influence is expected to be less pronounced in the domain of verb placement in *wh*-questions given its purely syntactic nature. This evidence forms the basis of the following hypothesis:

H1. Polish learners of L2 German and English will overaccept overt object pronouns, but not V2 placement in *wh*-questions in their L1 Polish.

5. The study

5.1. Participants

Finding two comparable groups with and without an L2 poses a challenge for researchers investigating L2 effects on L1, as true monolinguals hardly exist. One possible solution is to contrast individuals who have had the least possible exposure to L2 with those who have studied it at university level (e.g., Cook et al. 2003). In this study, university students of linguistics who were highly proficient both in German and in English were tested. At the moment of testing, all of them had completed the sixth term, which is equal to C1 level in Poland. Since they were learning both languages simultaneously, neither of them can be clearly classified as L2 or L3. On this account, both German and English were labelled L2. They had received ca. 800 hours of language instruction in both languages, and ca. 800 hours of professional courses that covered topics related to linguistics, literature, and culture, taught both by native speakers of German and English, and Polish academics. The students learned the languages in classroom conditions, and all of them used the same learning materials and had the same teachers. Therefore, they constitute a homogeneous group, as their input situation was qualitatively and quantitatively identical.

The multilingual group was compared to a group of 16 “monolinguals” with no command of German and very low English proficiency. The only chance of finding monolingual people in Poland was to recruit low-educated adults who didn’t use any foreign languages, except for inevitable contact with English media. Most of the “monolinguals” had only learned Russian at elementary school, due to the historic language policy in Poland. A few younger “monolinguals” had learned English. However, none of the participants had had significant exposure to Russian, English or an additional language after school graduation. In comparison with the multilinguals,

who were exposed to German and English on a daily basis and had a very high proficiency in both languages, the “monolinguals” could be classified as truly functionally monolingual.

The participants took part in this study on a voluntary basis. Demographic data were obtained by questionnaire. The following table provides an overview of participant characteristics.

Table 2. Participant characteristics

	Multilinguals	“Monolinguals”
Number	25	16
Age	21.0 19.0 – 22.0	39.0 26.0 – 51.0
English proficiency (CEFR)	C1	very low, only receptive
German proficiency (CEFR)	C1	–
Length of exposure to English in years	12.0 6.0 – 17.5	–
Length of exposure to German in years	9.5 3.0 – 15.0	–

5.2. Method

In order to investigate the influence of L2 German and English on L1 Polish in foreign language learners, a paper-and-pencil acceptability judgment test was administered. The test was completed individually with no time-limit imposed. Participants were asked to assign a numerical value from 1 to 5 to each sentence, from the most acceptable (5) to the least acceptable one (1). They were informed that there was no such thing as a “good” or “bad” answer. Participants were asked to make their judgments as quickly as possible, without referring back to previous sentences, correcting previous judgments, or paying attention to meaning or content. Moreover, the participants were pushed toward a monolingual mode, in that they completed the test exclusively in Polish and were informed that the study only concerned their preferences in Polish. A test session lasted approximately 10 minutes.

The materials consisted of 20 experimental items, 10 fillers and 30 items from another experiment (not reported here). The items were not controlled for length. The overview of experimental items is given in Table 3.

Table 3. Overview of experimental sentences

Phenomenon	Number of sentences
Overt object pronouns	5
Null object pronouns	5
V2 in wh-questions	5
V3 in wh-questions	5
Filler sentences	10

All sentences were grammatically correct in Polish. Sentences containing object pronouns were always preceded by context sentences, so that the referent was highly accessible in the participant's cognitive state. Sentences with both overt and null object pronouns only included 3rd person SG and PL objects. These sentences also contained all subject types that are acceptable in Polish, i.e. subject pronouns, NP subjects, and null subjects. Obviously, there is a possibility that the participants in this case paid attention not only to the objects but also to the subjects. To avoid that, the same subject types were used in sentences with the same number of both overt and null object pronouns. In sentences concerning V2 and V3 in wh-questions, a subject was consistently used, either as an NP or as an overt pronoun. Otherwise, the finite verb would always occur in V2. Filler items consisted of short sentences that didn't involve the phenomena under investigation. The material sentences are listed in Appendix A.

5.3. Results

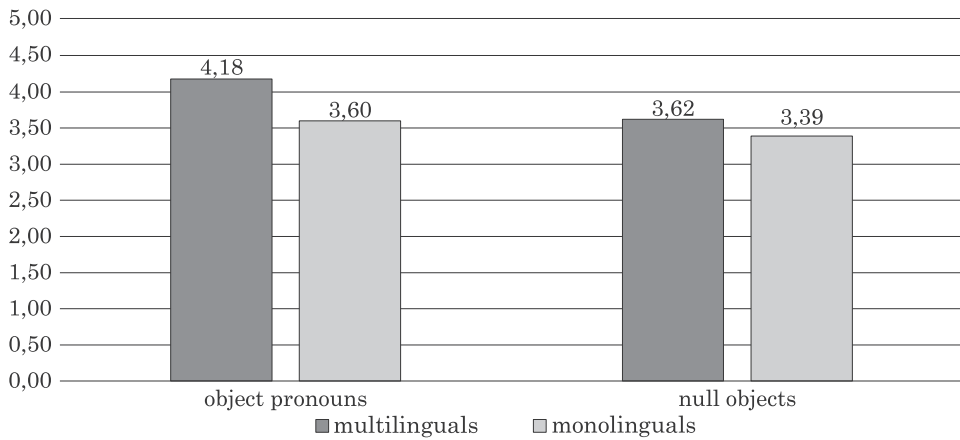
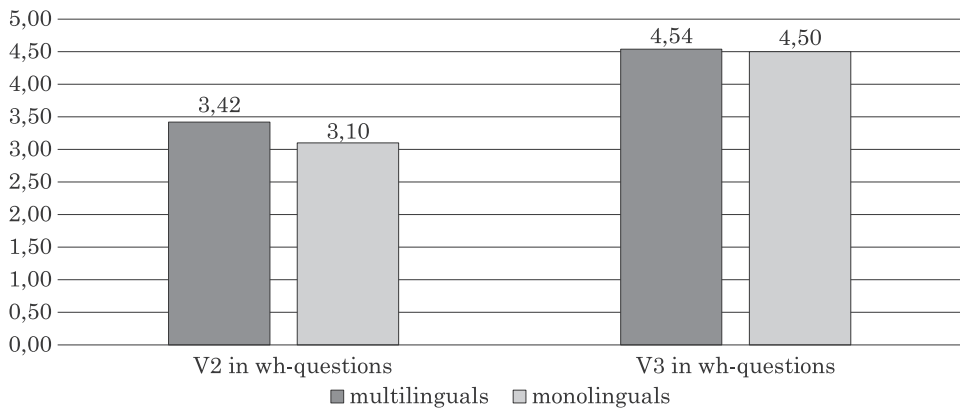
Since a Shapiro-Wilk test showed that four of the phenomena under investigation are not normally distributed, a non-parametric Mann-Whitney U-test was used for the statistical analyses (see Table 4). The Bonferroni correction for multiple comparisons was applied.

The results show that average acceptance rates are generally high. They exceed 3.0 in all cases, which means that participants are more likely to judge a sentence as acceptable. First, the acceptance rates of overt and null pronouns are reported.

First of all, the groups differ from each other in their judgments of object pronouns. Multilinguals accept more object pronouns than monolinguals. The difference amounts to 0.58 points and it is significant ($U = 117.50$, $p = .027$). The differences between the groups in their judgments of null objects are not significant. Figure 2 presents the acceptance rates of V2 and V3 in wh-questions.

Table 4. Between-group comparison of acceptance rates

	Multilinguals (n = 25)			Monolinguals (n = 16)			U	p	η^2
	M	SD	M_{rank}	M	SD	M_{rank}			
Object pronouns	4.18	0.57	24.30	3.60	0.93	15.84	117.5	0.027	0.12
Null objects	3.62	0.71	22.08	3.39	0.88	19.31	173.0	0.470	0.01
V2 in wh-questions	3.42	0.64	23.50	3.10	0.72	17.09	137.5	0.094	0.07
V3 in wh-questions	4.54	0.70	21.30	4.50	0.62	20.53	192.5	0.834	<0.01
Fillers	4.76	0.43	22.10	4.71	0.34	19.28	172.5	0.442	0.01

**Fig. 1.** Acceptance of null and overt object pronouns on a scale from 1 to 5**Fig. 2.** Acceptance of V2 and V3 in wh-questions on a scale from 1 to 5

The results show that the differences between the groups related to the acceptance of verb placement in *wh*-questions are small when compared to the acceptance of overt and null object pronouns. The differences between the groups in their judgments are not significant. Figure 3 illustrates the acceptance rates of filler sentences.

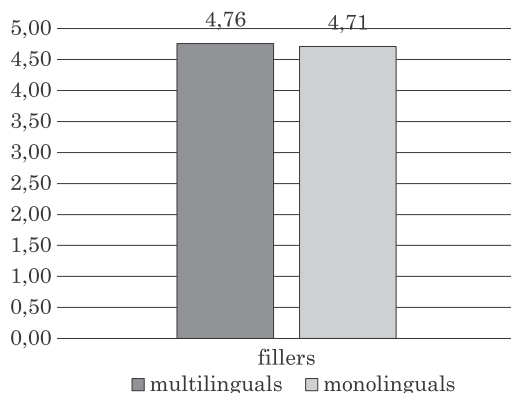


Fig. 3. Acceptance of filler sentences on a scale from 1 to 5

The results clearly demonstrate that both multilinguals and monolinguals rate the filler sentences very highly. The acceptance exceeds 4.7 points in both groups.

In addition to the acceptance rates of the phenomena involved in the study, the overall distribution of all acceptance rates is presented in order to determine which numerical value from 1 to 5 dominate in both groups, irrespective of the phenomena under investigation.

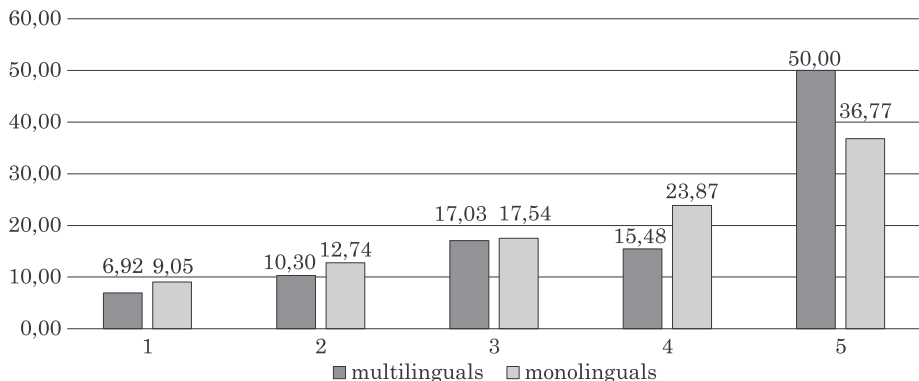


Fig. 4. Assignment of numerical values with respect to all sentences in percent

Figure 4 shows that the 5-point value constitutes half of all acceptability judgments made by multilinguals. In contrast, monolinguals assign the 5-point value to 36.77% of all sentences. Comparatively, the differences between the groups with respect to the other numerical values are equalised by similar judgments.

6. Discussion

The findings of the study demonstrate that L1 Polish grammar is affected by L2 German and English learned in instructed settings, thus providing an affirmative answer to the first research question. In regard to the second research question, concerning the selectivity of L2 effects on L1 grammar, the data show that the influence of L2 German and English only relates to overt object pronouns, which are accepted significantly more frequently by the multilinguals in comparison to the corresponding monolinguals. I assume that the observed influence at the level of object pronouns cannot be ascribed to transfer. English and German have a more indirect impact on multilinguals' judgments, which consists in the overacceptance of overt object pronouns. In other words, the fact that object pronouns in a clause-internal position are required both in German and English results in more frequent acceptance of this feature in native Polish, as compared to Polish monolinguals. On the basis of the results of this study, it is unfortunately impossible to determine which language contributed more to the occurrence of cross-linguistic influence. However, it may be the case that this L2 influence came from both English and German, thus indicating the occurrence of "combined" cross-linguistic influence (De Angelis 2007: 27). The findings are also consistent with the notion of multi-competence, which predicts cross-linguistic interactions between all languages present in the mind of a bilingual as a consequence of having an independent language system of their own.

Verb placement in *wh*-questions turns out to be immune to the influence of L2 German and English, since multilinguals do not opt for V2 placement more often than monolinguals. Multilinguals behave mostly like monolinguals in this domain, whereby the hypothesis (H1) formulated in Section 4 is confirmed. This result accords with the view that properties of narrow syntax are not vulnerable to change, thus confirming the findings of previous studies (e.g., Müller & Hulk 2001, Sorace & Serratrice 2009, among others). Importantly, this study not only confirms the vulnerability of interface

phenomena and resistance of narrow syntax but also extends them to the influence of L2 on the apparently stable L1.

Note that the multilinguals in this study are university students who have been provided with explicit knowledge of German and English grammar. Moreover, they have received professional training in linguistics. Consequently, they are able to consciously reflect on language and use this ability when making metalinguistic judgments. The rules of verb placement in German and English take centre stage in language classes. Similarly, students are taught to use object pronouns right from the beginning. These factors could potentially interfere with the results. However, the acceptance rates of filler sentences are virtually the same in both participant groups, suggesting that the above-mentioned factors did not exert a decisive influence on the participants' judgments.

The results of this study are not consistent with the findings of Ewert (2008) who discovered that Polish teenagers became more conservative in their metalinguistic judgments of syntactic structures in Polish as a result of learning French and English. I found the opposite: the multilingual participants in this study tended to assign the highest value (= most acceptable) to 50% of all sentences, whereas the monolinguals selected the highest value for 36.77% of all sentences. It follows that the multilingual students are more liberal in their judgments compared to the monolingual controls. This result can be accounted for in terms of access to multiple languages. This constitutes, therefore, a general effect of multilingualism, as opposed to the specific impact of a particular language.

A potentially confounding factor could be that the participant groups differ in terms of educational level. Highly-educated multilinguals have extensive experience with written language, whereas low-educated monolinguals do not. Rather, they have to rely predominantly on their experience with spoken Polish. Hence, accepting overt object pronouns might arise from the higher educational level and exposure to written Polish.

Interestingly, the results show that the specific constraints of L2 influence proposed by Pavlenko (2000) do not have to be satisfied in order for cross-linguistic influence to appear. The participants in this study are late L2 learners who are not exposed to L2 in an L2 environment and do not have reduced contact with L1 speech. Regarding the language-related factors, the results indicate that L2 can influence L1, even if they are two typologically distant languages. Moreover, the L2 effects on L1 were found in the grammatical domain, which should be affected secondarily.

Notwithstanding the exploratory character of this study, it seems legitimate to predict that in future research the influence of non-native

German and English on L1 Polish may be found in the use of interface phenomena, such as overt/null arguments, particularly in larger-scale studies based on online methods, when participants are under time pressure and their access to metalinguistic knowledge is limited.

7. Conclusion

To conclude, a foreign language acquired in instructed settings can influence L1 grammar in exclusively native contexts, as demonstrated even in an offline acceptability judgment task. The effect of L2 German and English was primarily found in the realisation of the object, in that multilingual students accepted significantly more overt object pronouns in L1 Polish as compared to the monolingual controls. By contrast, verb placement in wh-questions turned out to be resistant to L2 influence. These results thus confirm that phenomena at the syntax-pragmatics interface may be more prone to cross-linguistic influence than the properties of narrow syntax, even in the L2 to L1 direction. The current study has hopefully contributed to the understanding of L2 to L1 influence by looking at language properties which have hitherto not been considered in this language constellation. More research is needed to clarify the question under which conditions a non-native language influences the seemingly stable mother tongue.

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APPENDIX A

Overt object pronouns

Wszyscy widzieliście tych turystów? Piotrek ich nie widział.

Przedwczoraj zamówiłem zupę ogórkową, która wszystkim smakowała. A gdzie ją zamówiłeś?

Zgubiłem klucz u rodziców. Mama go nie znalazła.

Co uczniowie zrobili z kredą? Oni ją wyrzucili.

Gdzie jest twój krawat? Podarłem go i wyrzuciłem.

Null object pronouns

Wszyscy widzieliście moich rodziców? Kamil nie widział.

Bardzo smakują mi te bułki. Gdzie kupiłeś?

Zgubiłam telefon u koleżanki. Ania nie znalazła.

Co dzieci zrobiły z lalką? One ubrały.

Co się stało z twoim samochodem? Sprzedałem wczoraj.

V2 in wh-questions

Co przeskrobał twój brat tym razem?

Co zobaczyła sąsiadka na podwórku?

Kiedy idzie twój brat do szkoły?

Dlaczego budują robotnicy tak długo ten blok?

Gdzie odstawiła twoja żona dzisiaj auto?

V3 in wh-questions

Gdzie twój syn nauczył się tak dobrze mówić po angielsku?

Jak twoja mama ubrała się na imprezę?

Kiedy twoja siostra idzie do przedszkola?

Dlaczego kierowcy jeżdżą tak szybko?

Co sąsiad usłyszał w nocy?

Filler sentences

Bardzo lubię zupę pomidorową.

Kupiłem nowy telefon.

Chyba jestem przeziębiony.

Antek nie umie śpiewać.

Pokaż mi zegarek.

Dzisiaj pada deszcz.

Nie mogę znaleźć klucza.

Mój pies nie lubi burzy.

Nadużywanie antybiotyków jest szkodliwe.

Dlaczego jesteś smutna?