

Examining Possible Sources of L2 Divergence at the Pragmatics Interface: Turkish Accusative in the End-State Grammars of L1 Russian and L1 English users of L2 Turkish.

Abstract

The Interface Hypothesis (IH) postulates that interface structures are potentially vulnerable to incomplete acquisition in the end-state L2. Two plausible explanations have been suggested as possible causes of the L2 divergence at the interface: 1) the interaction between two competing grammatical systems, and 2) differences between monolinguals and bilinguals in integrating information from different domains in L2. This study aims to contribute to a deeper understanding of the interface phenomenon and to examine the extent to which L1 interference might account for L2 divergence at the interface. To this end, the study examines the use of Turkish accusative case (AC) in the end-state L2 grammar of L1 Russian and L1 English advanced users of L2 Turkish. The findings provide additional evidence for the IH and suggest that L2 divergence at the interface is likely to reflect more differences between monolinguals and bilinguals in integrating information from different domains rather than L1 interference.

Keywords: Interface Hypothesis, Turkish accusative markers, L1 Russian and L1 English advanced users of L2 Turkish

Introduction

The Interface Hypothesis (IH), which was proposed by Sorace and Filiaci (2006), suggests that language properties that involve interface between syntax and pragmatics domains are more vulnerable to incomplete acquisition in L2 end-states. So far several studies have demonstrated that language performance of advance and near-native L2 users with different L1 backgrounds may not be target-like at domains involving pragmatics interface (Cuza, Guijarro-Fuentes and Pires Rothman, 2013; Massery and Fuentes, 2017; Slabakova, 2009 among others), thereby producing evidence validating the IH. Sorace (2011) offered two plausible explanations as to the likely causes of L2 divergence: 1) differences between monolinguals and bilinguals in knowledge representations that mostly emerge from the mutual interference of two competing grammatical systems, and 2) differences between monolinguals and bilinguals in processing strategies which are required for mapping discourse information on the syntax domain. In other words, 'bilinguals are less efficient than monolinguals in the integration of multiple sources of information and that bilingualism itself, rather than (only) the particular language combination spoken, may be the underlying cause of the observed differences with monolinguals' (Sorace, 2011, p. 14).

Several researchers (e.g. Cuza, Guijarro-Fuentes, Pires and Rothman, 2013) have demonstrated that L2 divergence at the syntax-pragmatics interface can be attributed to L1 interference. On the other hand, a number of other studies have shown that even in cases when the L1s and L2s of the participants are similar in terms of the availability of a certain interface, the L2 users may still fail to acquire the interface structure in their L2 in a target-like manner (e.g. Lozano, 2006; Margaza and Bel, 2006; Sorace and Serratrice, 2009). Relying on such results, Sorace and Serrtrice (2009) and Sorace (2011) hypothesised that L2 divergence at the syntax-pragmatics interface is more likely to appear because there are differences between monolinguals and bilinguals in processing strategies which are required for mapping discourse information on the syntax domain rather than because one of the grammatical systems influences the other. However, the available research examining the acquisition of the interface domain by a particular group of L2 users sharing the same L1 seems to be inconclusive in this respect.

To confirm or reject this hypothesis and uncover to what extent L1 interference may account for L2 divergence at the syntax-pragmatics interface, it would be reasonable to examine the final attainments of L2 users at an interface from a cross-linguistic perspective, i.e. of at least two groups of participants whose L1s are different in terms of the availability of this interface.

So far, there have been few studies examining interface domains from a cross-linguistic perspective relying on the data coming from participants with different L1s (Sorace, 1993; Hopp, 2009; Smeets, 2019), and these studies have yielded mixed results. Against this background, the aim of the present study is twofold. Firstly, the study aims to contribute to the existing body of research into the vulnerability of interface structures by exploring the use of the accusative case (AC) marker in Turkish by L1 Russian and L1 English advanced users of L2 Turkish. Secondly, by comparing the language behaviours of L1 Russian and L1 English participants at the interface domain, the study aims to examine the extent to which L1 interference may account for L2 divergence and to disentangle the role of L1 interference and differences in processing at the interface domain.

The Turkish case system is a suitable domain for testing the IH since case marking for direct objects (i.e. AC or case non-marked) requires activation of multiple interface structures (morpho-syntax and pragmatics) and it is determined by the discourse context. The AC marker is used with direct objects that are definite *or specific*, known or inferable from the previously mentioned context. In contrast, a zero-case marker is used with indefinite and/or mentioned for the first time direct objects, which are commonly located immediately pre-verbally in the sentence.

Example 1:

(a) *Komş u-muz* *çok* *pahalı* *bir ev* *al-ır.*

Neighbour-POSS.1P.PL *very* *expensive* *a house-N-M* *buy-AOR.3P.SG*

'Our neighbour buys a very expensive house.'

(b) *Ev-i* *oğ lun-a* *evlilik* *hediye-si* *olarak* *ver-ir.*

House-ACC *son-DAT* *wedding* *present-POSS.3P.SG* *as* *give-AOR.3P.SG*

'He gives the house to his son as a wedding present.'

As it is seen from Example 1 (a, b), the use of case markers on the direct object in Turkish (AC or non-case marked) depends on the context of definite or indefinite/ known or unknown information for the sender and receiver. All the other cases in Turkish are not discourse-dependent. They are required by the case assignment property of the verb as projected from the lexicon. That is why these cases cannot be omitted (Enç, 1991; Johanson 2006; Von Heusinger and Kornfilt, 2005).

Secondly, the choice of the L1 Russian and L1 English of the participants was determined by the fact that the category of context-dependent definiteness is available in English, but it is not found in Russian. Therefore, assuming the IH and the suggestion of Sorace and Serrtrice

(2009) and Sorace (2011) that L2 divergence at the interface is likely to reflect more difficulties in integrating information from different domains in the L2 than L1 interference, we can hypothesise that:

1. both the L1 Russian and L1 English advanced users of L2 Turkish will perform significantly worse than the L1 Turkish control group when using the AC in Turkish;
2. both the L1 Russian and L1 English advanced users of L2 Turkish will encounter difficulties in the use of the AC in L2 Turkish more than in the use of all the other Turkish cases, which do not require the activation of pragmatics interface;
3. the L1 English participants will have no advantage in using the Turkish AC, despite the availability of the category of definiteness/indefiniteness in their L1;
4. the L1 interference will not be the main source for the recorded L2 divergence, that is the majority of the recorded non-target-like uses of AC markers in the data of the L1 Russian and L1 English groups cannot be traced to the interference of their L1s.

This paper is organized in the following way. To begin, it presents the review of the studies examining the IH. Then the case systems of the Turkish, Russian and English languages are described. Following the introduction of the participants and methods of data collection and analysis, the study finally presents and discusses the results.

Background to the study

There have been several studies examining ultimate achievements at the syntax-pragmatics interface of L2 users of a variety of languages. Some of them (Tsimpli & Sorace, 2006; Iverson, Kempchinsky, and Rothman, 2008; Massery & Fuentes, 2014, for instance) have provided evidence supporting syntax-pragmatics vulnerability and validated the IH, while others (Ivanov, 2012; Park, 2013) have not found such evidence.

In one of the early studies, Tsimpli and Sorace (2006) examined the use of overt subject pronouns by L1 Russian advanced users of L2 Greek in the oral production and compared their performance at the syntax-pragmatics interface with that at the syntax-semantics interface.

The researchers found that the performance of all the participants at the syntax-semantics interface was target-like, while the syntax-pragmatics interface was marked with subject overuse among all the users of L2 Greek. No developmental patterns were recorded in the data for both domains. The findings of this study were later replicated by Belletti, Benatti and Sorace (2007).

In another study supporting the IH, Iverson, Kempchinsky, and Rothman (2008) examined the acquisition of two classes of subjunctive complement clauses in L2 Spanish: subjunctive complements of volitional predicates (purely syntactic) and subjunctive vs. indicative

complements with negated epistemic matrix predicates, where the mood distinction is discourse-dependent, therefore, involving the syntax–pragmatics interface. The scholars revealed that the latter case was more challenging for the L2 users of Spanish. However, the study also showed that the interface properties can be acquired in a target-like manner at the advanced level of L2 proficiency, which challenged the notion of obligatory incomplete acquisition for all properties involving activation of the syntax-pragmatics interface.

The findings of Iverson et. al. (2008) are consistent with Slabakova, Kempchinsky and Rothman (2012), who tested the IH focusing on clitic left dislocation and fronted focus in the comprehension of L1 English users of L2 Spanish. Along with it, they examined knowledge of an additional semantic property, that is the relationship between the discourse anaphor and the antecedent in clitic left dislocation. The researchers maintained that all their participants were sensitive to the semantic constraints while there was a developmental pattern observed at the syntax-pragmatics interface. The near-native L2 users displayed target-like performance at the interface, the advanced L2 participants showed some discourse knowledge, and intermediate L2 participants demonstrated no discourse knowledge.

Later, Massery and Fuentes (2014) examined the IH and reported that learners, even at advanced stages of acquisition, performed poorly in epistemic environments where syntax and

discourse interacted and tended to choose the indicative mood even when the [subjunctive mood should be used](#). The scholars concluded that the L2 users of different levels of L2 proficiency performed better at “purely syntactic” than in pragmatically challenging domains.

In one of the latest studies supporting the IH, Massery and Fuentes (2017) examined L1 and L2 perceptions of complex nominal clauses embedded with deontic ([syntax-semantics](#)) and epistemic (syntax-discourse) modality in Spanish. The study revealed that the advanced L2 users struggled more with epistemic environments than they did with deontic environments. Nevertheless, the scholars also reported a clear developmental pattern in acquiring syntax-discourse domain.

In contrast to the studies reporting L2 divergence at the pragmatics interface, there have been several studies that recorded a target-like acquisition of syntax-pragmatics properties in L2s. In one of such studies, Ivanov (2012) examined the acquisition of pragmatic function of clitic doubling as a topicality marker by intermediate and advanced L2 users of Bulgarian. The results of the study showed that the intermediate L2 users had some problems with clitic doubling, while the advance group had acquired the pragmatic meaning of clitic doubling in Bulgarian in a target-like manner.

The study of Park (2013) is also among those that have challenged the IH. The researcher examined L2 acquisition of generic use of English articles by L1 Korean highly proficient learners of L2 English. Particularly, (in)definiteness and genericity of English articles were the focus of the study. The researcher assumed that (in)definite uses of English articles involves external interface (syntax-discourse) while generic use of the English article belongs to internal interface (semantics-syntax). The results of the research revealed that the participants performed better while using discourse-dependent (in)definite articles which required syntax-pragmatics interface than their structure-driven generic counterparts.

All the above-mentioned studies examined the acquisition of the syntax-pragmatics domains in L2 by the groups of participants who shared the same L1s. There have been few studies that examined interface domains from a cross-linguistic perspective relying on the data coming from participants with different L1s.

In one of the earliest cross-linguistic studies, Sorace (1993) examined the auxiliary selection in Italian 'clitic-climbing' constructions of near-native learners of L2 Italian. Two groups, L1 English and L1 French users of L2 Italian took part in the grammaticality judgement tasks. The scholar found that L1 English participants differed from the control L1 Italian group, while L1 French participants and the control group performed similarly. However, Sorace (1993) stated that the

differences between the L1 English and L1 French groups cannot be explained as due to 'straight L1 transfer'.

Further, Hopp (2009) examined the ultimate L2 attainment at the multiple-interface (syntax-morphology-pragmatics) focusing on the word order optionality in L2 German. The participants of the study were L1 English, L1 Dutch and L1 Russian advanced-to-near-native speakers of L2 German who were requested to do acceptability judgement task together with an on-line self-paced reading task. The findings revealed inconsistencies among the participants. The L1 Russian and L1 English near-natives performed on the judgement task similarly to the L1 German control group, while the performance of the advanced L1 English and L1 Dutch participants was not target-like. In the on-line task, the L2 participants performed differently from the target-like pattern. From these results, Hopp (2009) concluded that 'convergence on the syntax-discourse interface is not *a priori* constrained by L1 properties. Off-line and on-line comparisons further suggest that non-convergence on discourse-related aspects of syntax is partially due to increased computational demands in integrating information across grammatical modules '(p. 478).

In the most recent research, Smeets (2019) investigated the L2 acquisition of two different domains of object movement in Dutch, which involves syntax-pragmatics or syntax-semantics

interfaces. The participants were L1 English and L1 German near-native users of L2 Dutch. German and English differ in that only German has the same mapping strategies as those in Dutch. The participants were requested to do two felicity judgment tasks and a truth value judgment task. The findings revealed that the L1 German group performed in a target-like manner in all the tasks, while the L1 English group showed sensitivity to discourse information only when the relevant discourse cues were sufficient in the input. Smeets (2019) inferred that L2 convergence at the syntax–pragmatics interface is possible but suggested that input effects should also be taken into account. Relying on the differences between the L1 German and L1 English users of L2 Dutch, the scholar argued that general bilingual cost in mapping discourse information to the syntax domain in L2 does not account for L2 divergence at the syntax–pragmatics interface.

To conclude, the up-to-date research on the IH has yielded mixed results. Firstly, while some of the studies have supported the IH reporting difficulties at the syntax-pragmatics interface of advanced and near-native L2 users, others challenged the IH demonstrating that target-like ultimate attainment at the syntax-pragmatics interface in L2 is possible. Secondly, while some of the studies have failed to trace any developmental trajectory in the acquisition of the pragmatics interface others reported a clear developmental pattern in acquisition of the

syntax-pragmatics domain. Last but not least, as for the causes of L2 divergence at the syntax-pragmatics interface, the cross-linguistic research is scarce and contradicting as well. While some of the studies attributed L2 divergence at the syntax-pragmatics interface to the L1 interference, others suggested that general L2 processing difficulty in integrating discourse information to the syntactic domain accounts for the non-target-like performance.

These inconsistent findings suggest that there are still many questions regarding acquisition of external interfaces in L2 grammars that need answering and more research focusing on different languages is necessary to validate or reject the IH and determine factors that might account for the difficulties at the discourse-dependant domains.

Cases in Turkish

There are six cases in Turkish: nominative, genitive, dative, accusative, ablative and locative, and they mark question words, demonstrative and personal pronouns, nouns as well as nominals (see [Goksel and Kerslake, 2005](#); [Von Heusinger and Kornfilt, 2005](#); [Underhill, 1976](#)).

Among all the case markers, only AC can be non-obligatory, depending on the discourse.

Goksel and Kerslake (2005) define three contexts where the AC marker is obligatory. First, a direct object must be marked with the AC when it is definite, in other words, when it is mentioned earlier and/or known from the context (Example 2a). Secondly, the AC marker is

obligatory when an indefinite direct object appears before the verb but doesn't hold the closest pre-verbal place (Example 2b). Indefinite direct objects that appear in the closest pre-verbal place are not marked (Example 2c). Thirdly, the AC marker is obligatory even in the closest pre-verbal place when an indefinite direct object has either a possessive marker or pertains to plural generic nouns or implied groups (Example 2d).

Example 2:

(a) *Ara-diğ -ım anahtar-ı bul-du-m.*

Look for-NOM-1P.SG key-ACC find-PAST-1P.SG

'I have found the key I was looking for.'

(b) *Çikolotay-ı çocuklar çok sevi-yor!*

chocolate-ACC children love-IMPER.3P.PL

'Children love chocolate very much!'

(c) *Arkadaş -ı yeni bir ev kiralay-acak.*

friend-POSS.3P.SG new a house-N-M rent-FUT.3P.SG

'Their friend will rent a new house.'

(d) *Parti çok kalabalık-tı. Çok az kiş i-yi tanı-yor-duk.*

Party very crowded-PAST very few people-ACC know-IMPER-PAST.1P.PL

'The party was very crowded. We knew very few people.'

As can be seen from the examples, the use of the AC marker in Turkish involves not only morphological domain but also syntax and pragmatics, since its use is determined by the discourse and place of the direct object in relation to the predicate in the sentence. Therefore, the use of AC marking in Turkish requires the activation of multiple interfaces: morphology, syntax and discourse.

Cases in Russian

Russian has a quite complex nominal and verbal morphology, which is fusional and characterized by a myriad of morphophonemic alterations. Russian cases: nominative, genitive, accusative, dative, prepositional and instrumental, mark syntactic relations within a sentence indicating whether a noun/ pronoun is a subject, object, attribute or predicate. Each of the cases has different realizations for different nouns, which depends upon the noun declension (Corbett, 1982; Corbett, 1991; Corbett and Fraser, 1993; Timberlake 2004).

Russian has no special category of definiteness/ indefiniteness and, thus, no equivalent forms of English articles, so a Russian noun *книга* [*kniga*] (*book*) can be translated either as 'a book' or as 'the book' in English depending upon the context (Comrie, 1987).

Cases in English

English has three cases: nominative, genitive, and accusative. The forms of AC and nominative case are uniform [on the surface for nouns](#); therefore, they are determined by relying on the word order (Celce-Murcia, Larsen-Freeman and Williams, 1983). English has a category of definiteness and indefiniteness, which is marked with the definite article *the*, the indefinite article *a/an*, and the *zero* article.

Methods

Three groups of participants were included in the study.

The information about the participants is based on their self-reports, which is commonly used in the bilingual research for assessing the background and linguistic profiles of bi-/multilinguals (Marian, Blumenfeld, Kaushanskaya, 2007; de Bruin, Carreiras, Duñabeitia, 2017).

The participants were requested to fill in a background questionnaire, in which they were asked to provide information about their personal background (age, gender, marital status, socio-economic status, educational level and time of their arrival in Turkey for permanent residence) and their language experience: language learning process, different components of their language proficiency in Turkish and other languages, if available, (comprehension in reading

and listening, speaking, writing skills, use of grammar, and overall fluency) as well as the frequency of the language use.

Group 1

Group 1 consisted of five L1 Turkish speakers (four females and one male), who acted as the control group. They were within the age range of 33 to 60 years ($M = 39.1$) at the time of the data collection and came from a middle class. Four participants were university graduates and one of them finished a professional school.

Group 2

Group 2 consisted of ten L1 Russian users of L2 Turkish (8 females and 2 male), who had been residing in Turkey from 8 to 30 ($M = 17.9$) years. They were within the age range of 28 to 55 years ($M = 41.0$). Seven of the participants were university graduates and three of them finished a professional technical school in Russia. Eight out of the ten participants were married to an L1 Turkish user. After the participants arrived in Turkey for a permanent residence, they either attended Turkish language courses or took private classes from an L1 Turkish language teacher for at least a year. Among the ten participants, eight reported that they were certified as a proficient user of the Turkish language after taking a proficiency exam at the language course.

All the participants defined themselves as advanced users of L2 Turkish and stated that they had been mostly using Turkish in their daily communication during their stay in Turkey.

Along with Turkish, the L1 Russian participants reported that they had taken English classes in secondary and high school. All the participants stated that they did not read books and magazines in English and seldom watched English TV programs or films. The participants had not stayed in English-speaking countries more than two weeks. The participants reported that they had not taken any English proficiency exams. Seven participants considered their level of English to be elementary and three participants considered it to be pre-intermediate. The L1 Russian group was defined as advanced users of L2 Turkish based on their self-reports.

Group 3

Group 3 consisted of ten L1 English users of L2 Turkish (8 females and 2 males), who had been residing in Turkey from 10 to 28 ($M = 19.0$) years. The participants were within the age range of 28 to 56 ($M = 41.2$). Five participants were graduates of professional schools and five were university graduates. After arriving in Turkey, the participants either attended courses of Turkish or took private classes from a Turkish language teacher (an L1 Turkish speaker) for at least one and a half years. Among the ten participants, eight reported that they were certified as a proficient user of the Turkish language after taking a proficiency exam at the language

course. All the participants defined themselves as advanced users of L2 Turkish and stated that they had been using the language on the daily basis while in Turkey. The L1 English group was defined as advanced users of L2 Turkish based on their self-reports.

The background and linguistic profiles of the L1 Russian and L1 English participants allowed us to infer that both groups were compatible in terms of the duration of their residence in Turkey, Turkish language proficiency and frequency of the language use and they can be defined as advanced users of L2 Turkish who had been using the language on a daily basis for many years.

Data collection

Narratives produced by the participants were utilized. This method is widely used in bi-/multilingual research to explore language acquisition and interaction between the languages in the bilinguals' repertoire (Berman, 1999; Lanza, 2001; Polinsky, 2008;) because it provides researchers with authentic contextual data (Pavlenko, 2008).

The participants were asked to narrate the summary of a book or a film of their choice in a written form in Turkish. The participants were not allowed to use dictionaries or any other grammar books. They were not limited in time.

Additionally, the participants were requested to narrate the summary of the same film or book in their L1, either Russian or English.

Data Analysis

During the data analysis, the narratives collected from the participants were first transcribed using the Codes for the Human Analysis of Transcripts (CHAT) format of the Child Language Data Exchange System (CHILDES). The data were then analysed using error analysis because the study focused on non-target-like uses of AC marking in Turkish by the L1 Russian and L1 English participants. Accordingly, two L1 Turkish linguistics evaluated the use of case markers in the narratives of the three groups in terms of grammaticality.

All identified forms were grouped under four categories as follows: 1) target-like; and non-target-like: 2) replacement, 3) omission, and 4) overuse. The first category comprised the proper uses of case markers. The instances where an incorrect case marker was used were included in the second category. The instances where case markers were omitted were put in the third category. Finally, the fourth category comprised redundant uses of case markers. Following the classification of case markers under the relevant categories, all target-like and non-target-like uses of case markers were counted.

Further, quantitative analysis was used to determine whether:

1) the performance of the L1 Russian and L1 English participants significantly differed from that of the L1 Turkish control group;

2) the use of AC markers of L1 Russian and L1 English users of L2 Turkish significantly differed from the use of the other Turkish case markers, which do not involve pragmatics

interface;

3) the L1 English participants had an advantage while using Turkish AC due to the positive transfer from their L1.

Finally, qualitative analysis was utilized to find whether the error patterns in AC marking differed between the L1 Russian and L1 English groups, and could be ascribed to the interference of their L1s.

Results

L1 Turkish group

The evaluators detected no single non-target-like case use in the L1 Turkish group.

L1 Russian Group

Table 1 below shows the number of target-like instances and their ratio to the whole number of case uses in the Turkish narratives of the L1 Russian users of L2 Turkish.

Table 1. Turkish Cases in the Narratives of L1 Russian Group

Participant	I	II	III	IV	V	VI	VII	VIII	IX	X
N (%)										
LOC	7 (100)	8 (100)	8 (100)	7 (100)	7 (100)	10 (100)	8 (100)	7 (100)	6 (100)	8 (100)
ABL	9 (100)	3 (100)	9 (100)	4 (100)	7 (100)	5 (100)	5 (100)	8 (100)	4 (100)	8 (100)
GEN	6 (86)	5 (83)	11 (100)	8 (100)	7 (100)	8 (80)	6 (86)	8 (100)	6 (100)	9 (100)
INST	11 (100)	4 (100)	8 (100)	5 (100)	7 (100)	10 (100)	9 (90)	3 (100)	7 (100)	6 (100)
DAT	8 (89)	14 (93)	16 (94)	9 (100)	9 (100)	18 (95)	18 (90)	12 (100)	9 (90)	16 (94)
ACC	4 (25)	11 (73)	13 (68)	11 (69)	12 (67)	14 (70)	12 (60)	13 (68)	12 (75)	12 (67)

As Table 1 shows, the L1 Russian group used all the Turkish cases productively. Table 2 presents descriptive statistics regarding the use of cases in the Turkish narratives of L1 Russian group.

Table 2. Descriptive Statistics: Turkish Cases in L1 Russian Group data

	<i>M</i>	<i>ST</i>
LOC	100.00	.000
ABL	100.00	.000
GEN	93.50	8.554
INST	99.00	3.162
DAT	94.50	4.275
ACC	64.20	14.336

As seen in Table 2, the AC marking was target-like in the production of the L1 Russian group at a rate of 64.2%. Taken from the participant narratives, Example 4 is demonstrative.

Example 4:

Okul-da öğ retmen-ler kız-ı gör- ona tuhaf bakı-yor-lar-di.
ünce tuhaf

School- teacher-PL girl-ACC see- she- strangely look-IMPER-PL-
LOC CON DAT PAST

'When teachers saw the girl in the school, they looked at her in a strange manner'.

In Example 4, the L1 Russian participant used an AC marker with the noun *kız* (*girl*) correctly because the noun was definite and known from the previous context.

Statistical analysis was carried out to determine whether the L1 Russian group used the AC significantly differently in comparison with the control L1 Turkish group as well as in comparison with all the other Turkish cases, which do not involve pragmatics interface.

First, Welch's two-sample t-test test results showed a significant difference between the L1 Russian and L1 Turkish groups [$t(9) = 7.90, p < .0001$]. Secondly, Friedman test demonstrated that one of the medians of the case marker use in the narratives of the L1 Russian group differed significantly from all the other cases [$p < 0.001$]. Thirdly, a one-way analysis of variance (ANOVA) run for each pair of the case markers showed that the percentage of the target-like uses of the AC marker was significantly lower compared to each of the other case marker [$F(5,54) = 37.46, p < .0001$]. A multiple pairwise-comparison between the means of the groups using Tukey's HSD showed that the target-like use of the AC markers was significantly lower than the use of all the other case markers (all p s $< .0001$). Thus, the results of the statistical

analysis suggest that the L1 Russian group used the AC significantly differently in comparison with the control L1 Turkish group as well as in comparison with all the other cases in their Turkish narratives.

The data of the L1 Russian group were also analysed for patterns of the non-target-like use of the AC marker.

Table 3. Non-target-like Use of the AC by the L1 Russian Group

Participant	I	II	III	IV	V	VI	VII	VIII	IX	X
Total (N)	12	4	6	5	6	6	8	6	4	6
(%)	(75)	(27)	(32)	(31)	(33)	(30)	(40)	(32)	(25)	(33)
Replacement	1	0	0	0	1	0	0	0	0	0
Overuse	0	0	1	0	1	0	1	0	0	1
Omission	11	4	5	5	4	6	7	6	4	5

As shown in Table 3, there were two instances (3% of all the errors) where the AC marker was replaced with an incorrect one (in one case, it was replaced with a dative case marker and in the other case it was replaced with a genitive case marker). Of the two replacements, one could be due to the L1 Russian interference (see Example 5). In Russian the dative case marker

is used with the verb *звонить* (*call*), while in Turkish the AC should be used with its equivalent *aramak* (*call*). The L1 Russian participant used the dative case marker both in his Russian and Turkish narratives after the verb.

Example 5:

*Olay-dan sonra *aile-si-ne arı-yor.*
incident-ABL after family-POSS.3P.SG-DAT call-IMPER.3P.SG

'After the incident, he called his family.'

Along with it, there were four instances of overuse of the AC markers (6% of all the errors) as Example 6 illustrates. In Example 6, the L1 Russian participant used the AC marker when referring to *sözleşme* (*contract*), which was mentioned for the first time and was unknown from the context. Therefore, a case non-marked form should have been used there.

Example 6:

*Şirket sahip-ler-i avukat-la bir *sözleşme-yi imzalı-yor.*
Company owner-PL-lawer-INST a contract-sign-IMPER.3P.SG
POSS.3P ACC

'The owners of the company sign a contract with a lawyer.'

The analysis of [the results](#) indicated that an overwhelming majority of the non-target-like instances (57 instances corresponding to 90% of all the errors) in the narratives of the L1 Russian group resulted from omission of the AC marker. In most of the omissions, the L1 Russian group tended to leave out the AC marker in the definite common nouns that they mentioned earlier in their narratives and that, therefore, require an AC marker. Example 7 illustrates an omission of the AC.

Example 7:

*Bu *karar ver-dikten sonra hic kimse-ye haber ver-me-di.*

This decision take-NOM after nobody- news-N-M give-NEG-

DAT

PAST.3P.SG

'After taking this decision he did not inform anybody about it.'

The AC overuses and omissions might indicate that the L1 Russian participants were unable to associate the Turkish AC marker with definiteness in a target-like manner. Because Russian lacks the category of definiteness and indefiniteness, L1 Russian might be a source of the omissions and overuses of the AC marker in L2 Turkish.

L1 English Group

Table 4 below shows the number of target-like AC instances and their ratio to the whole number of Turkish case markers in the narratives of the L1 English users of L2 Turkish.

Table 4. Turkish Cases in the Narratives of L1 English Group.

Participant	I	II	III	IV	V	VI	VII	VIII	IX	X
N (%)										
LOC	8 (100)	18 (100)	12 (100)	9 (90)	9 (100)	5 (100)	19 (100)	5 (100)	7 (100)	18 (90)
ABL	6 (100)	5 (100)	11 (73)	10 (100)	14 (100)	6 (100)	4 (80)	12 (100)	8 (80)	9 (90)
GEN	4 (80)	10 (90)	8 (80)	9 (82)	8 (89)	9 (90)	6 (100)	6 (100)	9 (90)	9 (82)
INST	6 (100)	16 (100)	6 (75)	8 (100)	3 (100)	8 (100)	3 (100)	4 (100)	6 (100)	10 (90)
DAT	10 (100)	15 (100)	8 (67)	9 (90)	8 (80)	18 (95)	6 (86)	12 (86)	10 (90)	8 (89)
ACC	9	4	8	15	5	13	2	7	12	7

(60) (66) (67) (68) (31) (65) (22) (58) (60) (58)

As Table 4 shows, the L1 English group used all the Turkish cases productively. Table 5 presents descriptive statistics regarding the use of cases in the Turkish narratives of the L1 English group.

Table 5. Descriptive Statistics on the Use of the Turkish Cases by the L1 English Group

	<i>M</i>	<i>ST</i>
LOC	98.00	4.216
ABL	92.30	10.730
GEN	88.30	7.454
INST	96.50	8.181
DAT	88.30	9.764
ACC	55.50	15.862

As seen in Table 5, the AC marker was target-like in the production of the L1 English group at a rate of 55.5%. Taken from the participant narratives, Example 8 is demonstrative.

Example 8:

Komşu savaşı onun aile-si-ni mahved-er.

Neighbour war-POSS.3P.SG his family-POSS.3P.SG- ruin-AOR.3P.SG

ACC

'The war between the neighbours ruins his family.'

In Example 8, the participant used the AC marker with the noun *aile* (*family*) correctly because the noun was definite and known from the context.

Statistical analysis was carried out to determine whether the L1 English group used the AC significantly differently in comparison with the control L1 Turkish group as well as in comparison with all the other Turkish cases, which do not require the activation of the pragmatics domain.

Firstly, Welch's two-sample t-test test results showed a significant difference between the L1 English and L1 Turkish groups [$t(9) = 8.87, p < .0001$]. Secondly, Friedman test demonstrated that one of the medians of the case use in the narratives of the L1 English group differed significantly from all the others cases [$p < 0.001$].

Thirdly, a one-way analysis of variance (ANOVA) run for each pair of the case markers showed that the percentage of the target-like uses of the AC marker was significantly lower compared to each of the other case markers $F(5,54) = 24.57, p < .0001$. A multiple pairwise-comparison between the means of the groups using Tukey's HSD showed that the target-like use of the

AC markers was significantly lower than the use of all the other case markers (all p s < .0001).

Thus, the results of the statistical analysis suggest that the L1 English group used the AC significantly differently in comparison with the control L1 Turkish participants as well as in comparison with all the other cases in Turkish, which do not involve pragmatics interface.

[Comparing the use of Turkish cases by L1 English group](#) with the performance of the L1 Russian users of L2 Turkish, Welch's two sample t-test showed that the performance of both groups was compatible and no advantage of the L1 English group when using the AC was revealed.

The data of the L1 English group were also analysed for patterns of non-target-like uses of the AC marker.

Table 6. Non-target-like Use of the AC by the L1 English Group

Participant	I	II	III	IV	V	VI	VII	VIII	IX	X
N	6	2	4	7	11	7	7	5	8	5
(%)	(40)	(34)	(33)	(32)	(69)	(35)	(78)	(42)	(40)	(42)
Replacement	0	0	0	0	1	0	0	0	0	0

Overuse	0	1	1	1	2	0	1	0	1	0
Omission	6	1	3	6	8	7	6	5	7	5

As shown in Table 6, there was only one instance (2% of all the errors) where the AC marker was replaced with a dative case marker, as Example 9 below illustrates.

Example 9:

*Bu olay-la sev-diğ i *kız-a etkile-mek isti-yor-du.*

This event-INST love- girl-DAT affect-INF want-IMPER-PAST.3P.SG

NOM.3P.SG

'With this event, he was trying to affect the girl he loved'.

Additionally, there were seven instances (11% of all the errors) of overuse of the AC as Example 10 illustrates. In Example 10, the participant used the AC marker when referring to *köpek (dog)*, which was mentioned for the first time and unknown from the context. Therefore, a case non-marked form should have been used instead.

Example 10:

*Sahip-ler-i bir *köpeğ -i satın al-ır-lar.*

Master-PL-POSS a dog-ACC buy-AOR-3P.PL

'The masters buy a dog.'

The results of the data analysis demonstrated that most of the non-target-like uses (54 instances corresponding to 87% of all the errors) in the data of the L1 English group were omissions of the AC markers. The omissions were observed mostly in definite nouns that the participants mentioned earlier in their narratives, as Example 11 illustrates.

Example 11:

*O *kız yıl-lar sonra gör-ür ve ona tekrar aşık ol-ur.*

He girl year-PL after see-AOR.3P.SG and she-DAT again love fall-AOR.3P.SG

'After many years he sees the girl and again falls in love with her.'

The AC overuses and omissions might indicate that the L1 English participants were unable to associate the Turkish AC marker with definiteness in a target-like manner. Because English has the category of definiteness and indefiniteness and the L1 English participants used definite articles when referring to known/definite and indefinite articles when referring to new/indefinite objects in their English narratives, the omissions and overuses of the Turkish AC marker in their data cannot be explained as due to their L1 interference.

Discussion

The study set out to contribute to a deeper understanding of the vulnerability of interface structures and to explore the extent to which L1 interference, as a potential source of L2 divergence at the interface (Sorace, 2011), may account for the non-target-like performance at the interface in end-state L2 grammars. For this purpose, we examined the use of AC markers in Turkish, which depends on the context of definite/ known or indefinite/ unknown information and, thus, requires the activation of the pragmatics interface by L1 Russian and L1 English advanced users of L2 Turkish. Our findings revealed that both the L1 Russian and L1 English users of L2 Turkish encountered problems when using AC markers in their Turkish. Despite a long period of living in Turkey and using Turkish on a daily basis, the participants used AC markers significantly worse than the control L1 Turkish group. This finding confirmed our first hypothesis stated in the introductory part, according to which both the L1 Russian and L2 English users of L2 Turkish were expected to perform significantly worse than the L1 Turkish control group when using the AC case in Turkish. Moreover, the target-like use of AC markers in the Turkish narratives of both L1 Russian and L1 English groups was significantly lower than their target-like use of all the other case markers which do not involve pragmatics interface. These findings confirmed our second hypothesis according to which both the L1 Russian and L2 English advanced users of L2 Turkish were expected to encounter difficulties in the use of

the AC in Turkish more than in the use of all the other Turkish cases, which do not involve pragmatics interface. These findings can be considered as additional evidence for the IH and they are in accord with the earlier studies supporting the IH (e.g. Cuza, Guijarro-Fuentes, Pires and Rothman, 2013; Massery and Fuentes, 2017; Slabakova, 2009; Santoro, 2012).

As for the possible sources accounting for L2 divergence at the interface, Sorace (2011) came up with two explanations. Firstly, L2 divergence at the interface results from the interaction of two competing grammatical systems. Secondly, non-target-like performance at the interface domain may be due to differences between monolinguals and bilinguals in integrating information from different domains. To find which of the possible sources is more likely to account for L2 divergence at interface domains, we compared the use of the AC in L2 Turkish by L1 Russian and L1 English users of L2 Turkish. The Russian and English languages were chosen as the L1s on the basis that the category of context-dependent definiteness is not available in Russian, but it exists in English. If cross-linguistic influence from L1 were the main source of L2 divergence at the interface, the L1 English users of L2 Turkish would be expected to have an advantage over the L1 Russian group when using the AC due to the positive transfer from their L1 English and the errors observed in the use of AC markers could be traced to L1 interference. However, our findings demonstrated that the L1 English users of L2 Turkish did

not do any better when using the AC, thus, it seems reasonable to suggest that despite the availability of the category of definiteness and indefiniteness in English, the L1 English users of L2 Turkish seemed to have no advantage over the L1 Russian participants at the interface and they were not able to transfer their L1 knowledge to their L2 at the interface domain. These findings confirmed our third hypothesis. Moreover, the results of the qualitative data analysis revealed that the patterns and distribution of the non-target-like uses of the AC in the data of the L1 Russian and L1 English users of L2 Turkish were similar between the groups: the majority of them were due to the omission of AC markers when referring to definite/ known objects, followed by the overuse of AC markers on indefinite/ unknown objects. Accordingly, similar to the L1 Russian group, the L1 English participants failed to associate the AC marker with definite/ known information and case non-marked forms with indefinite/ unknown information. The non-target-like instances observed in the data of the L1 English group, thus, cannot be ascribed to the interference from their L1 English. Taken together, these findings confirmed our fourth hypothesis according to which the L1 interference is not be the main source for the recorded L2 divergence. Returning to the two possible sources of L2 divergence at the interface suggested by Sorace (2011), the second one - differences between monolinguals and

bilinguals in processing resources which are required for mapping discourse information on the syntax domain - seems to account more for the interface vulnerability.

Conclusion

The present study provides evidence for the IH and suggests that L2 divergence at the pragmatics interface is likely to reflect more differences in processing rather than cross-linguistic interference. The results of the study are based exclusively on the production data obtained from the free writing in Turkish of L1 Russian and L1 English advanced users of L2 Turkish. For this reason, another set of data, including structured off-line as well as on-line tasks is necessary to validate the results of the present study and to contribute to the knowledge of L2 end-state grammars.

Abbreviations

ABIL	Ability
ABL	Ablative case

ACC	Accusative case
AOR	Aorist
CON	Converb
DAT	Dative case
GEN	Genitive case
INF	Infinitive
IMPER	Imperfective
INST	Instrumental case
LOC	Locative case
NEG	Negation
N-M	Non-marked
NOM	Nominalizer
1P	Person 1
2P	Person 2
3P	Person 3
PAST	Past tense

PL	Plural
POSS	Possessive
PR	Present
SG	Singular
*	Incorrect use

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