

Anaphora resolution in Italian-Turkish late bilinguals in immigrant setting**Anna Lia ERGUN¹**

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Abstract

The research carried out in the recent years indicates that the structures at the syntax-discourse interface fall in a vulnerable domain for bilinguals (Sorace, 2011 for review). It has been proposed that cross-linguistic interference occurs when syntactic features of the two languages partially overlap (Müller & Hulk 2001 among others) due to the rise of optionality. Subsequent studies (e.g., Sorace & Serratrice, 2009; Serratrice et al., 2012) found a cross-linguistic interference in bilinguals speaking two typologically similar languages. Recently, Sorace (2016) has proposed that interference may be due to the cognitive load of processing two languages. The present study analyzes the data collected by employing an Acceptability Judgment Test on the interpretation of backward anaphora in complex sentences by twelve native Italian speakers, who had learned Turkish as adults in immigration setting, with twelve matched Italian monolinguals as a control group. It is assumed that Italian and Turkish do not differ with respect to the antecedent biases of null and overt subject pronouns in the contexts under investigation. The focus of this study is on the acceptability of an overt/null subject in intrasentential anaphora with three conditions: general sentences, quantifier sentences, and subjunctive sentences. Our results show that bilingual speakers reject, significantly more, the null subject in an embedded subjunctive sentence as referring to the subject in the matrix sentence than the monolinguals. These data seem to contradict previous studies (Sorace & Filiaci 2006), wherein it was found that monolinguals and bilinguals differ in the interpretation of an overt pronoun. A discussion on why a null pronoun is vulnerable in Italian-Turkish bilinguals is needed. Though this study reinvigorates the hypothesis that the structures at a syntax-discourse interface are vulnerable and that bilingual processing cost may contribute to cross-linguistic interference.

Key words: Language attrition, Turkish, Italian, Interface hypothesis.

Türkçeyi göçmenlik ortamında yetişkinen öğrenen anadili İtalyanca olanların artgönderim yorumu**Öz**

Son yıllarda gerçekleştirilen çalışmalar, sözdizimi-söylem arayüzündeki yapıların ikidilliler için yatkın bir alana dönüştüğünü belirtir (bkz. Sorace, 2011). İki farklı dilin sözdizimsel özellikleri, isteğe bağlılığın artmasına bağlı olarak kısmen çakıştığında (Müller & Hulk 2001), çapraz dilbilimsel girişimin ortaya çıktığı öne sürülmüştür. Daha sonraki çalışmalar (ör. Sorace & Serratrice, 2009; Serratrice vb., 2012) tipolojik olarak benzer iki dil konuşan ikidillilerde çapraz dilbilimsel girişim olduğunu bulmuştur. Son yıllarda Sorace (2016), bu girişimin iki dilin işlenmesinin bilişsel yüküne bağlı olabileceğini öne sürmüştür. Bu çalışma tek dilli on iki İtalyandan oluşan kontrol grubu ile eşleştirilmiş, Türkçeyi göçmenlik ortamında yetişkinen öğrenen anadili İtalyanca olan on iki İtalyan

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ile gerçekleştirilmiş karmaşık cümlelerde geriye dönük artgönderim yorumu üzerine kabul edilebilir değerlendirme testi (Acceptability Judgment Test) verilerini sunmaktadır. İtalyanca ve Türkçenin araştırmadaki bağlamlarda, gizli ve açık özne zamirlerinin öncül önyargıları bakımından farklılık göstermediği varsayılmaktadır. Çalışmanın odak noktası tümceiçi artgönderimde açık/gizli öznenin üç durumda kabuledilebilir olduğudur: genel cümleler, niceleyici cümleler ve dilek/istek cümleleri. Elde ettiğimiz sonuçlar ikidillilerin ana cümle öznesine gönderimde bulunarak dilek/istek cümlesindeki içeyerleşik gizli özneyi tek dillilere oranla daha fazla reddettiğini göstermiştir. Bu verilerin, tek dilliler ve iki dillilerin açık zamirlerin yorumlanmasında farklılık gösterdiğini tespit eden (Sorace & Filiaci 2006) daha önceki çalışmalar ile çeliştiği görülmüştür. İtalyanca-Türkçe ikidillilerinde gizli zamir yatkinliği konusunu tartışmak gereklidir ancak bu çalışma sözdizim söylemindeki arayüz yapılarının yatkin olduğu ve iki dillilik sürecinin çapraz dilsel müdahaleye katkıda bulunabileceği hipotezlerini yeniden canlandırmıştır.

Anahtar kelimeler: Ana dil bozumu, ikidilli, İtalyanca, Türkçe, sözdizimi-söylem arayüzü.

Introduction

In the past years, several studies investigating different bilingual groups (L2 learners, 2L1, attriters and heritage language speakers) have assessed the effects of cross-linguistic influence in bilinguals' language production and processing (Müller and Hulk, 2001; Unsworth, 2012, Rothman and Iverson, 2013, Tsimpli et al., 2004; Sorace 2003,2005,2011,2016). As argued earlier (Müller and Hulk, 2001, Hulk and Müller, 2002), the transfer from one language to another happens when one of the languages of bilinguals has more restrictive features in a given property. This is the case, for example, of pro-drop and non pro-drop languages, where one of the languages allows an only overt pronoun and influences the distribution of the overt pronoun in the bilingual's non pro-drop language in such a way that bilinguals are prone to use an overt subject even in a situation where a null subject would have been a more felicitous choice.

In this study, we have concentrated on a well-known interface phenomenon, i.e., the acceptability of anaphoric overt and null pronouns in bilingual speakers. It has been suggested that structures at the interface may be more vulnerable to the acquisition and could be subjected more to the language loss than the structures with narrow syntactic properties only (Sorace, 2003; Tsimpli et al., 2006).

Many of the studies focusing on syntax-discourse interface have been conducted on the acquisition or attrition in bilinguals, in whom the two languages differ for a parametric choice, and have concluded that the difficulty in mastering the structures at the interface is due to the underspecification and cross-linguistic influence (Lozano, 2006; Tsimpli, 2007; Tsimpli et al., 2004). The hypothesis is that if a language has a particular interface condition that is specified in L2, it becomes underspecified when this condition is absent in L1. However, some earlier studies, investigating language combinations with similar parametric conditions, have observed similar difficulties in acquiring discourse constraints (Bini, 1993; Margaza and Bel, 2006; Roberts, Gullberg, and Indrey, 2008; Sorace et al., 2009), while others have revealed that the structures, even if more problematic to acquire at the interface, can be successfully and completely acquired by L2 speakers (Iverson, Kempchinsky & Rothman, 2008; Donaldson, 2011, 2012; Ivanov, 2012; Kraš, 2008, 2014). These data indicate that vulnerability at the interface is not simply determined by the cross-linguistic influence and underspecification. Therefore, we must consider some other possible factors to explain this interface optionality in bilinguals. Some scholars have indicated that inhibiting one language on the cost of other causes difficulties in mastering

structures at the interface (Sorace, 2016). The processing of structures at the syntax-discourse interface is a highly demanding task that requires the allocation of a lot of cognitive resources (Rothman & Slabakova, 2011). Another factor that may add difficulties in mastering the structures at the interface is the quality and quantity of inputs. The bilinguals receive inputs that are different in quantity and quality according to monolinguals (Sorace, 2005; Tsimpli and Sorace, 2004; Sorace and Serratrice, 2009) and there is a growing consensus among the researchers in assuming that quantity and quality of input play an important role in acquiring structures that involve interfaces (Kupisch et al., 2013; Kupisch et al., 2014; Chonrogianni & Marinis, 2011; Grandfeldt, 2016; Unsworth et al., 2014; Unsworth, 2016).

The current study investigates the native language in Italian adults that migrated to Turkey after the complete acquisition of their native language and learned Turkish as the second language (L2) as immigrants. This group of late bilingual speakers shares the traits that may trigger first language attrition (nonpathological loss of some aspect of the native language, Köpke, 2004), so their Italian may be affected by Turkish, the language that surrounds them and they have learned as adults. Studies show that language attrition influences only non-core syntactic aspect of the native language such as word retrieval, pragmatical concepts (Köpke 2002, Pavlenko, 2000) and property at the syntax-discourse interface as distribution of overt pronoun and pronominal resolution (Gürel, 2004; Kaltsa et al., 2015; Tsimpli et al., 2004; Tsimpli 2007; Sorace, 2005, 2011). It has not clearly established if this change in the language of late bilinguals is due to a difference in the representation of the language in late bilinguals as they are assumed to have completely acquired the native language as a monolingual before entering in contact with the second language. Recently, Sorace (2011, 2016) has proposed that the constant need to suppress one language to retrieve the other leaves less resources available to the bilingual speakers to integrate information at the syntax-discourse interface and that the age at onset may play a role in how efficiently a language is processed, so that attrition is more due to the processing load than to a change in the representation.

The purpose of this study is to establish if there is a different linguistic behavior in this largely investigated phenomenon—the acceptability of the anaphoric overt and null pronouns—in late Italian bilinguals that had learned Italian as an adult after their migration to Turkey. The high social economic status of the participants in the study group will allow us to discuss the role of the quantity and quality of input in 2L1 and contribute to a better understanding of the mechanism underneath language attrition. The participants in the study group are educated middle-class adults with access to L1 resources like books and films; they frequently visit their home country for a short time. In principle, we can consider two possible outcomes for the study, at first, given that Italian late bilinguals came in contact with Turkish only after completely acquiring the native language and that the two languages share the same parametric setting, they may show no sign of cross-linguistic effects in their native language; there is yet another possibility to consider, as suggested by Sorace (2016), if structures at the interface are vulnerable due to the cognitive cost of continuously inhibiting one of the languages simultaneously available in the bilingual mind and that this cost is higher for late bilinguals, then we can expect that the sign of a cross-linguistic interference will be heavier in the late bilinguals.

The focus of this study is on the interpretation of pronominal subjects in intrasentential anaphora. Turkish and Italian are both pro-drop languages (Rizzi 1982, Kornfilt, 1990), the distribution of an overt/null pronoun is regulated at the syntax-discourse interface in both languages. This study aims to answer two questions: first, we want to investigate whether there is a cross-linguistic influence of Turkish on Italian. In other words, if late bilinguals overextend the scope of the overt pronoun, referring it to the subject in the matrix sentence even when this is inappropriate, as previous studies between

languages with different parametric setting (Sorace, 2004) and with same parametric setting (Bini, 1995, Sorace et al. 2009) seem to suggest. Secondly, we want to discuss whether the different linguistic behavior in late L2 speakers (if assessed) is due to factors other than the cross-linguistic influence.

Pronoun processing in null subject languages

Earlier research has tried to identify the principles that govern how overt and null pronouns are mapped to their antecedents. One such most influential proposal was given by Carminati (2002) as a “Position of Antecedent Strategy (PAS)”, this principle predicts that the null pronoun will prefer an antecedent in the subject position and the overt pronoun will pick an antecedent in object position. The PAS makes the prediction that structural configuration will guide choosing the proper antecedent for a pronoun. However, if null subject pronouns have a bias toward the subject in the matrix sentence, the overt subject shows a more flexible nature in the preference toward the overt subject antecedent (Carminati 2002; Filiaci et al., 2008; Geber, 2006; Costa et al., 2004).

An anaphora resolution has been investigated in different populations of bilinguals, L1 attriters, 2L1, and early bilinguals. Gürel (2004) investigated the L1 attrition of null and overt pronouns in Turkish native speakers in an L2 English migration setting. It is important to recall that Turkish is a null subject language that has two overt pronouns: *o* “s/he” and an anaphoric pronoun, *kendisi*, “self”. Of these three pronouns, only *kendisi* and the null pronoun can refer both to the subject in the matrix sentence as well to another object. Gürel (2004) found that Turkish late bilinguals were influenced by English as they overextend the referential property of English pronouns to the Turkish overt pronoun *o*, and they interpreted it as coreferential with the matrix subject significantly more than the monolingual control group, but the null pronoun and anaphoric pronoun *kendisi* do not show a sign of attrition. Tsimpli et al. (2004) investigated the sign of attrition in L1 Greek and Italian in contact with English, they focused on the production and interpretation of null and overt subjects as well preverbal and postverbal subjects. The findings for Italian suggested that L1 Italian attrition groups interpreted an overt subject in subordinate sentences as coreferential with the subject in the matrix sentence significantly more than monolingual control groups. The study conducted by Sorace et al. (2009) investigated English-Italian and Spanish-Italian in younger (6–8 years old) and older (8–10 years old) bilingual children in the context of the acceptability of null and overt pronouns. The results indicated that younger bilinguals in both groups were prone to understand an overt pronoun in embedded sentences as referring to the subject in the antecedent sentence significantly more than the monolingual control groups (Kras, 2014).

Pronoun interpretation in Turkish and Italian

Along with the PAS proposed by Carminati (2002), we have to take into account some other interpretative facts of Italian and Turkish. In the following section, we discuss some particular structures involving pronoun interpretation in the two languages. According to Carminati’s PAS (2002), the null subject in the sentence 1.a can be normally interpreted as referring to the precedent subject, while the overt embedded subject in 1.b is normally understood as linked to an external subject.

- 1.a Giovanni_i sa che [(*pro*)_{i/k} è intelligente]ⁱ
 Giovanni-subj know–3p.s. that [(*pro*)_{i/k} to be 3p.s clever]
 Giovanni knows he is clever
- 1.b Giovanni_i sa che [*lui*_{i/k} è intelligente]
 Giovanni-subj know–3p.s. that [*he*_{i/k} to be 3p.s clever]

Giovanni knows he is clever

Similar to other Romance languages, in Italian as well, there is a phenomenon known as “subjunctive disjoint reference effect” (Kempinsky, 1987) which means that neither null nor overt subject in a subjunctive embedded sentence can be referred to the subject in the matrix sentence (1.c and 1.d) (see Costantini, 2005 for discussion).

1. c Giovanni_i crede che [(*pro*)_{*i/k} sia intelligente]ⁱⁱ
 Giovanni-subj- believe- p.s. that [(*pro*)_{*i/k} to be 3p.sbj clever]
 Giovanni believes he is clever
1. d Giovanni_i crede che [*lui*_{*i/k} sia intelligente]
 Giovanni-subj- believe- p.s. that [(*he*)_{*i/k} to be 3p.sbj clever]
 Giovanni believes he is clever

Another restriction, worth of discussion, was given by Montalbetti (1984); the Overt Pronoun Constraint (OPC), which proposes that an overt pronoun in an embedded sentence preceded by a quantifier subject cannot be indexed to the subject in the matrix sentence:

1. e Nessuno_i pensa che[(*pro*)_{*i/k} sia intelligente]
 nobody-subj think-3p.s. that [(*pro*)_{*i/k} to be 3p.s clever]
 Nobody thinks he is clever.
1. f Nessuno_i pensa che [*lui*_{*i/k} sia intelligente]
 nobody-subj think-3p.s. that [(*he*)_{*i/k} to be 3p.s clever]
 Nobody thinks he is clever.

Turkish is a null subject language, but it has, along with the overt pronoun “o” (he/she), also an anaphoric pronoun “kendisi” (him/herself). For this reason, the embedded overt pronoun “o” can never be interpreted as referring to the subject in the matrix sentence (1.h)

1. h Yahya_i [o-nun_{*i/k} akıllı ol-duğu]-nu düşün-üyor
 Yahya_i [she/he_{*i/k} -GEN clever to be NOM-3P.SGPOSS]-ACC. believe-3P.SG-PRES-CONT.
 Yahya_i believes *she/he* _{*i/k} is clever
1. I Yahya_i [*pro*_{i/k} akıllı ol-duğu]-nu düşün-üyor
 Yahya_i [*pro*_{i/k} -GEN clever to be NOM-3P.SGPOSS]-ACC. believe-3P.SG-PRES-CONT.
 Yahya_i believes *pro*_{i/k} is clever

The anaphoric pronoun “kendi”, which does not exist in Italian, as third person singular or plural “kendisi”, can be used to express anaphoric references among the subjects of an embedded sentence and the one in the matrix sentence (Kornfilt 1986) as in the following examples (1.l, 1.o).

2. l Emel_i [kendi-si_i yap-tığı-ın] -ı söyle-di
 Emel_i [self_i-3P.SG. do-NOM-3PSPOSS] -ACC say-PAST.3P.SG
 Emel told that she did it.

When analyzed according to Montalbetti OPC (1984), Turkish allows the possibility for *kendisi* to be coindexed with the subject in the matrix sentence (2.o).

1. m Hiçkimse_i [*pro*_{i/k} akıllı ol-duğ-u] -nu düşün-mu -yor

- nobody_i [*pro*_{i/k} clever to be-NOM-3P.SG.ACC.]GEN think-NEG-3P.SG-PRES.
 nobody_i believes \emptyset _{i/k} to be clever
- 1.n Hiçkimse_i [onun^{*}_{i/k} akıllı olduğu] -nu düşün-mu-yor
 nobody_i [*she/he*^{*}_{i/k} clever to be-NOM-3P.SG.ACC.]GEN think-NEG-3P.SG-PRES..
 nobody_i believes he/she^{*}_{i/k} to be clever
- 1.o Hiçkimse_i [kendisinin_{i/*k} akıllı ol- duğ-u] -nu düşün-mu-yor
 nobody_i [*self*_{i/k} clever to be-NOM-3P.SG.ACC.]GEN think-NEG-3P.SG-PRES..
 nobody_i believes to be clever

The current study

Motivation

In the introductory section, it has been discussed that how structures at the interface and in particular anaphoric null and overt pronouns are difficult to master for bilinguals. It has been introduced how these difficulties may not be due only to a cross-linguistic influence but also due to the factors that may be related to bilingualism itself as a processing load or the length of the exposure and quality of input.

Many studies on intrasentential anaphora have focused on the interpretation and production of overt/null pronouns, this study concentrates on the acceptability of pronouns in an anaphoric context.

The main research question for this investigation is whether there is any effect of Turkish on Italian in the way bilinguals accept anaphoric relations of overt and null pronouns in backward anaphora when compared to a monolingual Italian control group. If a cross-linguistic effect is assessed then the subsequent research questions will aim to answer whether the length of stay plays any role in the mastery of this structure.

Given the fact that third person singular and plural in Turkish have two different overt pronouns “o” and “kendi” and that only “kendi” allows a co-indexed interpretation of the embedded pronoun, our prediction is that a sign of crosslinguistic influence will be found in the way bilinguals interpret the embedded pronoun in the Italian sentences. To meet these objectives a language background questionnaire and an acceptability judgment task were employed.

Methodology

Participants

A total of 24 people participated in this study, the late L2 speakers (the age range for this group was 35–60 years) have been living in Turkey continuously for more than ten years. The participants in the control group (12 participants, age range 30–60 years) were enrolled from the different regions of Italy; they were not having any significant competence in any second language or experience of living abroad. The baseline level of knowledge of Turkish was set as C1. Proficiency was assessed through a self-assessment grid from Europass (<https://europass.cedefop.europa.eu/resources/european-language-levels-cefr>) and personal conversations.

All the participants were recruited through personal contacts and a Facebook group of Italians living in Istanbul, all participants were living in Istanbul. Table 1 illustrates the results on the age of onset and length of stay in the host country.

Table 1. The subjects involved in the study

Subject	sex	Education	Age	Length of stay	age of onset
MI	F	BA	50	20	30
MC	F	BA	50	19	31
LK	F	High School	55	21	34
MN	F	BA	35	10	25
AL	F	BA	38	14	24
MG	F	Conservatory	58	28	30
CC	F	BA	44	11	19
DS	F	BA	65	34	23
LO	M	PH.d	49	15	34
BD	F	BA	48	18	30
MI	F	BA	48	18	30
P R	F	BA	50	10	19

Procedure

The data were collected through a linguistic background questionnaire and an acceptability judgment task (AJT) and a self-paced online survey tool was used. The linguistic background questionnaire was given to be filled online a few days ago and included questions about the family's socioeconomic status, the subject's linguistic history (language use preferences, a daily hour of exposure, and linguistic resources available); the test section was introduced with an explicatory section in Italian.

Material

The task was an acceptability judgment task and included 40 short stories giving the context to the sentences to be judged on a five-point Likert scale ranging from 1 (totally acceptable) to 5 (perfectly unacceptable). These 40 short stories included 20 stories introducing sentences with a referential matrix sentence (ten stories inducing disjoint interpretation of the embedded subject and 10 inducing coindexed interpretation (5). Ten stories introduced a final sentence with subjunctives (five stories induced disjoint interpretation of the embedded subject and five induced coindexed interpretation) (6), Ten stories introduced a final sentence with a quantifier antecedent (five stories induced disjoint interpretation of the embedded subject and five induced coindexed interpretation) (7). Among the sentences to be judged, 20 were with an overt pronoun and 20 with a null pronoun.

Table 2. The sentences used in the task

40 Stories introducing sentences		
20 indicative	10 quantifier	10 subjunctive
10 null subject- 10 overt subject	5 null subject -5 overt subject	5 null subject- 5 overt subject
20 stories elicited referential interpretation of anaphoric pronoun		
10 indicative	5 quantifier	5 subjunctive
5 null subject- 5 overt subject	2 null subject -3 overt subject	3 null subject- 2 overt subject
20 stories elicited disjoint interpretation of anaphoric pronoun		
10 indicative	5 quantifier	5 subjunctive
5 null subject- 5 overt subject	3 null subject -2 overt subject	3 null subject- 2 overt subject

Each item consisted of a short story, like the one given in ES. 1, wherein a context was presented. Of the stories, 20 offered disjoint reading and 20 coreferential reading. The story was then summarized by a sentence including backward anaphora. The participants were supposed to judge if the sentence was accurate to describe the context. In the story, if there was, for example, a situation suggesting coreferentiality, the embedded sentence in the summarizing sentence should have presented a null subject so our expectation was that if an overt pronoun is proposed instead, a participant would choose a higher score on the Likert scale.

ES. 1

...

1. Alcuni studenti si sono sentiti male per qualcosa che hanno mangiato in mensa. Adesso la mensa è vuota perché tutti gli studenti pensano che mangiando li, potrebbero ammalarsi di nuovo.

Gli studenti hanno paura che loro si possano sentire di nuovo male

Question

1 2 3 4 5

adeguata non adeguata

Results

The data collected were divided into three different groups, referential antecedent, quantifier antecedent, and subjunctive, and a subsequent distinction among these different groups was made according to whether the context was suggesting a coreference or disjoint interpretation of the

embedded subject and if the pronoun was null or overt, as illustrated in Table 3. For a total of 12 dependent variables.

Table 3. Summary of how the data were coded

context:					
referential		quantifier		subjunctive	
coreferential	disjoint	coreferential	disjoint	coreferential	disjoint
null/overt	null/overt	null/overt	null/overt	null/overt	null/overt

It is indeed controversial that which statistical model is suitable to investigate small-scale research, though the literature in the field of statistics applied to social science often suggests using a nonparametric test (Howell, 2010; Maxwell and Delaney, 2004). Therefore, after exploring the distribution of the data (Table 4), it was decided that a nonparametric statistical evaluation would be an appropriate choice for the present study.

In order to answer the question, if there is a difference in the way late bilinguals and control group interpreted overt and null pronouns in the different conditions, a nonparametric Friedman's test of differences was conducted and rendered a chi-square value of 30.321 which was significant ($p=0.01$). A pairwise comparison for each variable was conducted to identify the differences among the two groups. Table 4 reports lower and upper bounds for each variable and group so that the variables that differ significantly from each other are identified. A significant effect was found only in two cases when the story context was suggesting referentiality. In the first case, the sentence to be considered had a subjunctive verb and a null pronoun. The Mann-Whitney test indicated that the late L2 participants judged the null subject with a subjunctive verb that is not adequate to show referentiality ($Mdn=3.6$) than the control group ($Mdn=2.5$), $U=8.228$, $p=.012$). In the second case the sentences to be judged had a null subject in the embedded sentence with a quantifier antecedent and in this case, as well the late bilinguals discharged referentiality more ($Mdn=4.5$) than the control group ($Mdn=1$), $U=5.666$, $p=.051$).

Table 4. Data regarding comparison between groups

Comparison of the groups								
Variables	Groups	Mean	Std. Dev.	Lower Bound	Upper Bound	Mann-Whitney U	df	Sig
Ref_subj_overt	attriters	3,1250	,64403	2,7158	3,5342	2,632	1	,671
	control	2,6667	1,36931	1,6141	3,7192			
Ref_Subj_null	attriters	3,5208	,78667	3,0210	4,0207	8,228	1	,012
	control	2,4444	,85493	1,7873	3,1016			
Disj_subj_overt	attriters	2,3333	1,11464	1,6251	3,0415	2,451	1	,143
	control	3,4444	,84574	2,7944	4,0945			
Disj_subj_null	attriters	2,8750	1,53926	1,8970	3,8530	3,358	1	,178
	control	2,3333	1,08972	1,4957	3,1710			
Ref_Quant_overt	attriters	2,8611	,89283	2,2938	3,4284	,908	1	,410
	control	2,3333	1,37437	1,2769	3,3898			
Ref_Quant_null	attriters	3,4167	1,83196	2,2527	4,5806	5,666	1	,051
	control	2,2222	1,64148	,9605	3,4840			
Disj_Quant_overt	attriters	2,9583	1,07573	2,2748	3,6418	3,627	1	,068
	control	2,1667	,90139	1,4738	2,8595			
Disj_quant_null	attriters	1,3333	,49237	1,0205	1,6462	4,561	1	,422
	control	2,0000	1,41421	,9129	3,0871			
Ref_Ind_overt	attriters	3,1667	,73168	2,7018	3,6316	,494	1	,781
	control	3,0370	1,01986	2,2531	3,8210			
Disj_Ind_null	attriters	3,5000	1,73205	2,3995	4,6005	1,707	1	,630
	control	3,3333	1,64225	2,1180	4,5487			
Ref_Ind_null_	attriters	2,5357	,76356	2,0506	3,0209	,349	1	,843
	control	2,7619	,653	2,1407	3,3831			
Disj_Ind_overt	attriters	2,9524	,84259	2,4170	3,4877	1,922	1	,347
	control	2,8095	,69253	2,2772	3,3418			

In order to answer the second part of the research question—whether the length of stay in the host country has any effect on the linguistic behavior of late bilingual—Spearman's rho correlation was conducted but it did not reveal any significant effect.

Table 5: The result of the correlation analysis

Correlations									
		years in Turkey	Ref subj overt	Ref_Subj null	Disj subj overt	Disj subj null	Ref Quant overt	Ref Quant null	
Spearman's rho	years_in_Turkey	Correlation	1,000	-,121	,372	,553	,457	,114	,019
		Coefficient							
		Sig. (2-tailed)		,709	,234	,062	,136	,725	,953
	N		12	12	12	12	12	12	
		years in Turkey	Disj_Quant overt	Disj quant null	Ref_Ind overt	Disj_Ind null	Ref_Ind null	Disj_Ind overt	
Spearman's rho	years_in_Turkey	Correlation	1,000	-,104	,051	-,204	,332	,112	,566
		Coefficient							
		Sig. (2-tailed)		,747	,874	,526	,291	,730	,055
	N		12	12	12	12	12	12	

We can point out that the acceptability of an overt pronoun in a context that suggests disjoint reading is very close to the border of statistical significance (r_s .566, $p < .05$) indicating that the longer stay in Turkey influences the judgment of late L2 speakers on an overt pronoun in disjoint reading.

Discussion

The aim of this study was to contribute to a better understanding of how late Italian-Turkish bilinguals accept null and overt pronouns in intrasentential anaphora. The understanding of overt/null anaphoric relations is an interface phenomenon and not merely a syntactic phenomenon (Sorace and Filiaci, 2006) and the language pair in focus has a similar parametric setting but Turkish has a richer pronominal system with the presence of an anaphoric pronoun that does not have a correspondent in Italian. The study aimed to contribute to the understanding of language attrition when, for bilinguals, the two languages have the same parametric setting. The choice of the language pair was particularly relevant as the Turkish pronominal system could help us have a better insight of if language attrition is due to a representational deficit or processing load as suggested by Sorace (2016). To this end, we picked up late bilinguals having sufficient exposure to their L1 and have been living in Turkey for a minimum of ten years speaking fluently Turkish. In the light of the suggestions made by Sorace and colleague (2009) and Gürel (2004), our original hypothesis was that a sign of the cross-linguistic interference would be found in the way bilinguals interpret an overt pronoun in a coreferential context, assuming that the overt pronoun in Italian can be influenced by the Turkish overt pronoun “kendisi”. The results contradicted the prediction as, in fact, a sign of the crosslinguistic influence was found for a null subject. It is not surprising that a statistically significant effect could be found in a null subject in subjunctive embedded sentences. The subjunctive mood is not used by most regional Italians thus many children might have acquired this mood and the related disjoint reference effect during formal instructions in schools. Thus at the one hand, some of the participants in the study might have acquired the subjunctive mood quite late and on the other hand, this knowledge might be stored in the declarative memory creating a conflict with the same knowledge stored in the procedural memory (learned as a preschool child). Eventually, a non-prescriptive rule has to be inhibited along with the other non-necessary language, creating a higher processing load for the late L2. This can result in an over-extension of the disjoint reference effect and can be used as a proof of what proposed by Sorace (2016) that processing load plays an important role in language attrition. Further, the results regarding the null pronoun with quantitative antecedent when the story suggested a coreferential reading seem to push in the direction of a processing problem indicated a difficulty in processing null pronoun in low-frequency structures as a subjunctive and quantifier. In a sense, these findings concord with those of Sorace and Serratrice (2009), in which the overt pronoun was interpreted as referring to the subject in the matrix sentence significantly more by the bilinguals when compared to the monolinguals, and also when the languages were typologically similar as in the case of Spanish and Italian.

The result that there is no correlation between the length of stay in Turkey and the conditions is not surprising. This particular group of bilinguals in the current study has a large access to the resources in their native language, frequent travel at the home country, and have monolingual friends and family visiting from Italy, so their monolingual-divergent behavior in the two conditions indicated that the above condition is not due to the lack of quality or the quantity of input, otherwise we could have assumed that the longer they would have stayed away from the home country the more sign of attrition would have been found. The only condition that seems to be related to the length of stay is the overt pronoun in disjoint reading. These findings are quite interesting, as there is a conflict between Turkish and Italian pronoun system, as the years pass, the results show a tendency in the late L2 to assimilate the syntactic properties of the Turkish anaphoric pronoun “kendisi” to the Italian overt pronoun. In conclusion, it would be too bold to claim that these data finally establish that attrition is a processing problem as it has to be recalled, as the data were collected from a self-paced off-line test. In order to test the processing problems in a reliable way, online tests must be implemented. Nevertheless, the study

gives a clear insight into the fact that an access to high-quality input in the native language minimizes the effect of attrition even after a life-long stay in a foreign country.

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