First Language Change in Turkish-English Bilinguals

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Abstract
This paper examines whether the first language (L1) Turkish grammar would be restructured on the model of second language (L2) English due to prolonged L2 exposure in Turkish-English bilinguals (late L2 learners) living in Turkey and those living in an English-speaking country. The linguistic structure under investigation is wh-scrambling. The results of an acceptability judgment task revealed the same tendencies in the bilingual groups and monolingual controls towards rejection of certain grammatical wh-extractions. Therefore, the observed changes do not qualify to be L2-induced attrition effects. Rather, these findings may imply a language-internal change towards avoidance of wh-scrambling.

Key words: First Language Change, Bilingualism, Turkish, *Wh*-scrambling, Island Constraints

Introduction

Weinreich (1953) is one of the first researchers who discussed first language (L1) change due to second language (L2) interference. Following Weinreich, several researchers suggested that native L1 speakers inevitably develop different L1 representations as they become L2 users (Cook, 1991; 2003; Grosjean, 2001). This position is generally associated with Cook's (1991) multi-competence model, according to which L2 users' knowledge of either the L1 or the L2 is typically not identical to that of monolingual native speakers of L1 and L2 (Cook, 2002: 5–6). From the perspective of L1 competence, this view implies that bilinguals have "a compound state of a mind with two grammars" (Cook, 1991). Therefore their L1 knowledge is believed to diverge from that of monolingual L1 speakers in various linguistic domains.

The effects of L2 on the L1 grammar (generally referred to as L1 attrition/loss) have been studied for different language combinations for almost three decades (e.g., Köpke, Schmid, Keijzer, & Dostert, 2007; Lambert & Freed, 1982; Schmid & Köpke, 2013; Schmid, Köpke, Keijzer, & Weilemar, 2004; Seliger & Vago, 1991; Weltens, De Bot, & Van Els, 1986). L1 attrition is never perceived as a total loss of L1 knowledge but rather as rearrangement or restructuring of the L1 grammar due to L2 contact (Gürel, 2002; Pavlenko, 2000). Individuals who move to an L2 country and begin to use the L2 extensively (with little or no contact with the L1) can potentially demonstrate language change in various domains of grammar (Köpke et al., 2007; Schmid et al., 2004). This is referred to as loss of L1 in an L2-environment (Van Els, 1986). The present study tries to identify another bilingual environment in which L1 change is potentially possible: loss of L1 in an L1 environment among bilinguals who are in frequent contact with the L2 in their professional and/or social lives. It is, however, necessary to note that research on L1 attrition does not provide conclusive evidence for the proposal that L1 change is an inevitable consequence of bilingualism. Seliger

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(1996:606) suggests that although loss of L1 can be seen as a natural outcome of acquiring an L2, it would be incorrect to see it as 'an automatic consequence of acquiring another language'. Furthermore, it has been suggested that late bilinguals are not very likely to experience L1 attrition/change even under extensive L2 exposure because they start learning an L2 after they have already established a mature L1 competence (Montrul, 2008). Indeed, there are studies demonstrating that late bilinguals maintain their L1 morpho-syntactic properties even after years of L2 exposure and that emerging deviance (if any) is only marginal (Dostert, 2009; Gürel, 2007; Gürel & Yılmaz, 2011; Schmid, 2002 among others).

In adult L1 attrition, properties that fall into the domain of narrow syntax are expected to be stable; whereas certain interface features are susceptible to attrition as they require integration of syntactic knowledge with knowledge from other domains such as morphology, semantics, discourse/pragmatics (e.g., Sorace, 2005, 2011). For example, in a previous study designed within this Interface Hypothesis framework, it was observed that L1 Italian and L1 Greek speakers, who are near-native speakers of L2 English, tend to overgeneralize overt subjects and preverbal subjects to contexts which require a null subject or a postverbal subject (Sorace, 2000, 2005; Tsimpli, Sorace, Heycock, & Filiaci, 2004). Nevertheless, the overuse of the null pronoun in overt subject contexts is not found. Such finding is taken to show that syntactic features responsible for licensing null subjects (i.e., narrow syntax) remain resistant to attrition/change but the distribution of null and overt pronouns regulated by the syntax-discourse/pragmatic interface (i.e., interface syntax) becomes vulnerable to attrition possibly due to a decline in an ability to integrate syntactic and discourse/pragmatic constraints in the L1 due to long-term disuse. Similarly, in a study of Tsimpli et al. (2004), besides the use of overt pronouns, researchers also tested participants' grammaticality judgments on subject extractions out of *wh*-islands (e.g., *Chi si chiede Maria se ha invitato Paolo?* (Lit. trans.: 'Who does Maria wonder whether has invited Paolo?') but no attrition effects were found (Sorace, 2011:10).

In the same vein, in a recent L1 attrition study with adult Spanish-English bilinguals living in the US for an average of 5 years, Perpiñán (2011) examined subject-verb inversion on two *wh*-constructions: matrix questions (considered to be purely of syntactic nature) and relative clauses (regulated by pragmatic and/or phonological considerations). The results support the Interface Hypothesis in the sense that while pragmatic/phonological inversion is affected by language attrition, purely syntactic inversion remains intact.

In light of this background, the study explores potential changes in L1 knowledge of bilinguals (those living in an L1 environment and those living in an L2 setting) on *wh*-scrambling, a multiple interface phenomenon, which is a prime candidate for language attrition.

The Linguistic Property under Investigation

It is assumed that in English-type languages, *wh*-phrases obligatorily undergo movement to the SPEC, CP due to an extended projection principle (EPP) feature that is associated with a [+Q] C. In Turkish-like languages, however, this uninterpretable EPP feature in C is absent. Thus, *wh*-movement is not forced (Chomsky, 2001; see Akar,

1990; Arslan, 1999, İşsever, 2009, Özsoy, 1996, 2009 for Turkish *wh*-in-situ). Nevertheless, some of the island constraints in English are also relevant in Turkish scrambled *wh*-forms. Unlike English, morphology plays a crucial role in island constraints in Turkish[2]. As illustrated in the following examples, no element other than the Genitive-marked subjects can move out of a clause without violating island constraints (Görgülü, 2006; İkizoğlu, 2007; see also Öztürk, 2013 for similar locality constraints in other Turkic languages) (see Gürel, 2013 for other examples as well):

(1) Complex NP Island Constraint[3]
    a. Kim-in$_i$ Ali [t_i kitap yaz-dığ-ı   iddia-sı]-nı
       Who-GEN   Ali   book write-NOM-3POSS claim-3POSS-ACC
       yalanla-dı?
       deny-PST
       "*Who$_i$ did Ali deny the claim that t_i wrote a book?"

    b. *Ne-yi$_i$ Ali [Emel'in t_i yaz-dığ-ı   iddia-sı]-nı
       What-ACC   Ali Emel-GEN   write-NOM-3POSS claim-3POSS-
       ACC
       yalanla-dı?
       deny-PST
       "*What$_i$ did Ali deny the claim that Emel wrote t_i?"

(2) The RC Island Constraint
    *Ne-yi$_i$ Ali   [t_i çal-an   adam]-ı   gör-müş?
     What-ACC   Ali   steal-REL   man-ACC   see- R.PST
    "*What$_i$ did Ali see the man who stole t_i?"

(3) The Subject Island Constraint
    ?Kim-in$_i$ sen-i   [t_i Ali'yle   konuş-ma-sı]
     Who-GEN   you-ACC   Ali-COM   talk-NOM-3POSS
    sinirlendir-di?
    annoy-PST
    "*Who did that t_i talked with Ali annoy you?"
    (4) The Adjunct Island Constraint
      *Ne-yi$_i$ sen [Burakt_i temizlerken]   kitap
      What-ACC   you Burak   while-cleaning book
      oku-yor-du-n?
      read-PST.PRG-2SG
    "*What$_i$ were you reading (a) book while Burak was cleaning t_i?"

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[2] Not only syntax-morphology but also syntax-phonology, syntax-semantics, syntax-pragmatics/discourse interactions are also relevant for wh-scrambling in Turkish (see Akar, 1990; Erguvanlı-Taylan, 1984; 1987; Göksel & Özsoy, 2000; Kelepir, 2001, Kornfilt, 1997 for relevant discussions).
[3] The grammaticality judgments given on the English translations indicate whether or not the sentences are grammatical in English

Furthermore, Turkish prohibits extraction of adjuncts but not case-marked arguments out of *wh*-islands. Thus, *wh*-islands are less restrictive than other island types:

(5)   The *Wh*-island Constraint
        Extraction of Genitive-marked embedded subject (argument):
        a. Kim-in$_j$ sen   [t_j ne-yi   al-dığ-ı]-nı
            Who-GEN   you   what-ACC   take-NOM-3POSS-ACC
            merak et-ti-n?
            wonder do-PST-2SG
         "*Who$_j$ did you wonder what$_i$ t_j bought t_i?"

        Extraction of non-case-marked adjunct:
        b. *Nasıl$_j$ sen   [Ali-nin   hangi problem-i t_j
            How you   Ali-GEN   which problem- ACC
            çöz-eceğ-i]-ni   merak et-ti-n?
            solve-NOM-3POSS-ACC wonder do-PST-2SG
         "*How$_j$ did you wonder which problem$_i$ Ali would solve t_i t_j?"

        Extraction of case-marked adjunct:
        c. *Nere-de$_j$ sen   [Ali-nin   hangi problem-i t_j
            Where-LOC you   Ali-GEN   which problem-ACC
            çöz-eceğ-i]-ni   merak et-ti-n?
            solve-NOM-3POSS-ACC   wonder do-PST-2SG
         "*Where$_j$ did you wonder which problem$_i$ Ali would solve t_i t_j?"

Research questions

These properties raise an interesting question as to whether or not adult bilinguals may lose/alter L1 knowledge of morphology-based flexibility on *wh*-scrambling and become more conservative on the model of L2 English. Related to this, the study also examines potential differences (in the extent of L1 change) between the two bilingual groups, which differ from each other in terms of the context of bilingualism and amount/type of L2 exposure.

Study

Participants

A total of 90 participants were tested. The background information about the participants is given in Table 1.

Table 1. Background information about the participants

	Age range (mean)	Age of first L2 exposure (mean)	Age of arrival (mean)	Length of stay in the L2 setting	Length of L2 exposure
Immigrant bilinguals (N=27)	31-55 (40.04)	7-16 (10.78)	17-30 (24.59)	8-31 (15.59 yrs.)	15-48 (29.96 yrs.)
Bilinguals living in Turkey (N=36)	22-49 (34.14)	6-23 (11.54)	N/A	0-11 (2.68 yrs.)	11-38 (23.94 yrs.)
Monolingual controls (N=27)	25-72 (40.39)	N/A	N/A	N/A	N/A

The immigrant bilinguals are late bilinguals, who have immigrated to an English-speaking country at an adult age and have been living there for 8 to 31 years. The bilinguals living in Turkey are also late L2 learners and 19 of them have lived in an English-speaking country for short periods. In this group, the number of participants whose length of stay in an L2 country exceeds 8 years is only 3. Nevertheless, at the time of testing, all of them had been residing in Turkey for at least 5 years. Sixteen immigrant bilinguals had a paper-based TOEFL score above 587 and the rest had an IELTS score above 6.0. The bilinguals living in the L1 country have been working/studying at an English-medium university in Turkey as professors or graduate students and they all had either a valid TOEFL score (550 and above) or an equivalent IELTS score. All immigrant bilinguals have been working in an English-speaking environment since the onset of immigration and they use English extensively in their daily lives. The total number of hours of L1 contact per day varies between 10 minutes to 16 hours. The bilinguals in Turkey use mostly English at work (approx. 8 hours) and Turkish at home and in social environments. The monolingual controls had a university degree and received some English instruction in their high school years but never used English since then.

Task

The task was a written acceptability judgment task with 112 interrogative sentences divided into 28 sentence types with four tokens in each. Only 20 variables are discussed in this paper.[4] The interrogatives included 56 *wh*-in-situ and 56 corresponding scrambled questions, 28 of which were ungrammatical. Fifty-two declarative sentences were used as fillers. The test was completed on computers, via a web-based survey tool by judging the acceptability of a given sentence on a five-point Likert Scale ranging

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[4] Besides the island constructions, the test items also included interrogatives (both in-situ and scrambled) involving subject and object extractions from embedded clauses. These constructions involved subject and object extraction sentences such as *Öğretmen Ali'nin mağazadan ne/neyi aldığını düşünüyor?* ('What does the teacher think Ali got t_i from the store?'). Nevertheless, due to space limitations, the results of such constructions will not be discussed here.

from 1 (totally unacceptable) to 5 (perfectly acceptable). While ordering the items in the task, it was made sure that similar constructions did not follow each other.

Results and Discussion

A 3 (i.e., *group: control, immigrant bilinguals, bilinguals in Turkey*) X 28 (i.e., *word type*) Mixed ANOVA revealed significant differences among the word type ($F_{(2-87)}=252.910$, $p<.001$) but not among the groups ($F=.727$, $p=.49$), or the group-word type interaction ($F=1.091$, $p=.352$). This suggests that the two bilingual groups and monolingual group converge on their judgments of (un)grammatical items including scrambled and in-situ constructions. Table 2 presents the parameter estimates of each variable (i.e., word type). This table helps us identify the word types that differ significantly from each other. The results demonstrated that overall the acceptance rate of the grammatical items was significantly higher than that of the ungrammatical items across all variables ($p<.001$). This suggests that the participants were sensitive to the rules associated with *wh*-scrambling. What is also crucial in these results is that in all island types, *wh*-in-situ interrogatives received significantly higher acceptance rates than the corresponding scrambled forms ($p<.001$). For example, grammatical Complex NP *wh*-in-situ items including '*kimin*' (e.g., *Ali kimin kitap yazdığı iddiasını yalanladı*, '*Who did Ali deny the claim that wrote a book?*') were rated significantly higher than their grammatical *wh*-scrambled counterparts (e.g., *Kimin Ali kitap yazdığı iddiasını yalanladı?*) ($p<.001$). The lowest mean acceptance rate across the participant groups was in ungrammatical RC Islands with scrambled '*neyi*' (e.g., **Neyi Ali çalan adamı görmüş?* '**What did Ali see the man who stole?*') ($M=1.18$). However, grammatical scrambled forms such as Complex NP islands with extracted subject '*kimin*' (e.g., *Kimin Ali kitap yazdığı iddiasını yalanladı?*, '**Who did Ali deny the claim that wrote a book?*') were also rated low by all participant groups ($M=1.45$). The island type that received a relatively higher mean acceptance rate was grammatical constructions involving Subject islands with extracted '*kimin*' (e.g., *Kimin seni Ali'yle konuşması sinirlendirdi?*, '**Who did that talked with Ali annoy you?*') ($M=2.50$). Nevertheless, this was still significantly lower than the mean acceptance rate of its in-situ counterpart ($M=4.07$) ($p<.001$).

With respect to *wh*-islands, ungrammatical scrambled sentences in which a non-case-marked manner adjunct, *nasıl* ('how') is extracted (e.g., **Nasıl sen Ali'nin hangi problemi çözeceğini merak ettin?* '**How did you wonder which problem Ali would solve?*') were judged as unacceptable by all groups ($M=1.83$). Grammatical extraction of non-adjuncts (e.g., *Hangi problemi siz Zeynep'in nasıl çözdüğünü merak ettiniz?*, '*??Which problem did you wonder how Ali would solve?*') was considered more acceptable ($M=2.38$). Nevertheless, the difference between them was not significant ($p=.017$), suggesting that the contrast between argument-adjunct extraction was not well-maintained. Furthermore, in the grammatical constructions with two case-marked *wh*-elements in the argument position (e.g., *Kimin sen neyi aldığını merak ettin?* '**Who did you wonder what bought?*'), the mean acceptance rate across the groups was only ($M = 1.90$). This might be a reflection of a general tendency to reject scrambled questions.

Table 2. The lower and upper bound for each variable with means and standard deviations

Variable	Group	Mean	SD	95% Confidence Interval for Mean	
				Upper Bound	Lower Bound
Adjunct island *wh*-in-situ *(neyi)*	Im.Bil.	4.611	0.472	4.424	4.798
	Bil.Tr	4.743	0.366	4.619	4.867
	Mono	4.583	0.820	4.259	4.908
*Adjunct island *wh*-scramb.*(neyi)*	Im.Bil.	2.333	1.083	1.905	2.762
	Bil.Tr	2.813	1.071	2.450	3.175
	Mono	2.556	1.112	2.116	2.996
Complex NP *wh*-in-situ *(kimin)*	Im.Bil.	3.769	1.000	3.373	4.164
	Bil.Tr	3.708	1.003	3.369	4.048
	Mono	3.630	0.989	3.238	4.021
Complex NP *wh*-scramb.*(kimin)*	Im.Bil.	1.463	0.692	1.189	1.737
	Bil.Tr	1.389	0.523	1.212	1.566
	Mono	1.528	0.748	1.232	1.824
Complex NP *wh*-in-situ *(neyi)*	Im.Bil.	4.093	0.904	3.735	4.450
	Bil.Tr	3.951	1.067	3.590	4.312
	Mono	3.713	1.115	3.272	4.154
*Complex NP *wh*-scramb.*(neyi)*	Im.Bil.	1.620	0.807	1.301	1.940
	Bil.Tr	1.688	0.735	1.439	1.936
	Mono	1.750	0.948	1.375	2.125
RC Island (obj) *wh*-in-situ *(kimin)*	Im.Bil.	4.898	0.304	4.778	5.019
	Bil.Tr	4.944	0.254	4.858	5.030
	Mono	4.815	0.692	4.541	5.089
RC Island (obj) *wh*-scramb.*(kimin)*	Im.Bil.	1.407	0.640	1.154	1.661
	Bil.Tr	1.431	0.634	1.216	1.645
	Mono	1.426	0.689	1.153	1.699
RC Island (sbj) *wh*-in-situ *(neyi)*	Im.Bil.	4.620	0.561	4.399	4.842
	Bil.Tr	4.646	0.672	4.419	4.873
	Mono	4.315	1.001	3.919	4.711
*RC Island (sbj *wh*-scramb. *(neyi)*	Im.Bil.	1.139	0.412	0.976	1.302
	Bil.Tr	1.160	0.359	1.038	1.281
	Mono	1.250	0.439	1.077	1.423
Subject Island *wh*-in-situ *(kimin)*	Im.Bil.	4.083	0.981	3.695	4.471
	Bil.Tr	4.313	0.789	4.045	4.580
	Mono	3.796	0.928	3.429	4.163
Subject Island *wh*-scramb.*(kimin)*	Im.Bil.	2.574	1.109	2.135	3.013
	Bil.Tr	2.465	1.150	2.076	2.854
	Mono	2.537	1.151	2.082	2.992
Subject Island *wh*-in-situ *(neyi)*	Im.Bil.	4.315	0.664	4.052	4.577
	Bil.Tr	4.410	0.725	4.164	4.655
	Mono	3.769	0.938	3.398	4.139
*Subject Island *wh*-scramb.*(neyi)*	Im.Bil.	1.444	0.516	1.240	1.648
	Bil.Tr	1.354	0.508	1.182	1.526
	Mono	1.620	0.770	1.316	1.925
Wh-islands; *wh*-in-situ *(hangi-nasıl)*	Im.Bil.	3.204	1.207	2.726	3.681
	Bil.Tr	3.007	1.361	2.547	3.467
	Mono	3.278	1.106	2.840	3.715
Wh-islands; *wh*-scramb. *(hangi-nasıl)*	Im.Bil.	2.333	1.127	1.888	2.779
	Bil.Tr	2.361	1.278	1.929	2.794
	Mono	2.407	1.323	1.884	2.931

Im.Bil=Immigrant bilinguals (N=27); Bil.Tr= Bilinguals in Turkey (N=36); Mono=Monolingual Turkish-speaking controls (N=27). The sign * indicates ungrammatical items.

Table 2. The lower and upper bound for each variable with means and standard deviations (cont.)

Variable	Group	Mean	SD	95% Confidence Interval for Mean	
				Upper Bound	**Lower Bound**
Wh-islands; *wh*-in-situ *(kimin-neyi)*	Im.Bil.	3.472	1.272	2.969	3.975
	Bil.Tr	3.721	1.108	3.341	4.102
	Mono	3.500	1.160	3.041	3.959
Wh-islands; *wh*-scramb. *(kimin-neyi)*	Im.Bil.	1.787	0.924	1.421	2.153
	Bil.Tr	1.958	0.955	1.635	2.282
	Mono	1.935	1.153	1.479	2.391
*Wh-islands; *wh*-in-situ *(nasıl-hangi)*	Im.Bil.	2.398	1.288	1.888	2.908
	Bil.Tr	2.222	1.047	1.868	2.576
	Mono	2.019	1.000	1.623	2.414
*Wh-islands; *wh*-scramb. *(nasıl-hangi)*	Im.Bil.	1.917	1.021	1.513	2.321
	Bil.Tr	1.875	0.836	1.592	2.158
	Mono	1.713	0.780	1.404	2.022

Im.Bil=Immigrant bilinguals (N=27); Bil.Tr= Bilinguals in Turkey (N=36); Mono=Monolingual Turkish-speaking controls (N=27). The sign * indicates ungrammatical items.

As noted earlier, the mixed-design ANOVA did not reveal significant differences among the three participant groups. Nevertheless, an additional analysis involving One-way Repeated Measures ANOVA was conducted to examine the extent of similarity among the groups. The results were presented in Table 3. A One-way Repeated Measures ANOVA revealed a significant difference among the variables (i.e., word types) (F=258.388, $p<.001$). A Bonferroni test was conducted as the Post-Hoc test.

Table 3. ANOVA results

		Sum of Squares	df	Mean Square	F	Sig.
Complex NP *wh*-in-situ (*neyi*)	Between Groups	1.997	2	.998	.929	.399
	Within Groups	93.459	87	1.074		
	Total	95.456	89			
*Complex NP *wh*-scramb. (*neyi*)	Between Groups	.227	2	.113	.167	.847
	Within Groups	59.218	87	.681		
	Total	59.445	89			
RC Island (object RC) *wh*-in-situ (*kimin*)	Between Groups	.261	2	.130	.663	.518
	Within Groups	17.120	87	.197		
	Total	17.381	89			
RC Island (object RC) *wh*-scramb. (*kimin*)	Between Groups	.009	2	.004	.010	.990
	Within Groups	37.072	87	.426		
	Total	37.081	89			
RC Island (subject RC) *wh*-in-situ (*neyi*)	Between Groups	1.947	2	.973	1.692	.190
	Within Groups	50.042	87	.575		
	Total	51.989	89			
*RC Island (subject RC) *wh*-scramb. (*neyi*)	Between Groups	.193	2	.096	.602	.550
	Within Groups	13.936	87	.160		
	Total	14.128	89			
Subject Island *wh*-in-situ (*kimin*)	Between Groups	4.112	2	2.056	2.586	.081
	Within Groups	69.177	87	.795		
	Total	73.289	89			
Subject Island wh-scramb. (*kimin*)	Between Groups	.195	2	.097	.075	.928
	Within Groups	112.709	87	1.296		
	Total	112.903	89			
Subject Island *wh*-in-situ (*neyi*)	Between Groups	6.955	2	3.477	5.740	**.005**
	Within Groups	52.709	87	.606		
	Total	59.664	89			
*Subject Island wh-scramb. (*neyi*)	Between Groups	1.104	2	.552	1.530	.222
	Within Groups	31.385	87	.361		
	Total	32.489	89			
Wh-islands; wh-in-situ (*hangi-nasıl*)	Between Groups	1.255	2	.627	.406	.668
	Within Groups	134.482	87	1.546		
	Total	135.737	89			
Wh-islands; wh-scramb. (*hangi-nasıl*)	Between Groups	.076	2	.038	.024	.976
	Within Groups	135.699	87	1.560		
	Total	135.775	89			

Table 3. ANOVA results (cont.)

		Sum of Squares	df	Mean Square	F	Sig.
Wh-islands; wh-in-situ (*kimin-neyi*)	Between Groups	1.186	2	.593	.430	.652
	Within Groups	118.763	86	1.381		
	Total	119.949	88			
Wh-islands; wh-scramb. (*kimin-neyi*)	Between Groups	.500	2	.250	.245	.783
	Within Groups	88.725	87	1.020		
	Total	89.225	89			
*Wh-islands; wh-in-situ (*nasıl-hangi*)	Between Groups	1.950	2	.975	.789	.458
	Within Groups	107.495	87	1.236		
	Total	109.445	89			
*Wh-islands; wh-scramb. (*nasıl-hangi*)	Between Groups	.638	2	.319	.412	.664
	Within Groups	67.400	87	.775		
	Total	68.039	89			

The results of this analysis revealed that the only between-group difference that came close to a statistically significant level was observed in the *wh*-in-situ counterpart of Subject Island constructions with the question form '*neyi*' (e.g., *Sizi sekreterin neyi sorması şaşırttı?*, 'That the secretary asked what surprised you?') ($F_{(2,87)=}5.740, p<.005$). The mean acceptance rate of this item was lower in the monolingual control group (M=3.77) than the immigrant bilinguals (M=4.32) and bilinguals in Turkey (M=4.41) (see Table 2). However, this value was not significant at a reduced alpha value, which was below 0.002. No other between-group difference was close to a significant level.

Overall, the results revealed that the ungrammatical forms were rated lower than the grammatical forms by all groups, suggesting that bilinguals, like monolinguals, maintained sensitivity to island constraint violations in Turkish. The only exception to this was grammatical forms with Genitive-case-marked NPs extractions with '*kimin*'. Such finding would have implicated L2 English influence on L1 Turkish if this pattern had been found only in the bilingual groups. However, the same tendency was also found in monolingual native speakers, ruling out an L2-dependent change in the L1 grammar. Furthermore, the results revealed that scrambled question forms were not rated as acceptable as the in-situ forms by any of the groups, indicating an interesting tendency, which apparently would not stem from L2 English influence.

In sum, since all groups behaved similarly, no L2-induced L1 change can be implicated in this study. However, certain tendencies observed in both monolinguals and bilinguals are worth noting: 1) scrambled *wh*-constructions were rated lower than the corresponding in-situ sentences across all categories; 2) grammatical items were rated significantly higher than ungrammatical ones, with the exception of grammatical extraction of Genitive-case-marked NPs; 3) in *wh*-islands, grammatical extractions of case-marked arguments were rated as low as ungrammatical extractions of adjuncts. These last two findings suggest that there is a tendency to disregard morphology-

dependent flexibility in *wh*-scrambling in Turkish. Lower acceptance rates for case-marked *wh*-elements extracted out of different islands cannot be due to English as monolingual controls also demonstrated this tendency.

From the perspective of the Interface Hypothesis, it is expected that the involvement of multiple interfaces would make it more difficult for potential attriters to maintain properties of Turkish *wh*-scrambling. As far as the syntax-morphology interaction is concerned, this difficulty was expected to be manifested in the form of rejection of extracted *wh*-elements regardless of their morphological shape. More specifically, Genitive-case-marked subject extraction was expected to become less acceptable due to the influence of L2 English. Similarly, extraction of case-marked arguments out of *wh*-islands was predicted to become less favorable.

As we saw in the results, the two bilingual groups demonstrated lower acceptance rates for case-marked *wh*-elements extracted out of different islands. Nevertheless, it is difficult to attribute this tendency to L2 English because the above-mentioned preferences were also observed in the control group. Furthermore, although one can also predict that an overt *wh*-movement L2 could potentially help bilinguals maintain *wh*-scrambling in their L1, the results revealed that both groups accepted *wh*-in-situ constructions more readily than the corresponding scrambled sentences, disconfirming the above prediction. These results also question Cook's (1991) multi-competence model, which predicts dissimilar L1 knowledge in bilinguals and monolinguals.

Conclusion

This study examined potential effects of syntactic constraints on overt *wh*-movement in the L2 English on the L1 Turkish rules of *wh*-scrambling pertaining to multiple interfaces. In contrast to the view that interface domains will be vulnerable to attrition effects, our results did not reveal significant L2-induced restructuring in this aspect of L1 Turkish grammar. There were, nevertheless, certain tendencies in the acceptability of *wh*-scrambled sentences. Thus these results suggest that in the context of language change, the L2 may not be the only trigger for change in complex interface phenomena. Restructuring in the L1 grammar might also occur as a consequence of a language-internal tendency/change, whereby a (psyho)linguistically costly operation (i.e., *wh*-scrambling) is disfavored or avoided. Tendencies to reject grammatical scrambled sentences might also be due to task effect in the sense that the participants might have failed to create a discourse context for scrambled questions in isolation, which are otherwise perfectly legitimate. Further research with multiple tasks is necessary to resolve this issue not only in bilinguals but also in monolinguals.

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Türkçe-İngilizce İki Dillilerin Ana Dillerindeki Değişiklikler

Özet

*Bu makalede, Türkiye'de ve İngilizce konuşulan bir ülkede yaşayan Türkçe ana dillilerin uzun süre ikinci dil
İngilizceye maruz kalmalarından dolayı ana dillerinde yeniden yapılanma olup olmayacağını
araştırılmaktadır. İncelenen dilbilimsel yapı Türkçedeki kim, nasıl, ne gibi soru sözcüklerini içeren karmaşık
soru tümceleridir. Dilbilgisel yargı testiyle toplanan veriler, hem Türkçe ana dillilerde hem de iki dilli
gruplarda belli soru yapılarının kullanımında aynı oranda düşük kabul edilebilirlik eğilimini ortaya
koymuştur. Bu bulguların, ana dil Türkçede İngilizceden kaynaklanan değişiklikler olduğu biçiminde
yorumlanamayacağı düşünülmektedir. Ancak, tümce başına taşınmış soru sözcükleri içeren bazı yapıların
düşük kabul edilebilirlik oranları Türkçenin kendi yapısal değişimine gösterge olarak düşünülebilir.*

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