

VEHICLE CHANGE IN RIGHT-NODE RAISING AND VERB PHRASE
ELLIPSIS IN ENGLISH AND TURKISH

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ABSTRACT

VEHICLE CHANGE IN RIGHT-NODE RAISING AND VERB PHRASE ELLIPSIS IN ENGLISH AND TURKISH

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In this study, I aim to investigate the interpretation and processing of anaphors under ellipsis. In particular, I am interested in the role of Vehicle Change (VC) in anaphora resolution in two elliptical constructions: Verb Phrase Ellipsis (VPE) and Right Node Raising (RNR) in L1 Turkish and L1 and L2 English. VC is a semantic process that allows non-pronominals to be interpreted as pronominals under ellipsis. I examined whether sentences whose interpretation requires VC are processed with more difficulties than those in which VC is not required, with the aim of determining whether VC is computationally demanding. To see a possible effect of VC in anaphora interpretation and in linguistic processing, I focus on the interpretation and on the on-line processing of ambiguous VPE and RNR sentences where the elided portion contains either a reflexive or a possessive anaphor. I also investigate how gender (mis)match between the antecedent and the anaphor, the directionality of anaphora, and the head directionality parameter of the language (head-initial versus head-final) affect the anaphora interpretation under ellipsis. I relied on offline semantic interpretation tasks and online self-paced reading experiment. The results revealed that the interpretations that required VC were dispreferred, suggesting that they are difficult and computationally costly. I found no effect of gender (mis)match on the

interpretation of the anaphors. Lastly, there were mixed results regarding the effect of the directionality of anaphora and of the head directionality of a language on the interpretation.

Keywords: Vehicle Change, Right Node Raising, Verb Phrase Ellipsis, sloppy and strict identity reading, anaphora interpretation

ÖZ

TÜRKÇE VE İNGİLİZCE'DE EYLEM ÖBEĞİ EKSİLTME VE SAĞ BUDAK YÜKSELTME YAPILARINDA TAŞIYICI DEĞİŞİMİ

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Bu çalışmada, *eksiltme* (ellipsis, *ing*) tümcelerindeki *göndergelerin* (anaphor, *ing*) anlamlandırılması ve işlenmesini inceledik. İki farklı eksiltme yapısı üzerinde, özellikle, *Taşıyıcı Değişimi'nin* (TD) (Vehicle Change, (VC) *ing*) *gönderge* çözünürlüğündeki rolünü inceledik. Yani, *Eylem Öbeği Eksiltme (EÖE)* (Verb Phrase Ellipsis, (VPE) *ing*) ve *Sağ Budak Yükseltme (SBY)* (Right Node Raising, (RNR) *ing*) tümcelerinin ekseninin *değişmez* (strict, *ing.*) veya *değişken* (sloppy, *ing*) olarak yorumlanmasında belirsizliğe yol açan bir gönderge içerdiğinde, bu göndergelerin nasıl anlamlandırıldığını araştırdık. TD, adilla ilgili olmayanların, eksiltme altında, adilla ilgili olarak yorumlanmasına izin veren anlamsal bir süreçtir. TD'nin bilişsel işleme açısından zor ve/ya maliyetli olup olmadığını belirlemek amacıyla, yorumlanması TD gerektiren cümlelerin, TD'nin gerekli olmadığı tümcelere göre daha fazla güçlkle işlenip işlenmediğini inceledik. Eksilteli kısmın bir dönüşlü veya iyelik göndergesi içerdiği durumlarda, göndergelerin yorumlanması ve dilsel işlemesi sırasında, TD'nin olası bir etkisini görmek için, çevrimdışı yorumlamaya ve belirsiz *SBY* ve *EÖE* cümlelerinin çevrimiçi işlenmesine odaklanıyoruz. Ayrıca, öncül ve gönderge arasındaki cinsiyet eşleşme(me)sinin, göndergenin yönlülüğünün ve dilin *yönlülük değiştirgenin* (directionality parameter, *ing*) bu eksilti altındaki gönderge

yorumunu nasıl etkilediğini araştırıyoruz. Çevrimdışı anlamsal yorumlama görevleri kullandık ve kendi hızında çevrim içi okuma deneyi uyguladık. Ayrıca, bu anlamsal belirsizliklerden hangilerinin anadili İngilizce olanlar, anadili Türkçe olanlar ve İngilizceyi ikinci dil olarak konuşanlar tarafından daha çok kabul edildiğini araştırıyoruz. Sonuçlar, TD gerektiren yorumların genel olarak tercih edilmediğini ve bilişsel işleme açısından zor ve maliyetli olduğunu ortaya koydu. Göndergelerin yorumlanmasında cinsiyet eşleşme(me)sinin etkisi bulunamadı. Son olarak, göndergelerin yönlülüğünün ve dilin *yönlülük değiştirgenin* (directionality parameter, *ing*) bu göndergelerin yorumlanması üzerindeki etkisine ilişkin karışık sonuçlara varıldı.

Anahtar Kelimeler: Taşıyıcı Değişimi, Sağ Budak Yükseltme, Eylem Öbeği Eksiltme, değişmez ve değişken kimlik yorumlama, gönderge yorumlama

To my beloved son, Kemal Eren Gezen
To my beloved husband Emre Çađrı Gezen
To my family

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LIST OF ABBREVIATIONS

| | |
|----------|--|
| ACC | Accusative |
| ATB | Across the Board |
| DAT | Dative |
| DN | Dolaysız Nesne (Direct Object, <i>ing</i>) |
| DO | Direct Object |
| DP | Determiner Phrase |
| D1 | Dil 1 (L1, First Language, <i>ing</i>) |
| D2 | Dil 2 (L2, Second Language, <i>ing</i>) |
| EÖE | Eylem Öbeği Eksiltme (Verb Phrase Ellipsis, <i>ing</i>) |
| F-F | Female-Female |
| F-M | Female-Male |
| GEN | Genitive |
| LF | Logical Form |
| L1 | First Language |
| L2 | Second Language |
| M | Mean Score |
| M-M | Male-Male |
| M-F | Male-Female |
| MS | Millisecond |
| N | Noun |
| NEG | Negative |
| NP | Noun Phrase |
| PAST | Past Tense |
| PF | Phonological Form |
| PL | Plural |
| POSS | Possessive |
| PP | Prepositional Phrase |
| REF/REFL | Reflexive |

| | |
|------|---|
| RelC | Relative Clause |
| RNR | Right Node Raising |
| RT | Relevance Theory |
| SBY | Sağ Budak Yükseltme (Right Node Raising, <i>ing</i>) |
| SD | Standard Deviation |
| SG | Singular |
| SL | Sloppy |
| SSH | Shallow Structure Hypothesis |
| ST | Strict |
| 3SG | Third Person Singular |
| VC | Vehicle Change |
| VP | Verb Phrase |
| VPE | Verb Phrase Ellipsis |
| T | Tense |
| TD | Taşıyıcı Değişimi (Vehicle Change, <i>ing</i>) |
| T/F | True/False |

CHAPTER 1

INTRODUCTION

In the current study, I aim to explore the interpretation of deleted anaphors (in reflexive/possessive constructions) in forward and in backward ellipsis in native and second language English and native Turkish. The ellipsis constructions that I examine are Verb Phrase Ellipsis (henceforth VPE) for the forward ellipsis and Right Node Raising (henceforth RNR) for the backwards ellipsis. I analyze these constructions in English, which is a head-initial language, and in Turkish, which is a head-final language since the interpretation of different anaphors in terms of the directionality of ellipsis might be modulated by the fact that the speakers' language is head-initial or head-final.¹

An example of VPE in English is given in (1) and an example of RNR in English is given in (2). In VPE there is a pivot, which is the part of a VPE sentence that appears only in the first conjunct but it is interpreted in both conjuncts. Similarly, RNR involves a pivot: the segment of an RNR sentence that appears only in the second conjunct, yet is interpreted in both clauses.

(1) *VPE (English)*

- a. Sue praised Jane, and Mary did too.
- b. Sue praised Jane, and Mary did <praise Jane> too.

¹ RNR and VPE differ in the directionality of ellipsis, thus I wanted to explore whether languages whose head directionality parameters are different reveal different results because different values of the head directionality parameter might interact differently with the directionality of ellipsis. That is why I wanted to test English as a head-initial language and Turkish as a head-final language and VPE as forward ellipsis and RNR as backward ellipsis.

(2) *RNR (English)*

- a. Sue praised, but Mary blamed Jane.
- b. Sue praised <Jane>, but Mary blamed Jane.

For Turkish, I will use the *-de* structure, illustrated in (3), as representative of VPE and the *hem...hem*² structure, illustrated in (4), as representative of RNR construction.

(3) *VPE (Turkish)*

- a. Pelin Semra-’y1 değerlendir-di, Melis de.
Pelin Semra-ACC evaluate -PAST.3SG, Melis too.
‘Pelin evaluated Semra, and Melis did too.’

² While VPE is definitely involved in the *-de* construction in Turkish, the *hem...hem* construction might not be identical to RNR. Although RNR has been proposed to exist in Turkish, for our purposes I could not use it because of the following reasons. First, RNR analysis has been proposed for Turkish sentences like (i) (Hankamer 1971; Kornfilt, 2000), where the element that is interpreted in both conjuncts, but is present only in one is the verb (while in English, it is the direct object). I could not use examples like (i) for our purposes because in that case the anaphor in the object position would be overt in both conjuncts, which would not allow me to test anaphora interpretation under ellipsis. Also, construction such as (i) in Turkish have been analyzed both as RNR and as gapping (İnce, 2009; Duman, 2013) whereas the RNR construction in English is definitely not gapping. RNR analysis has also been proposed for Turkish (gapping) examples like (ii), where the shared element is the direct object. However, the word order in (ii), which is entirely parallel to English, necessarily involves scrambling of the direct object since the post-verbal position is not the canonical position of the direct object in Turkish. Thus, any results that I obtained on sentences like (ii) would be confounded by the extra scrambling involved.

- i. [[Hasan karides-i __], [Mehmet te istiridye-yi yedi]]
Hasan shrimp-ACC Mehmet also oyster-ACC ate
‘Hasan (ate) the shrimp, and Mehmet ate the oyster.’
- ii. Mehmet ___1 pişirdi, Hasan da ___1 yedi, elma-y1.
Mehmet cooked Hasan also ate apple-ACC
‘Mehmet cooked and Hasan ate, the apple.’ (İnce, 2009, p.247)

Another option was to use the *both... and* construction in English, given in (iii) and (iv) as the counterpart to the Turkish correlative *hem...hem* conjunction. However, I opted against that because the correlative conjunctions in English (*like both... and, either...or, neither...not*) are not unanimously given a biclausal analysis. Typically, *both... and*, when coordinating subjects, as in (iii) and (iv), is used as a scope marker and the size of the coordination is small (Hendriks, 2004). Thus, *Both John and Mary went home* does not receive the analysis: *Both [John went home] and [Mary went home]*, but rather *Both [John and Mary] went home*.

- iii. Both John and Mary praised his friend.
- iv. Both John and Mary went home.

- b. Pelin Semra-'yı değerlendir-di, Melis de <Semra'yı
 Pelin Semra-ACC evaluate -PAST.3SG, Melis too <Semra-ACC
 değerlendir-di>.
 evaluate—PAST.3SG>
 'Pelin evaluated Semra, and Melis <evaluated Semra>, too.'

(4) RNR (Turkish)

- a. Hem Pelin hem Melis Semra-'yı aşağıla-dı.
 also Pelin also Melis Semra-ACC insult -PAST.3SG
 'Both Pelin and Melis insulted Semra.'
- b. Hem Pelin <Semra'yı aşağıla-dı>, hem Melis Semra-'yı
 also Pelin <Semra-ACC insult—PAST.3SG> also Melis Semra-ACC
 aşağıla-dı.
 insult -PAST.3SG.
 'Both Pelin <insulted Semra> and Melis insulted Semra.'

To the best of my knowledge, there are no studies examining the interpretation of unpronounced anaphors in the *-de* structure and the *hem...hem* structure in Turkish. I believe that the *-de* structure instantiates VPE³ since it is parallel to the English *did too* structure and the two work almost the same both syntactically and semantically. More specifically, in the Turkish *-de* structure, there are two clauses and the VP of the second clause is covert although it is interpreted as if it was present. As for the *hem...hem* structure, shown in (4), its pivot contains the entire VP, rather than only a DP, as is the case in the English RNR. Therefore, although the two are not entirely parallel, I used the *-hem...hem* structure to examine anaphor interpretation in backwards ellipsis

³ As for the Turkish VPE structures that I used in this dissertation, although Bliss (2004, p. 23) stated that Turkish does not have a construction that would be completely comparable to English VP deletion, illustrated in (i), there are reasons to believe that the Turkish postpositive *-de* structure, shown in (ii), is more or less equivalent to the English VPE structure that I used in this dissertation.

- i. Roger kicked the ball and Simon did too. (Bliss, 2004, p.23)
 ii. Roger top-a vur-du, Simon da.
 Roger ball-DAT kick-PAST.3SG Simon too.

Firstly, the elided constituent in (ii) is the VP because the subject remains overt, and is not part of the elipsis site. Even though in English the presence of an auxiliary such as *do*, *did*, *will* ensures that the deleted constituent is not bigger than the VP/vP, given that Turkish does not have overt auxiliaries, the deleted constituent might be a verb phrase or a T', but in the absence of empirical evidence of the contrary, I will assume that it is VPE.

because this structure looks like RNR; i.e., the first conjunct is missing a chunk that is found at the right edge of the second conjunct and is interpreted in both conjuncts. The main difference is that in Turkish, this chunk includes the verb and the direct object (i.e., it is the whole VP), while in English it only includes the direct object.

My main interest in this study is the interpretation of the missing anaphors in both VPE and RNR constructions in English and in Turkish. The anaphors I investigate are reflexive and possessive constructions in the object positions.⁴ Examples (5) to (8) show VPE and RNR with reflexive anaphors.

(5) *VPE: Reflexive construction*

- a. Sue praised herself, and Mary did too.
- b. Sue praised herself, and Mary did <praise herself>too.

⁴ In the initial phase of the study, I was planning to investigate the interpretation of personal pronouns, reflexive pronouns, and possessive pronouns in RNR, as illustrated in the A examples in (i)-(iii). However, given that a personal pronoun in the object position cannot be bound by the local subject (because of the principle B of the Binding theory), except when used in prepositional phrases, using personal pronouns in the study would mean that *every anaphor* (including possessive and reflexive pronouns) should be embedded into prepositional phrases, which would put us at risk of not finding a sufficient number of items that sound natural to speakers.

Therefore, I conducted an offline pilot study to investigate whether there are differences in the interpretation of these three anaphor types regarding the strict and sloppy identity readings. I asked the participants to read the sentence A and the sentence B (see below) and to rate on a 5-points Likert scale to what extent the meaning of sentence A is similar to the meaning of sentence B. A Wilcoxon signed-rank test showed that L2 English speakers did not elicit a statistically significant change either in the sloppy identity reading preference between the possessive pronouns and personal pronouns ($Z = -.566$, $p > .05$) or in the strict reading preference ($Z = -.496$, $p > .05$). The results showed that interpretations of elided personal pronouns in RNR did not differ from possessive pronouns. Given this result, I decided to omit personal pronouns from the main study.

- (i) A: Yesterday, Olivia dropped, but Evelyn lifted the pen near her in the café.
B: Yesterday, Olivia dropped the pen near Olivia in the café, but Evelyn lifted the pen near Olivia in the café.
- (ii) A: Yesterday, Olivia confronted, but Evelyn avoided the student near herself in the café.
B: Yesterday, Olivia confronted the student near Evelyn in the café, but Evelyn avoided the student near Evelyn in the café.
- (iii) A: Yesterday, Olivia exited, but Evelyn entered the restroom behind her friend in the café.
B: Yesterday, Olivia exited the restroom behind Evelyn's friend in the café, but Evelyn entered the restroom behind Evelyn's friend in the café.

(6) *RNR: Reflexive construction*

- a. Sue praised, but Mary blamed herself.
- b. Sue praised ~~<herself>~~, but Mary blamed herself.

(7) *VPE: Reflexive construction in Turkish*

- a. Pelin kendi-ni değerlendirdi-di, Melis de.
Pelin self -3SG-ACC evaluate -PAST.3SG Melis too.
'Pelin evaluated herself, and Melis did too.'

- b. Pelin kendi-ni değerlendirdi-di, Melis de <kendi-ni
Pelin self -3SG-ACC evaluate -PAST.3SG Melis too <self-3SG-ACC
~~değerlendirdi-di~~>.
~~evaluate~~ → ~~PAST.3SG~~>
'Pelin evaluated herself, and Melis did <evaluate herself> too.'

(8) *RNR: Reflexive construction in Turkish*

- a. Hem Ecem hem İdil kendi-ni aşağıla-dı.
also Ecem also İdil self -3SG-ACC insult -PAST.3SG
'Both Ecem and İdil insulted herself.'

- b. Hem Ecem <kendi-ni → aşağıla-dı>, hem İdil
also Ecem <self-3SG-ACC insult -PAST.3SG>, also İdil
kendi-ni aşağıla-dı.
self -3SG-ACC insult -PAST.3SG.
'Both Ecem <insulted herself> and İdil insulted herself.'

Examples (9) and (10) show VPE and RNR in possessive constructions.

(9) *VPE: Possessive construction*

- a. Sue praised her friend, and Mary did too.
- b. Sue praised her friend, and Mary did <praise her friend>too.

(10) *RNR: Possessive construction*

- a. Sue praised, but Mary blamed her friend.
- b. Sue praised ~~<her friend>~~, but Mary blamed her friend.

Possessive anaphors in Turkish, however, work differently. Unlike English, which only has possessive pronouns, shown in (11)a) Turkish also has possessive reflexives⁵, as shown in (11)b).

(11)

- a. **onun** işçisi /abisi *Turkish possessive pronoun*
his/her worker/brother
'his/her worker', 'his/her brother'
- b. **kendi** işçisi /abisi *Turkish possessive reflexive*
self's worker/brother
'his/her worker', 'his/her brother'

However, the most natural way in Turkish to form a possessive phrase that in English would contain a possessive pronoun, is to altogether omit the anaphor that indicates the possessor, as in (12), which contains just the possessed phrase *abisi* ('one's older brother').

(12) İdil abi -si -ni aşığıla-dı
İdil big brother-POSS.3SG-ACC insult -PAST.3SG
'İdil insulted his/her brother.'

Also unlike English, Turkish possessive pronouns in the object position cannot be co-referential with the subject, due to the Principle B violation, as shown in (13)a) (Gürel, 2003, p.132, 134); the only way for the possessor in the object phrase to co-refer with the subject is to use a possessive reflexive, as in (13)b).

⁵ The lexical item *kendi* in Turkish can receive multiple interpretations; it can serve as a reflexive anaphor, a possessive reflexive and it can also be used as an adverbial as in *Ayşe okula kendi gitti* 'Ayşe went to school herself'. In some dialects of Turkish, *kendi* can also assume the role of a personal pronoun as in *Dün kendini aradım* 'Yesterday, I called him/her'. (İ. K. Bayırlı, personal communication, August 24, 2022). In this dissertation, I focused on the usage of *kendi* as a reflexive possessive and as a reflexive pronoun.

(13) *Possessive construction in Turkish*

a. İdil_i onun_{k/*i} abi -si -ni aşağıla-dı *Possessive Pronoun*
İdil his/her big brother-POSS.3SG-ACC insult -PAST.3SG
'İdil_i insulted his/her_{k/*i} brother.'

b. İdil_i kendi_{i/*k} abi -si -ni aşağıla-dı *Possessive Reflexive*
İdil self's big brother-POSS.3SG-ACC insult -PAST.3SG
'İdil_i insulted his/her_{i/*k} brother.'

Since the most natural way to express possession in Turkish is to omit the possessor anaphor, I decided to do so in our experimental items as well, as shown in (14) and (15).

(14) *VPE: Possessive construction in Turkish*

a. Pelin işçi -si -ni değerlendir-di, Melis de.
Pelin worker-POSS.3SG-ACC evaluate-PAST.3SG Melis too.
'Pelin evaluated her worker, and Melis did too.'

b. Pelin işçi -si -ni değerlendir-di, Melis de
Pelin worker- POSS.3SG-ACC evaluate -PAST.3SG Melis too
<işçi —si —ni —değerlendir-di>.
<worker-POSS-3SG-ACC-evaluate —PAST.3SG>
'Pelin evaluated her worker, and Melis did <evaluate-her-worker> too.'

(15) *RNR: Possessive construction in Turkish*

a. Hem Ecem hem İdil abi -si -ni aşağıla-dı.
also Ecem also İdil big brother-POSS.3SG-ACC insult -PAST.3SG
'Both Ecem and İdil insulted her brother.'

- b. Hem Ecem <abi — si — ni — aşağıla — dı>,
 also Ecem <big brother POSS.3SG ACC insult — PAST.3SG>,
 hem İdil abi -si -ni aşağıla-dı.
 also İdil big brother-POSS.3SG-ACC insult -PAST.3SG.
 ‘Both Ecem <insulted her brother> and İdil insulted her brother.

However, it was important for our purposes to know whether the anaphor in the elided conjunct was underlyingly a possessive pronoun *onun* ‘his/her’ or a possessive reflexive *kendi* ‘self’s’. Given the anti-subject orientation of local possessive pronouns in Turkish, illustrated in (13) above, I expected the (unpronounced) possessive anaphor in the first, non-elliptical conjunct to always be the possessive reflexive *kendi* ‘self’. Accordingly, I also expected the underlying anaphor in the elided conjunct to also be *kendi*.

1.1. Ambiguities in Anaphor⁶ Interpretation in VPE and RNR

Since VPE and RNR constructions contain at least two coordinated clauses, the elided anaphor used as the direct object (DO) or as a part of the DO in the elliptical conjunct may pick up the reference from either of the two subjects. If it picks up the reference from the local subject, *the sloppy identity reading* occurs while if it picks up the reference from the non-local subject, *the strict identity reading* arises (Ha, 2006; 2007; 2008a; 2008b). For example, in (16) below, one of the interpretations of the elliptical sentence, the *sloppy identity reading*, given in (16)b), suggests that the anaphor (reflexive/possessive) in the elided VP indeed is bound by the subject of the second conjunct, *Bill*, as indicated by the co-indexation of the two. However, the existence of the *strict identity reading*, given in (16)c), suggests that the elided anaphor can also be interpreted as referring back to the subject of the first conjunct, *John*.

⁶ Binding Theory (Chomsky 1981) argues that the term “anaphor” solely addresses reciprocals and reflexives, in addition to defining any pronominal form that refers to an antecedent as a part of the text (Gardelle, 2012). However, Oxford Concise Dictionary of Linguistics (Matthews, 2014: p.19) defines an anaphor in a simpler way, as “any unit standing in a relation of *anaphora*”, which is “the relation between a pronoun and another element, in the same or in an earlier sentence that supplies its referent.” In this thesis, I adopt this more general definition of anaphor in which it is defined as any expression that cannot be interpreted in isolation on its own, and refers back to an antecedent (i.e., mention) (Fang et al., 2021; Xu, 2019).

(16) *Ambiguity in VPE*

- a. John_i praised himself/his friend and Bill_k did too.
- b. ‘John_i praised himself_i/his_i friend and Bill_k did <praise himself_k/his_k friend> too.’
Sloppy identity reading
- c. John_i praised himself_i/his_i friend and Bill_k did <praise him_i/his_i friend> too.’
Strict identity reading

The same ambiguity arises in Turkish VPE as well, as shown in (17).

(17) *Ambiguity in VPE in Turkish*

- a. Selma kendi-ni /arkadaşını aldat-tı,
Selma self-3SG-ACC/friend-POSS-3SG-ACC deceive-PAST.3SG
Aylin de.
Aylin too.
‘Selma deceived herself/her friend, and Aylin did too.’
- b. Selma_i kendi-ni_i /arkadaşını_i aldattı,
Selma_i self_i-3SG-ACC /friend-POSS-3SG-ACC deceive-PAST.3SG
Aylin_k de <kendi-ni_k /arkadaşını_k aldat-tı>,
Aylin_k too <self_k-3SG-ACC/friend_k-POSS-3SG-ACC deceive-PAST.3SG>
‘Selma_i deceived herself_i/her_i friend, and Aylin_k deceived herself_k/her_k friend too.’
Sloppy identity reading
- c. ‘Selma_i kendi-ni_i /arkadaşını_i aldat-tı,
Selma_i self_i-3SG-ACC /friend-POSS-3SG-ACC deceive-PAST.3SG,
Aylin_k de <ø(n)u_i /arkadaşını_i aldat-tı.>
Aylin_k too <3SG-ACC_i/friend_i-POSS-3SG-ACC deceive-PAST.3SG>
‘Selma_i deceived herself_i/her_i friend, and Aylin_k deceived her_i/her_i friend, too.’
Strict identity reading

RNR examples whose pivots contain anaphors are also ambiguous between the sloppy and strict identity readings (Ha, 2006; 2007; 2008a; 2008b), both in English and Turkish. This is illustrated in (18)-(19).

(18) *Ambiguity in RNR*

a. Sue praised, but Mary blamed herself/her friend.

b. Sue_i praised ~~<herself_i/her_i friend>~~, but Mary_k blamed herself_k/her_k friend.

Sloppy identity reading

c. Sue_i praised ~~<her_k/her_k friend>~~, but Mary_k blamed herself_k/her_k friend.

Strict identity reading

(19) *Ambiguity in RNR in Turkish*

a. Hem Ecem hem İdil kendi-ni /arkadaşını aşağıla-dı.
 also Ecem also İdil self-3SG-ACC/friend-POSS-3SG-ACC insult-PAST.3SG
 ‘Both Ecem and İdil insulted herself/her friend.’

b. Hem Ecem_i <kendi-ni_i /arkadaşını_i>
 also Ecem_i <self_i-3SG-ACC /friend_i-POSS-3SG-ACC>
 hem İdil_k kendi-ni_k /arkadaşını_k aşağıla-dı.
 also İdil_k self_k-3SG-ACC/friend_k-POSS-3SG-ACC insult-PAST.3SG
 ‘Ecem_i insulted herself_i/her_i friend and İdil_k insulted herself_k/her_k friend.’

Sloppy identity reading

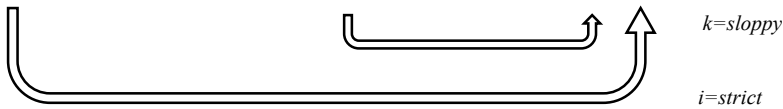
c. Hem Ecem_i <on-u_k /arkadaşını_k>
 also Ecem_i <3SG-ACC_k/friend_k-POSS-3SG-ACC>
 hem İdil_k kendi-ni_k /arkadaşını_k aşağıla-dı.
 also İdil_k self_k-3SG-ACC/friend_k-POSS-3SG-ACC insult-PAST.3SG
 ‘Ecem_i insulted her_k/her_k friend and İdil_k insulted herself_k/her_k friend.’

Strict identity reading

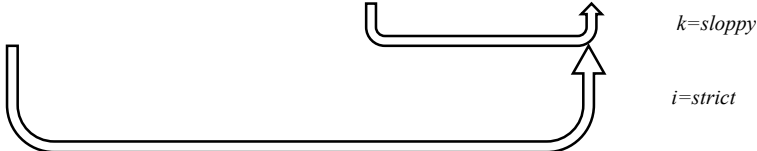
1.1. Direction of Anaphora

In all of the VPE examples in Turkish and in English above, I have *forward anaphora*. In these examples, the antecedent *precedes* the anaphor in both sloppy and strict readings because both the local subject and the long-distance subject precede the elided anaphor. For example, in (20)a), the elided DO, *himself*, and, in (20)b) the elided DO, *his friend* is preceded both by the local subject *Bill* and by the distant subject *John*. Example (21) shows the same for Turkish.

(20) VPE: Forward anaphora

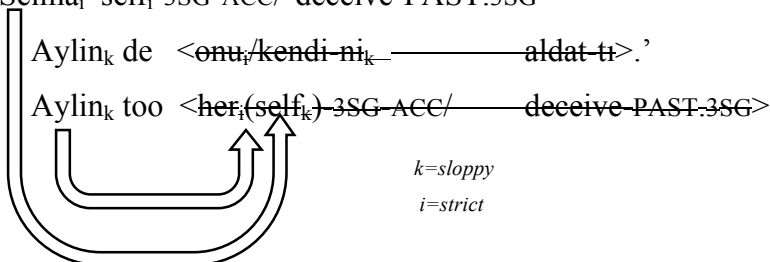
- a. John_i praised himself_i and Bill_k did ~~<praise him_i(self)_k>~~ too.
- 
- k=sloppy*
i=strict

Reflexive Construction

- b. John_i praised his_i friend and Bill_k did ~~<praise his_{k/i} friend>~~ too.
- 
- k=sloppy*
i=strict

Possessive Construction

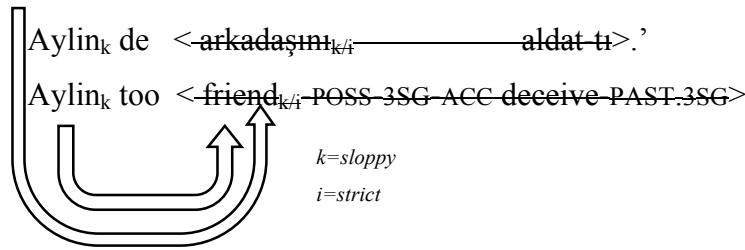
(21) VPE: Forward anaphora in Turkish

- a. Selma_i kendi-ni_i aldattı,
Selma_i self_i-3SG-ACC/ deceive-PAST.3SG
Aylin_k de ~~<onu/kendi-ni_k aldattı>.~~
Aylin_k too ~~<her_i(self_k)-3SG-ACC/ deceive-PAST.3SG>~~
- 
- k=sloppy*
i=strict

‘Selma deceived herself, and Aylin deceived her(self) too.’

Turkish Reflexive Construction

b. Selma_i arkadaşını_i aldattı,
 Selma_i friend_i-POSS-3SG-ACC deceive-PAST.3SG

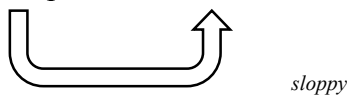


‘Selma deceived her friend, and Aylin deceived her friend too.’

Turkish Possessive Construction

Forward anaphora is also what I find in the *sloppy identity readings* in RNR because, in that case, the elided anaphor picks up reference from its local subject (in the first conjunct) while the pronounced anaphor picks up reference from the subject of the second conjunct, as shown in (22).

(22) John_i praised <himself_i> but Bill_k blamed himself_k. RNR - Forward anaphora





However, assuming that the anaphor is present at some level of representation in the RNR sentences, then the *strict identity reading* involves backward anaphora (i.e., cataphora). In the backward anaphora, the anaphor picks up reference from the antecedent that *follows* it. The example (23) in English shows that the elided pronoun, *him*, is followed by its antecedent, *Bill*.

(23) John_i praised <him_k>, but Bill_k blamed himself_k. RNR – Backward anaphora



This is also true of RNR in Turkish: backward anaphora is involved only in the strict identity reading, but not in the sloppy identity reading. The following examples (24) and (25) show this.

(24) ‘Hem Ecem_i < ~~kendi-ni_i~~ — ~~aşağıla-dı~~ >, hem İdil_k
also Ecem_i < self_i -3SG-ACC insult -PAST.3SG > also İdil_k
 *sloppy*
kendi-ni_k aşağıla-dı.’
self_k-3SG-ACC insult -PAST.3SG.
‘Ecem_i insulted İdil_k and İdil_k insulted herself_k.’ *Turkish - Sloppy identity reading*

(25) ‘Hem Ecem_i < ~~onu_k~~ — ~~aşağıla-dı~~ >, hem İdil_k
also Ecem_i < 3SG-ACC_k — insult -PAST.3SG >, also İdil_k
 *strict*
kendi-ni_k aşağıla-dı.’
self-3SG-ACC_k insult-PAST.3SG.
‘Ecem_i insulted İdil_k and İdil_k insulted herself_k.’ *Turkish - Strict identity reading*

1.2. Vehicle Change

In the strict reading in (26), I observe that the reflexive in the elided VP takes as its antecedent the subject of the first conjunct, *John*, rather than the subject of the second conjunct, *Bill*. In other words, the anaphor picks a long distant antecedent, which also does not c-command it. Therefore, if the elided VP is exactly the same as the non-elided one, and that means that it contains the reflexive *himself*, how this reading obtains must be complicated because *himself* as a reflexive must be locally bound and *John* does not locally bind it. Thus, in order for the *strict identity reading* to obtain with reflexive anaphors, either in VPE or in RNR, the deleted anaphor should be interpreted not as a reflexive, but as a pronoun. This is due to the Principle A of the Binding Theory (Chomsky, 1981), according to which a reflexive cannot be bound by an antecedent outside of its binding domain, which more or less corresponds to the minimal clause that contains the reflexive. Therefore, in order for the deleted reflexive to be co-referential with the non-local subject (*John* in 26a-b), it has to be interpreted as a personal pronoun and not as a reflexive pronoun (Radford 2009, p. 89). This is illustrated in (26)a) for VPE and in (26)b) for RNR.

(26)

a. John_i praised himself_i and Bill_k did <praise him_v/*himself_i> too. *VPE*

b. John_i praised <him_k/*himself_k> but Bill_k criticized himself_k. *RNR*

This process is explained by a mechanism called *Vehicle Change (VC)*, proposed by Fiengo and May (1994), by which a deleted non-pronoun expression may be interpreted as a pronoun for purposes of interpretation. In ellipsis contexts, an elided name (e.g., proper name) might shift into a “pronominal correlate” having the same index with the proper name (both the proper name and their pronominal correlate must bear the same reference).⁷ As a result, in VPE and RNR contexts, Principle C, Principle B and Principle A violations can be prevented. For example, in (27), I would expect a Principle A violation because the antecedent of the reflexive in the second conjunct is not within the binding domain of the reflexive, but since the sentence is grammatical, the reflexive must have been “converted” into a pronoun to avoid Principle A violation. Similarly, in (28) and (29), Principle C violation is expected if the elided copy and its antecedent are phonologically alike because in both cases, the elided R-expression would end up being bound, but it is prevented by shifting the proper name into a pronoun. Lastly, as seen in example (30), I observe that if the pronoun in the second conjunct was the same with the elided copy in the first conjunct, there would be a Principle B violation because a pronoun cannot be preceded by its antecedent within its local domain.

(27) Josh_i didn't vote for himself_i, but Mary did. (Fiengo and May 1994: 220)

(28) Mary loves John_i, and he_i thinks Sally does, too. (Fiengo and May 1994: 220)

(29) Mary heard that John_i SUBMITTED, but Sue said that Bill actually WROTE the article about John_i for the magazine. (Ha, 2007)

⁷ Fiengo and May (1994) also claim that pronouns and reflexives are not clearly different, believing that reflexives consists of a pronoun and plus *-self* which only has a syntactic function; therefore, *him* and *himself* are the same argument for reconstruction (as cited in Ha, 2007). Therefore, VC does not only reconstruct non-pronominals but also switches a reflexive into a pronoun inherently.

(30) John_i COULDN'T, so I nominated him_i.

(Ha, 2007)

From the point of view of processing, VC is presumably problematic. The VC phenomenon occurs within the process of the *strict* identity reading, which is argued to carry more computational load than *sloppy* identity reading (inter alia Guo et al., 1996; Reuland, 2001; Foley et al. 2003; Ying, 2005; Epoge, 2012; Park, 2016; Gandón-Chapela & Gallardo del Puerto, 2019). Moreover, VC requires an operation in which a shift of lexical category arises. Based on these considerations, if it is correct that VC involves a higher processing burden, I would expect that, construction internally, *strict identity reading* will be dispreferred with reflexives, as compared to possessive pronouns. For instance, I expect that the examples involving reflexive pronouns in (31) and (32) should be more readily given the sloppy identity reading in the (b) examples compared to the strict identity reading in the (c) examples because the strict identity reading requires turning a syntactic element (*himself*), into another expression (*him*), which is in turn expected to require more processing load.

(31) *VPE: Reflexive construction*

a. John praised himself and Bill did too.

b. John_i praised himself_i and Bill_k praised himself_k too. *Sloppy reading: no VC*

c. John_i praised himself_i and Bill_k praised him_i too. *Strict reading: VC*

(32) *RNR: Reflexive construction*

a. John praised but Bill blamed himself.

b. John_i praised himself_i but Bill_k blamed himself_k. *Sloppy reading: no VC*

c. John_i praised him_k but Bill_k blamed himself_k. *Strict reading: VC*

However, I expect no such preference for sentences like the one in (33) and (34), which contain a possessive pronoun in the ellipsis site, whose interpretation does not require VC either with the sloppy or with the strict identity reading.

(33) *VPE: Possessive construction*

- a. John praised his friend and Bill did too.
- b. John_i praised his_i friend and Bill_k praised his_k friend too. *Sloppy reading: no VC*
- c. John_i praised his_i friend and Bill_k praised his_i friend too. *Strict reading: no VC*

(34) *RNR: Possessive construction*

- a. John praised but Bill blamed his friend.
- b. John_i praised his_i friend but Bill_k blamed his_k friend. *Sloppy reading: no VC*
- c. John_i praised his_k friend but Bill_k blamed his_k friend. *Strict reading: no VC*

Likewise, I expect that the sloppy identity reading in Turkish examples with elided reflexives, given in (35)b) and (36)b), would be preferred compared to the strict identity reading, given in (35)c) and (36)c), which require VC, by interpreting *kendi* ('self') as *onu* ('him/her/it').

(35) *VPE: Reflexive construction in Turkish*

- a. Selma kendi -ni aldat -tı, Aylin de.
 Selma self.3SG-ACC deceive-PAST.3SG Aylin too.
 'Selma deceived herself and Aylin did too.'

- b. Selma_i kendi-ni_i aldat-ti, Aylin_k de *Sloppy reading: no VC*
 Selma_i self_i.3SG-ACC deceive-PAST.3SG Aylin_k too
 kendi-ni_k aldat-ti.
 self_k-3SG-ACC deceive-PAST.3SG
 ‘Selma_i deceived herself_i, and Aylin_k deceived herself_k too.’
- c. Selma_i kendi-ni_i aldat -ti, Aylin_k de *Strict reading: VC*
 Selma_i self_i -3SG-ACC deceive-PAST.3SG Aylin_k too
 o-nu_i aldat-ti.
 3SG-ACC_i deceive-PAST.3SG
 ‘Selma_i deceived herself_i, and Aylin_k deceived her_i too.’

(36) *RNR: Reflexive construction*

- a. Hem Selma hem Aylin kendi-ni aldat -ti.
 also Selma also Aylin self -3SG-ACC deceive-PAST.3SG
 ‘Both Selma and Aylin deceived herself’
- b. Hem Selma_i kendi-ni_i aldat-ti, *Sloppy reading: no VC*
 also Selma_i self_i -3SG-ACC deceive-PAST.3SG
 hem Aylin_k kendi-ni_k aldat -ti.
 also Aylin_k self_k -3SG-ACC deceive-PAST.3SG.
 ‘Selma_i deceived herself_i and Aylin_k deceived herself_k.’
- c. ‘Hem Selma_i o-nu_k aldat-ti, *Strict reading: VC*
 also Selma_i 3SG-ACC_k deceive-PAST.3SG
 hem Aylin_k kendi-ni_k aldat -ti.
 also Aylin_k self_k -3SG-ACC_k deceive- PAST.3SG.
 ‘Selma_i deceived her_k and Aylin_k deceived herself_k.’

The situation is somewhat different with possessive constructions. Recall from (13) above that the possessor which is co-referential with a local subject in Turkish can only be a possessive reflexive *kendi* ‘self’s’, but not a possessive pronoun *onun*

‘his/her’. Recall also that the most natural way to express the possession is to omit the possessive anaphor altogether. Thus, in Turkish possessive construction, I have an unpronounced possessive anaphor *kendi* ‘self’s’ in the non-elliptical conjunct (and therefore presumably also in the elliptical one).⁸ Therefore, contrary to what I expected in English, in Turkish I expected that in sentences like (37) and (38), the sloppy reading will be preferred to the strict reading since the latter requires VC and the former does not. In other words, the sloppy identity reading in (b) examples will be preferred with respect to the strict identity reading in (c) examples, just like with the reflexive pronouns.

(37) *VPE: Possessive construction in Turkish*

- a. Selma arkadaş-ı -nı aldat -tı, Aylin de.
 Selma friend_i -POSS.3SG-ACC deceive-PAST.3SG Aylin too.
 ‘Selma deceived her friend and Aylin did too.’

⁸ I tested whether the unpronounced pronoun in the first (non-elliptical) conjunct in our Turkish experimental items is interpreted as a possessive reflexive *kendi* ‘self’s’ or a possessive pronoun *onun* ‘his/her’. I did this by showing participants experimental items (e.g., *Selma arkadaşını aldattı, Aylin de* ‘Selma cheated on her friend and so did Aylin’) and asking them to answer one of the two questions:

- i. a. If Aylin cheated on her own friend, who did Selma cheat on?
 b. If Aylin cheated on Selma’s friend, who did Selma cheat on?

The answer to the question in (ia) revealed how the participants resolved the null anaphor in the non-elliptical conjunct under the sloppy identity reading, whereas the answer to the question in (ib) revealed how they resolved it under the strict identity reading.

I gave the participants three choices:

- a) her own (Selma’s) friend,
 b) Aylin’s friend,
 c) some other person’s friend.

No participant saw both questions in (i): one group only saw the question in (ia) and the other group only saw the question in (ib). Participants in both groups consistently chose the answer in a) *her own friend*, showing that they interpreted the possessive anaphor in the non-elliptical (first) conjunct as containing the possessive reflexive *kendi* ‘self’s’ regardless of how they resolved the ambiguity of the experimental item (i.e., whether they interpreted it as having a strict or a sloppy reading). (See Chapter 3 for a more details description of this experiment and its results.)

- b. Selma_i arkadaş-ı -n_i aldat -tı, *Sloppy reading: no VC*
 Selma_i friend_i -POSS.3SG-ACC deceive-PAST.3SG
 Aylin_k de <arkadaş-ı ————— n_k- aldat —tı>.’
 Aylin_k too <friend_k -POSS.3SG-ACC deceive -PAST.3SG>
 ‘Selma_i deceived her_i friend, and Aylin_k deceived her_k friend too.’

- c. Selma_i arkadaş-ı -n_i aldat -tı, *Strict reading: VC*
 Selma_i friend_i-POSS.3SG-ACC deceive-PAST.3SG
 Aylin_k de <arkadaş-ı ————— n_i- aldat —tı>.’
 Aylin_k too <friend_i -POSS.3SG-ACC deceive -PAST.3SG>
 ‘Selma_i deceived her_k friend, and Aylin_k deceived her_k friend too.’

(38) RNR: Possessive construction in Turkish

- a. Hem Selma hem Aylin arkadaş-ı -n_i aldat -tı.
 also Selma also Aylin friend -POSS.3SG-ACC deceive-PAST.3SG
 ‘Both Selma and Aylin deceived her friend.’

- b. Hem Selma_i <arkadaş-ı ————— n_i- aldat —tı>, *Sloppy reading: no VC*
 also Selma_i <friend_i -POSS.3SG-ACC deceive -PAST.3SG>
 hem Aylin_k arkadaş-ı -n_i aldat -tı.
 also Aylin_k friend_i -POSS.3SG-ACC deceive-PAST.3SG.
 ‘Both Selma_i deceived her friend_i and Aylin_k deceived her_k friend.’

- c. Hem Selma_i <arkadaş-ı ————— n_k- aldat —tı>, *Strict reading: VC*
 also Selma <friend_i -POSS.3SG-ACC deceive -PAST.3SG>,
 hem Aylin_k arkadaş-ı -n_k aldat -tı.’
 also Aylin_k friend -POSS.3SG-ACC deceive-PAST.3SG.
 ‘Both Selma_i deceived her friend_k and Aylin_k deceived her_k friend.’

1.3. Gender (Mis)Match

Although the main goal of this study is to investigate the impact of VC and the ellipsis/anaphora directionality on the anaphora interpretation, I also included the gender match or mismatch between the antecedent and the anaphor as a variable since the RNR literature suggests that the interpretation of the unpronounced anaphor in the first conjunct depends, among other things, on the phi-features of the antecedent. We, thus, wanted to ensure that any lower acceptance rates that I might find in RNR sentences were not due to this gender match/mismatch condition.

Literature (Ha, 2008; Chaves, 2014) suggests that a gender match between the antecedent and the anaphor is required for the sloppy identity reading to arise in RNR, but not in VPE. In other words, RNR is sensitive to the phi-features of the anaphor and the antecedent and does not allow the sloppy identity reading under gender mismatch conditions (Ha, 2008, p.78).⁹ This predicts that in gender mismatch conditions in English, when the anaphors in the two conjuncts differ in gender, speakers should prefer the *strict identity reading* in RNR (as opposed to the *sloppy identity reading*), while no such preference should obtain in VPE. In other words, in the RNR example in (39)a), the elided anaphor is expected to be interpreted as *her* (=Sue) rather than as *himself* (=John). On the other hand, in the VPE gender mismatch condition in (40), I do not expect the strict identity reading, given in (1)c), to be preferred to the sloppy identity reading, given in (1)b). I also expect that in English, it will be easier for speakers to access the strict identity reading in the gender mismatch condition compared to the gender match condition (in both VPE and RNR).

⁹ See Vehicle Change Section under RNR in Chapter 2 for further details.

In light of the claims discussed in section 2, the English examples of RNR that I test in this dissertation (e.g., *John praised but Bill blamed himself.*) cannot be given a VPE analysis because the verb survives the deletion in both conjuncts. Therefore, our English cases are all NP-RNR sentences, whose gender mismatch conditions are expected to obstruct the sloppy identity readings.

On the other hand, my Turkish RNR examples, where the VP/T' is elided, allow a VPE analysis. Therefore, such cases should allow gender mismatches in sloppy identity readings. However, as Turkish is a gender-neutral language, it does not display gender differences in its pronominal system.

(39) *RNR: Gender mismatch*

- a. John praised, but Sue blamed herself.
- b. John_i praised himself_i but Sue_k praised herself_k. *Sloppy identity reading*
- c. John_i praised her_k but Sue_k praised herself_k. *Strict identity reading*

(40) *VPE: Gender mismatch*

- a. John praised himself and Sue did too.
- b. John_i praised himself_i and Sue_k praised herself_k. *Sloppy identity reading*
- c. John_i praised himself_i and Sue_k praised him_k. *Strict identity reading*

However, given that Turkish has no grammatical gender distinction, no preference for the *strict identity reading* in the gender mismatch condition is expected in RNR. In Turkish, the form of the reflexive *kendi* ‘self’, does not change depending on the gender of the antecedent. Similarly, the possessive pronoun is *onun* ‘his/her/its’ regardless of the gender of the antecedent. Thus, due to the grammatically gender-neutral nature of Turkish, I do not expect to see any differences in the preference for strict/sloppy identity reading in the gender mismatch condition either in RNR, shown in (41), or in VPE, shown in (42).

(41) *RNR: Gender mismatch in Turkish*

- a. Hem Selma hem Ahmet kendi-ni aldat -tı.
also Selma also Ahmet self -3SG.ACC deceive-PAST.3SG
‘Both Selma and Ahmet deceived himself.’

- b. Hem Selma_i < ~~kendi-ni_i~~ ~~aldat -tı~~ >, *Sloppy identity reading*
 also Selma < self_i -3SG.ACC ~~deceive-PAST.3SG~~ >,
 hem Ahmet_k kendi-ni_k aldat -tı.’
 also Ahmet_k self_k -3SG.ACC deceive-PAST.3SG.
 ‘Selma_i deceived herself_i and Ahmet_k deceived himself_k.’

- c. ‘Hem Selma_i < ~~onu_k~~ ~~aldat -tı~~ >, *Strict identity reading*
 also Selma_i < 3SG.ACC_k ~~deceive-PAST.3SG~~ >,
 hem Ahmet_k kendi-ni_k aldat -tı.’
 also Ahmet_k self_k -3SG.ACC_k deceive-PAST.3SG.
 ‘Selma_i deceived him_k and Ahmet_k deceived himself_k.’

(42) *VPE: Gender mismatch in Turkish*

- a. Selma kendi-ni aldat -tı, Ahmet de.
 Selma self -3SG.ACC deceive-PAST.3SG Ahmet too.
 ‘Selma deceived herself and Ahmet did too.’

- b. Selma_i kendi-ni_i aldat -tı, *Sloppy identity reading*
 Selma_i self_i -3SG.ACC/ deceive-PAST.3SG
 Ahmet_k de < ~~kendi-ni_k~~ ~~aldat -tı~~ >.’
 Ahmet_k too < self_k -3SG.ACC/ deceive-PAST.3SG >
 ‘Selma_i deceived herself_i, and Ahmet_k deceived himself_k too.’

- c. Selma_i kendi-ni_i aldat -tı, *Strict identity reading*
 Selma_i self_i -3SG.ACC deceive-PAST.3SG
 Ahmet_k de < ~~o-nu_i~~ ~~aldat -tı~~ >.’
 Ahmet_k too < 3SG.ACC ~~deceive-PAST.3SG~~ >
 ‘Selma_i deceived herself_i, and Ahmet_k deceived her_i too.’

1.4. Interim Summary

The following tables, Table 1 and Table 2, summarize possible interpretations of anaphors in elliptical sentences in English.

Table 1. Mechanisms Involved the Interpretation of the Elided Anaphor in English VPE

| | | REFLEXIVE CONSTRUCTION | | POSSESSIVE CONSTRUCTION | |
|----------------|----------------|---|---|-------------------------|-----------------------|
| | | GENDER MATCH | GENDER MISMATCH | GENDER MATCH | GENDER MISMATCH |
| SLOPPY READING | IDENTITY | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ |
| | STRICT READING | Vehicle Change Forward anaphora ✓-dispreferred | Vehicle Change Forward anaphora ✓-dispreferred | Forward anaphora ✓ | Forward anaphora ✓ |

Table 2. Mechanisms Involved the Interpretation of the Elided Anaphor in English RNR

| | | REFLEXIVE CONSTRUCTION | | POSSESSIVE CONSTRUCTION | |
|-------------------------|----------------|--|--|-------------------------|------------------------|
| | | GENDER MATCH | GENDER MISMATCH | GENDER MATCH | GENDER MISMATCH |
| SLOPPY IDENTITY READING | IDENTITY | Forward anaphora ✓ | Forward anaphora ✗ | Forward anaphora ✓ | Forward anaphora ✗ |
| | STRICT READING | Vehicle Change Backward anaphora ✓-dispreferred | Vehicle Change Backward anaphora ✓-dispreferred | Backward anaphora ✓ | Backward anaphora ✓ |

Turkish differs due to the fact that in this language, possession can be expressed through a possessive reflexive or through a possessive pronoun. Thus, unlike in English, where VC is involved only in the strict identity reading of sentences that

involve reflexive pronouns both in VPE and in RNR, in Turkish VC is involved in the strict identity reading of both reflexive pronouns and possessive constructions. This is shown in Table 3 and Table 4.

Table 3. Mechanisms Involved the Interpretation of the Elided Anaphor in Turkish VPE

| | REFLEXIVE CONSTRUCTION | | POSSESSIVE CONSTRUCTION | |
|-------------------------|--|--|--|--|
| | GENDER MATCH | GENDER MISMATCH | GENDER MATCH | GENDER MISMATCH |
| SLOPPY IDENTITY READING | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ |
| STRICT IDENTITY READING | Vehicle Change Forward anaphora ✓-dispreferred | Vehicle Change Forward anaphora ✓-dispreferred | Vehicle Change Forward anaphora ✓-dispreferred | Vehicle Change Forward anaphora ✓-dispreferred |

Table 4. Mechanisms Involved the Interpretation of the Elided Anaphor in Turkish RNR

| | REFLEXIVE CONSTRUCTION | | POSSESSIVE CONSTRUCTION | |
|-------------------------|---|---|---|---|
| | GENDER MATCH | GENDER MISMATCH | GENDER MATCH | GENDER MISMATCH |
| SLOPPY IDENTITY READING | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ | Forward anaphora ✓ |
| STRICT IDENTITY READING | Vehicle Change Backward anaphora ✓-dispreferred | Vehicle Change Backward anaphora ✓-dispreferred | Vehicle Change Backward anaphora ✓-dispreferred | Vehicle Change Backward anaphora ✓-dispreferred |

I collected offline data from native speakers of English (a head-initial language) and Turkish (a head-final language) to see if they prefer sloppy or strict identity readings in VPE and RNR in their respective native languages. I also wanted to see whether the preference is affected by VC and gender (mis)match conditions. In addition, I collected

data from second language (L2) learners of English, whose native language is Turkish. Given that lexical differences between English and Turkish – the existence of a possessive reflexive in Turkish and its absence in English – give rise to different expectations in anaphor interpretation under ellipsis (in possessive constructions), I wanted to see how L2 speakers of English with native Turkish interpret the anaphors in elliptical sentences in English and whether their choices would be influenced by the possibilities of anaphor interpretation available in Turkish.

I also measured the time that it took the participants to reach the decision that a certain sentence has a certain reading (strict or sloppy) in order to see whether differences in interpretation are reflected in the length of the reaction times. However, it was impossible to directly compare the results obtained in different conditions (given that participants gave different answers to different items). Nevertheless, the data still allows us to show the trends of how the speakers process elided anaphors in these constructions. The results of the reaction time comparisons, thus, represent the trends in the processing of anaphors in VPE and RNR in English (i.e., in L1 and L2 English) and in Turkish (i.e., in L1 Turkish), and are reported in the dissertation as such.

The dissertation is organized as follows: In Chapter 2, I will explain the form and meaning of the VPE and its theoretical and experimental literature. Following the VPE construction, I will shortly touch upon the form and meaning of the RNR construction and I will display some theoretical background of RNR. In Chapter 3, I will cover the experiments that I conducted about the interpretation of elided anaphors in the abovementioned elliptical constructions in L1 English, L2 English and L1 Turkish. I will first give the methodological background information about these experiments, then provide the descriptive results and their discussions. Chapter 4 contains general discussion of the results and Chapter 5 is the conclusion.

CHAPTER 2

THEORETICAL BACKGROUND AND LITERATURE REVIEW

2.1. Verb Phrase Ellipsis (VPE)

2.1.1 Form and meaning

I start with the linguistic details of the Verb Phrase (VP) ellipsis (henceforth, VPE) construction. In VPE, there are two clauses in which the VP of the second clause is phonologically null, but interpreted as if it was overt. For instance, in the VP ellipsis examples in (43), there are two conjuncts and the first conjunct (the source conjunct) contains the antecedent for the missing VP in the second conjunct (the target conjunct) (Ong, 2014).

(43) Sue loves the book, and Mary does too.

The main characteristics of VPE can be listed as following (Gandón-Chapela & Gallardo del Puerto, 2019, p. 73):

- A. VPE contains a VP omission, as in (43) above, after some licensors allowing for the omission of the linguistic element, such as auxiliaries *do*, *be* and *have*.
- B. It can be formed in subordination contexts, as in (44) below.

(44) Sue loved the book, and I believe Mary did ~~love the book~~ too.

- C. It can apply across sentence boundaries as in (45) below.

(45)

- A. Did you call Mike last week to tell him that he was fired?
- B. Yes, I did ~~call Mike last week to tell him that he was fired~~. He got upset to hear that.

The meaning of the null constituent in *Sue loves the book, and Mary does too* can be completely recovered when there is no anaphora, so the meaning of this sentence would be *Sue loves the book, and Mary loves the book, too*. Namely, the meaning in the non-elliptical clause is carried over into the elliptical clause. If there is an anaphor in the elided part, as in (46), then the sentence may receive either the strict or the sloppy identity reading, as explicated before, depending on which element the anaphor takes as its antecedent.

(46) Sue praised herself, and Mary did too.

One of the most notable aspects of VPE that has been investigated concerns the interaction between ellipsis and the interpretation of anaphoric elements. In other words, it has been studied how speakers resolve ambiguities in VPE sentences that arise because of the availability of sloppy and strict interpretations due to anaphoric pronouns (Dahl, 1973; Dalrymple et al. 1991; Fiengo & May, 1994; Heim & Kratzer, 1998; Klein, 1987; Ong, 2014; Reinhart, 1983; Sag, 1976;, among others). One way in which the sentence *Sue praised herself and Mary did too* can be interpreted is through the local binding of the anaphor, which arises when the VP of the non-elliptical clause is copied into the ellipsis site. Assuming that the elided VP and its antecedent must be identical (Ong, 2014) the reading aroused by the local binding is the reading that the sentences would have if the VP of the second conjunct were not elided, as shown in (47)b).

(47)

- a. Sue praised herself, and Mary did too.

VPE

Allowing bound variable interpretation: leading to the sloppy identity reading

- b. Sue_i praised herself_i, and Mary_k praised herself_k. NO VPE
Bound variable interpretation

Since the non-elliptical VP contains a reflexive *herself*, when it is copied into the ellipsis site, the reflexive takes *Mary* as its antecedent and no problem occurs since *herself* is bound by the local antecedent as required by principle A of the Binding theory. The overt *herself* (in the first conjunct) is in turn bound by its local antecedent *Sue*, so the sloppy reading is not problematic from the point of view of the Binding Theory.

In the strict reading, the elided anaphor is interpreted as having the same antecedent as the anaphor in the overt VP. Thus, the interpretation of the elided VP in the *Sue praised herself, and Mary did too* example would be *Mary praised Sue*.

The strict identity reading involving a reflexive anaphor arises only if the VP in the second conjunct is elided. In sentences where the target conjunct contains a full overt VP (*Mary praised herself*), only the sloppy identity reading arises. This is because Principle A of the Binding Theory, which states that a reflexive must be bound in its local domain (Chomsky, 1981), eliminates the possibility of co-reference of the anaphor and the long-distance antecedent regardless of the coordinator or subordinator types that were used to connect the two conjuncts (Ong, 2014). In other words, the reflexive in (48)b), cannot be bound by the subject of the first conjunct.

(48)

- a. Sue praised herself, and Mary did too. VPE
Allowing co-referential interpretation: leading to strict identity reading

- b. #Sue_i praised herself_i, and Mary_k praised herself_i. NO VPE
No co-referential interpretation

2.1.2. Theoretical literature

2.1.2.1 Meanings of the unpronounced VP

2.1.2.1.1 Identity between the elided VP ellipsis and the antecedent

In ellipsis, some parts of the sentence remain unpronounced. The unpronounced elements may account for many different types of syntactic phrases. As for the size of the constituents and the syntactic category, it can be a verb or a noun or a verb phrase or a noun phrase as predicates, or a whole clause that does not include a single element (Liptak, 2015). For example, (49) involves an elided VP ellipsis.

(49) Sue praised Jane, and Mary did, too

There are still debates in the field about how the non-pronunciation of the elided VPE occurs (See Reich, 2012 for a revision of the literature). Over the last three decades, meanings of reflexives in VPE cases have been extensively researched from the theoretical perspective (Dalrymple, 2005; Dalrymple et al. 1991; Fiengo & May 1994; Johnson, 2001; Kitagawa, 1991; Murguia, 2004;).

Ellipsis *identity* is about how identical the deleted material must be to the antecedent of the previous discourse. In most of the ellipsis examples, the preceding discourse has an expression that serves as an antecedent to the ellipsis (Liptak, 2015). In example (50), the existence of a structurally and interpretively equivalent VP antecedent in the adjacent preceding discourse is required for VPE *praise Jane*.

(50) Sue praised Jane, and Mary did ~~praise Jane~~, too

Liptak (2015) argued that it appears obvious to suggest that the deleted material and its antecedent are similar in certain ways: both include the same VP such as *praise Jane*. This resemblance is definitely a prerequisite for the successful ellipsis application. All in all, ellipsis is not permitted unless there is such a similarity: for instance, VP ellipsis is not permitted in 0 if that VP is *admire Jane*. However, in these contexts, utterances of such VPs would not be ill-formed

- (51) Sue praised Jane, and Mary did ~~praise Jane~~, too
Sue praised Jane, and Mary did ~~admire Jane~~, too

It is not obvious how to characterize the type and degree of resemblance that must exist between the deleted material and its antecedent in order for the ellipsis to be grammatical. The search for identity in structural approaches, outlines to determining if identity is sought in the interpretational or (morpho)syntactic part of the language (containing information and discourse representation), or both.

One of the basic questions that is commonly picked up in the discussions of VPE is the degree of semantic or syntactic identity between the elided part and its antecedent. The null segment of an ellipsis sentence carries its antecedent's meaning because the elided part is somehow completely recovered thanks to the identity condition/Parallelism; that is, the null part in the ellipstical sentence and its antecedent should be similar.

There are scholars who believe that the identity must hold at the semantic level, i.e., the elided constituent and its antecedent must be *semantically* alike and the meaning of the antecedent gets available in linguistics discourse or wider discourse (Dalrymple et al. 1991; Hardt, 1992; Hartman, 2011; Ginzburg & Sag, 2000; Merchant, 2001; Messick & Thoms 2016, Miller & Pullum, 2013; among others). In the semantic approach, it is claimed that the lexical items' semantic features determine whether the strict identity reading arises in VPE or not (Dalrymple et al., 1991). To illustrate, internal semantic properties of the verb *defend*, as in (52), allow the strict identity reading, while semantic properties of *lock*, as in (53), inherently do not allow it (Ying 2005, p. 552).

- (52) Bill defended himself against the accusation, and John did, too.

- (53) John locked himself in the bathroom when bad news arrived, but Bill would never do so.

(Ying 2005, p. 552)

On the other hand, there are scholars who believe that the strict reading is not made available by the verbs' semantic properties (Hestvik, 1995, among others). For instance, the verb *lock* can get strict identity reading in certain contexts, as in (54). The elided VP can be interpreted as *before Jane could lock Mary in the room*. The phonetic string *could* is analyzed as equivalent to an abstract mental representation which is the copy of the VP in the first clause through *reconstruction* process, as in *could lock herself/her*.

(54) Mary locked herself in the room before Jane could.

In the literature, there are several reconstruction theories regarding ellipsis (inter alia Fiengo & May, 1994; Lasnik, 1995; Merchant, 2008, 2013; Sag, 1976; Williams, 1977). They claim that the identity should hold at the syntactic level; in that the elided constituent must be syntactically identical with its antecedent (Chomsky 1964, 1965; Chung et al. 1995; Fox & Lasnik, 2003; Lasnik, 1995; Merchant, 2008, 2013; Sag 1976; Williams, 1977; among others). The syntactic account holds that in VPE, a syntactically consistent antecedent VP is required in the linguistic context. The elided clause is interpreted although the antecedent VP appears only covertly in the elided clause (e.g., Fiengo & May, 1994; Sag, 1976; Wasow, 1972; Williams, 1977). This account anticipates that wider discourse related information should not be recognized.

To summarize, syntactic identity theories hold that identity is determined using syntactic representations, containing LF-representations generated from surface syntactic structure. In the examples such as (50) and (51), this suggests that the elided VP is the same with the antecedent's VP formally: the verb and its argument are the identical and share the same structural relationship. On the other hand, semantic theories of identity, claim that the unpronounced material has a meaning comparable to the antecedent material, which requires that the antecedent and deleted content be the same regarding truth-conditional. However, if identity is syntactic, deleted content and the antecedent should be located in the same syntactic contexts with the same syntactic composition. as long as the formal distinctions do not transfer into semantic distinctions making the meaning dissimilar, syntactic composition/ syntactic contexts

may be considered different, if identity is characterized in terms of meaning (Liptak, 2015).

2.1.2.2 The procedure of how the missing VP gets unpronounced

The theoretical interest surrounding the ellipsis has many different facets. One aspect concerns the question of how missing documents are represented in the grammar. In the unstructured approach, the ellipsis " site ", i.e. the missing phrasal verb can be in (1), with no internal structure, or correspond to an anaphor element with similar resolution to other anaphors (see e.g. Culicover & Jackendoff, 2005; Dalrymple et al., 1991; Hardt, 1993; Ginzburg & Sag, 2000). On the other hand, the structural approaches assume that some kind of non-atomic structure is present in the position of the ellipse. In some stories, this structure is present in the syntax, but not pronounced (Lasnik, 2001; Merchant, 2001; Ross, 1969; among others), while in others the website of the ellipsis is syntactically empty but LF- filled with material copied/reused from elsewhere in the discourse (Chung et al., 1995, 2011; Fiengo & May 1994; Williams, 1977; among others).

Two main theories of grammar in the literature exist to explain the recovery of the meaning of ellipsis; LF-copying and PF-deletion. There are scholars who believe that in the surface structure in syntax, the non-pronounced anaphoric element in the ellipsis conjunct is not syntactically represented (Culicover & Jackendoff, 2005; Ginzburg & Sag 2000), but is later provided at LF by copying the antecedent into the elliptical conjunct. This is called LF copying (Beavers & Sag, 2004; Chung et al., 1995; Dalrymple, 1991; Fiengo & May, 1994; Kitagawa, 1991; Wasow, 1972; Wilder 1997; Williams, 1977; among others). Another approach states that the null element in the elliptical clause is replaced by an unpronounced *proform* that is interpreted exactly the same with the overt VP by means of semantics and discourse (inter alia Chao, 1988; Elbourne, 2008; Hardt 1993, 1999; Hoji, 1998, 2003; Kehler, 2000; Lobeck, 1995, 1999; Schachter, 1977; Wasow, 1972; Webber, 1978). Thus, in the LF copying approach to VPE, ellipsis sites are resolved by replacing them with their antecedent in the syntax (Kobele, 2015), i.e. that the antecedent VP is literally copied into the missingVP site at LF – there is no co-indexing, but literal copying. Whereas in the

proform approach, antecedents are semantic objects, and ellipsis sites are resolved by replacing them with their antecedent in the semantics (Kobebe, 2015); i.e. that the null proform in the unpronounced VP site is interpreted like the antecedent VP through a procedure that is like anaphor interpretation (i.e., co-indexing).

In the proform approach, the same type of processing with the expressions such as pronouns is predicted to take place in the comprehension of the ellipsis site. The co-indexing of an anaphor and the antecedent effectively makes the anaphor a copy of the antecedent, so the sentence *John_i loves himself_i*, as in (55), means *John_i loves John_i* due to the indexation.

(55) John_i loves himself_i.

Null VPs in VPE function the same way the anaphors do. The null VP refers back to the co-indexed entity, followed by the copying of the co-indexed entity into the site of the anaphor. Therefore, this gives the recovered meaning, as in (56)b).

(56)

- a. John_i will [_{VP} eat an orange]_k and Bill will [_{VP} Θ]_k too. *Spellout*
- b. John_i will [_{VP} eat an orange]_k and Bill will [_{VP} eat an orange]_k too. *LF*

In short, under this theory, ellipsis is a null pro-form that exists in the syntax but does not have an internal structure. The meaning is recovered the same way reflexives and pronouns resolve their meaning, i.e., by copying the content of the antecedent in the site of the empty VP.

On the other hand, there are also scholars who believe that the missing verb phrase is fully present syntactically, but is non-pronounced in phonology. This is called the PF deletion theory. In other words, the VPE sentences are processed the same way as their non-elided corresponding sentences, using the same procedures; however, the syntactic representation of the elided constituents in the VPE sentences is phonologically null (inter alia Hankamer, 1979; Lasnik, 2001; Liptak & van Craenenbroeck, 2008; Merchant, 2001, 2008; Ross, 1967, 1969; Rouveret, 2012; Sag,

1976). Basically, in the PF-deletion theory, the two VPs are present in both clauses with full structure throughout the derivation, but the phonology of the second clause's VP is deleted before Spell Out, so the VP in the elided site remains unpronounced. The structure of the sentence in (57)a) gets phonologically reduced to (57)b) because of the economy of speech. The missing VP is co-indexed with the existing VP in the first conjunct not to repeat the same VP again. Before spell-out and at LF, the missing material possesses internal structure, it is only unpronounced.

(57)

a. John_i will [_{VP} eat an orange]_k and Bill will [_{VP} eat an orange]_k too. *LF*

b. John_i will [_{VP} eat an orange]_k and Bill will [~~_{VP} eat an orange~~]_k too. *PF*

In the case of Turkish ellipsis, Kornfilt (2019) claimed that in the examples that look like gapping, identical verb ellipsis is a PF-phenomenon, since it may influence verbs which are not necessarily involved in directly coordinated conjuncts

As long as such verbs are adjacent to verbs (in a phrase-structurally higher level) which are contained in such direct coordination, and as long as those architecturally higher verbs also undergo ellipsis. Since adjacency is not a syntactic condition on operations (cf. Chomsky, 1995), but is a legitimate PF-condition, I conclude that identical verb ellipsis is a PF-phenomenon, and that it works on strings of identical items, thus explaining the effects of string adjacency (Kornfilt 2019, p.43).

(58) [[Ali [Oya -nın karides -i pişir -diğ -in -i] duy -du],
 Ali Oya -GEN shrimp -ACC cook -FNOM -3SG -ACC hear-PAST.3SG
 [Zeynep de [Mehmed-in ıstakoz -u ____] ____]].
 Zeynep and Mehmet -GEN lobster -ACC
 ‘Ali heard that Oya cooked the shrimp and Zeynep (heard) that Mehmet
 (cooked) the lobster.’

All of the abovementioned approaches try to shed light onto the nature of the procedure of how the elided segment in ellipsis gets unpronounced and acquires its meaning. All the approaches have their strong and weak points in terms of (dis-)allowing for certain

linguistic forms, usages and interpretations, as pointed out by Ying (2005). Importantly, none of these theoretical approaches can predict how the speakers might resolve the ambiguity of strict-sloppy identity.

In this dissertation, I remain agnostic as to the questions of whether the identity between the elided VP and its antecedent must be syntactic or semantic, as well as to the question of how the missing VP ends up unpronounced. In my study, the elided VP and its antecedent are syntactically identical in that both involve the verb and an anaphor. I do not commit to either of the two identity conditions (syntactic or semantic) because the kind of identity that holds between the elided VP and its antecedent seems not to make a difference in my study, which investigates whether speakers' preferences for strict or sloppy identity readings are modulated by factors such as the directionality of anaphora and/or the process of Vehicle Change. I will assume, for concreteness, the LF copying account of VPE, although nothing hinges on this choice (the interpretation of the elided VPs would be identical even I assumed the PF deletion approach). I do assume, however, that the unpronounced part of the elliptical conjunct is interpreted as if it contained the VP that is in some relevant sense identical to the pronounced VP (modulo Vehicle Change).¹⁰

2.1.3. Vehicle Change

Fiengo and May (1994) proposed the mechanism of Vehicle Change (VC) to account for the possibility of strict readings in sentences where the antecedent VP contains an element (a referential expression or a reflexive) that refers to an entity to which it would not be able to refer if the VP was pronounced.

Fiengo and May (1994) proposed that under certain conditions, reflexives might be copied as pronouns from one clause to the other one (see chapter 1 for further explanation). Thus, the strict reading becomes available by re-forming the reflexive as pronoun, which does not get locally bound in the ellipsis site, as required by Principle

¹⁰ In fact, for the examples that I used in the experiments in this thesis, it is not crucial for my purposes what underlying syntactic analysis (of all the analyses that the strings are compatible with) is correct as long as the ambiguity between the strict and sloppy identity reading obtains. Thus, my aim in this dissertation is not to pick between the correct syntactic analyses of VPE and RNR, but to investigate how the ambiguity, which exists regardless of which analysis is correct, is resolved.

B of Binding Theory (Chomsky, 1981). Thus, in (59), the reflexive *himself* from the antecedent VP is copied into the ellipsis site as the pronoun *him*, to avoid a Principle A violation, and in (60), the R-expression *John* is copied into the ellipsis site as the pronoun *him*, to avoid a Principle C violation.

(59) John voted for himself, and Mary did too (vote for him/*himself).

(60) Sue voted for John_i, and he_i thinks Bill did too (vote for him_i/*John_i).

The impact that VC may have on the interpretation preferences of speakers is what this thesis is investigating. Thus, one of the questions that this study is trying to answer is how VC affects interpretative possibilities of elided anaphors and speakers' preferences in that interpretation.

2.1.4. Review of experimental literature

For VPE constructions, there is an extensive body of research stating that the sloppy identity reading is by and large preferred by most adult speakers in offline interpretation tasks (Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Koornef et al., 2011; Ying, 2005; see Frazier & Clifton, 2000 for an overview). Online studies of anaphor interpretation in VPE partially confirm these results (Frazier & Clifton, 2000; Shaphiro & Hestvik, 1995; Shaphiro et al., 2003). Thus, while local subjects are preferred for possessive pronouns in elided VPs (Clifton et al., 1999), yielding the sloppy identity reading, and reflexives in elided VPs are mostly expected to be bound (Frazier & Clifton, 2000), again yielding the sloppy identity reading, non-local antecedents are preferred for deleted pronouns (e.g. *she*, *he*, *him*) (Clifton & Ferreira, 1987; Shaphiro & Hestvik, 1995, and many others).

Shaphiro and Hestvik (1995) examined strict identity readings of pronominals in VPE, by implementing a cross-modal priming study. They investigated the interpretations of reflexives in coordinated sentences (e.g., *The policeman defended himself and the fireman did [e] too, according to someone who was there*) and subordinated VPE sentences (e.g., *The policeman defended himself because the fireman did [e]*,

according to someone who was there). The participants listened to pre-recorded VPE sentences and were presented with written probes at different positions in the sentence. These positions were: a position that precedes the VPE site (marked as [1] in (61) and (62)), a position within the VPE ellipsis site (marked as [2] in (61) and (62)), and a position that follows the VPE site (marked as [3] in (61) and (62)). The probes were either related to the long-distance antecedent *the policemen* (e.g., *robber*) or they were unrelated control probes (e.g., *roller* or nonce words). Participants were asked to decide whether the written probe is a word or not and their reaction times to the probes were recorded.

(61) The policeman defended himself and the fire[1]man did [2][e] too, according to someone [3] who was there.

(62) The policeman defended himself because the fire[1]man did [2] [e], according to someone [3] who was there.

In coordinated sentences, the probes which were semantically related to the first clause subject (i.e., *the policeman*), such as *robber*, induced faster reaction times in position [2] (the VPE site), but not in position [1], which preceded the VPE site. This was interpreted by the authors as a consequence of an automatic re-access of the non-local antecedent (*the policeman*), which yielded the strict identity reading. However, in subordinated VPE, related probes induced faster reaction times relative to non-related probes only in position [3], i.e., after the VPE site. The authors argued that the strict reading was activated right at the edge of the elided site in the coordinated sentences as part of automatic processing of strict identity. On the other hand, they argued that the later activation of the strict identity reading in the subordinated clauses might be due to the processing of the causal relationship between the two clauses since additional semantic factor is involved in these subordinate structures. All in all, the study revealed that, although it was difficult to detect strict identity preference or interpretation in offline tasks, there was an indication that it was available in online processing of coordinate VPE sentences. The authors also briefly mentioned the fact that strict identity reading in VPE with reflexives involves VC mechanism, which makes the strict identity reading difficult to process (p. 525, 527).

Using a cross-modal lexical priming task, Shaphiro et al. (2003) investigated the VPE sentences involving inherent reflexives (e.g., *The policeman perjured himself, and the fireman did too. . .*) and inalienably possessive verbs (e.g., *The policeman winked his eye, and the fireman did too.*), which mainly restrict the ultimate interpretation of anaphors. The findings revealed that the strict identity reading was activated even with the verbs whose properties did not allow for such a meaning, such as *perjure oneself*. Sloppy identity reading was also activated. In general, the results of the reflexive and possessive interpretation in VPE revealed that both sloppy and strict identity readings were momentarily available at the initial stages of processing. However, sloppy identity occurred more frequently than the strict identity. Overall, the authors claimed that although the verb's lexical properties and probabilistic information had an effect on the interpretation, these could be ignored in the initial online analysis of a sentence. Ong & Brasoveanu (2014) also showed that semantic properties of the verb within VPE may affect the interpretation of the anaphor. Based on Ong (2013)'s thesis, the authors investigated the role of discourse relations in the reflexive interpretation in VPE; i.e., they examined whether the strict-sloppy interpretation of VPE sentences with reflexives were syntax or discourse related. The authors made use of different types of implicit causality (IC) verbs, within two groups: IC1 (e.g., *amaze, amuse, annoy*) in which the subject started an action causing emotional condition in the object, and IC2 (e.g., *assist, blame, comfort*), where the opposite happened with different connectors (e.g., *and, but, therefore*). The authors controlled for different discourse types. They also investigated the discourse structure by controlling the discourse connectives which are used in the early or late positions of sentential negation. Particularly, they compared *and* and *therefore* with *but* and *nevertheless*. The effect of sentential negation was examined by using *didn't* and *did* in different positions in the experimental items. The authors' findings revealed that, across multiple discourse connective conditions, implicit causality of a verb determined the strength of the preference for the sloppy identity reading; in particular, that implicit causality verbs that are *subject-oriented* (IC1 verbs), as in (63), led to less strict identity readings than *object-oriented* causality verbs, (IC2 verbs), as in (64).

(63) Judy humiliated herself at the company picnic and Sara did too.

(64) Sally comforted herself at the family funeral and Clara did too. (Ong, 2013: 49)

They also found that although sloppy identity reading had an overall higher preference rate, the discourse connectives *and* or *but*, in (65)-(69) had lower preference rates for the strict identity reading than *therefore* and *nevertheless*, shown in (70)- (73). The results also showed that the position of sentential negation played a significant role in the interpretation of the reflexive anaphora in VPE constructions, in particular that *late negation*, as in (67), (69), (71), (73) had a lower probability of strict reading than *early negation*, as in (66), (68), (70), (72).

(65) Ann voted for herself and Mary did too. (Ong & Brasoveanu, 2014: 257)

(66) John didn't blame himself and Bill did. *And-Early negation*

(67) John blamed himself and Bill didn't. *And-Late negation*

(68) John didn't blame himself but Bill did. *But-Early negation*

(69) John blamed himself but Bill didn't. *But-Late negation*

(70) John didn't blame himself but nevertheless Bill did. *Nevertheless-Early negation*

(71) John blamed himself but nevertheless Bill didn't. *Nevertheless-Late negation*

(72) John didn't blame himself and therefore Bill did. *Therefore-Early negation*

(73) John blamed himself and therefore Bill didn't. *Therefore-Late negation*

(Ong & Brasoveanu, 2014: 264)

Storbeck & Kaiser (2018) investigated the interpretation of possessive pronouns in VPE. The authors studied the effect of possession type: inalienable, ownership, animate, kinship (illustrated in (74)-(77)) on the interpretation of the possessive

pronoun in adult L1 speakers of English in VPE. The findings showed that that *animate* possessions, as in (76), led to more strict identity readings (co-referential) than inanimate possessions, as in (74) and (75); i.e. that they found more bound variables (sloppy identity reading) in the inanimate possessions than the animate possessions. They also found that *kinship* possessions such as *her son* displayed more strict readings than *animate relational* possessions such as *her boss*.

(74) Inalienable possession: Helen chabbed her nose, and Amanda did, too.

(75) Ownership possession: Helen chabbed her jacket, and Amanda did, too.

(76) Animate Relational possession: Helen chabbed her boss, and Amanda did, too.

(77) Kinship possession: Helen chabbed her son, and Amanda did, too.

Storbeck & Kaiser (2018, p.5)

Reuland (2001) suggested that the preference for sloppy identity reading compared to strict identity reading might be explained by the economy of the interpretation process. In his *Primitives of Binding Framework* (Reuland, 2001), Reuland proposed a hierarchy regarding the assignment of pronominal reference, in which the discourse level operations (the co-reference operation, yielding strict identity reading) require more computational weight than the semantic level operations (the binding operation, yielding sloppy identity reading).

The reason behind the preference for the sloppy identity reading might involve other factors, as well. For example, the tendency to prefer the sloppy or strict reading might be influenced by the semantic property of individual verbs (Dalrymple et al., 1991), and also relations with the clauses such as discourse coherence relations (parallel) or cause-effect relations (Frazier et al., 1984; Frazier & Clifton, 2006; Kehler, 1993; 1995; 2000; 2002). In other words, in parallel sentences, sloppy identity reading is preferred more, while in cause-effect sentences, the two might be equally preferred or the strict identity reading might overrule the sloppy identity reading. Frazier & Clifton (2006) proposed that beyond the parallelism, the existence of pre-suppositional words

such as 'too' could also affect the reading and acceptability of elliptical sentences; i.e., that it also leads to the sloppy identity reading.

Studies in the literature mostly demonstrate that strict identity reading is reasonably difficult to produce in offline interpretation tasks for VPE constructions with reflexive anaphors (e.g., Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Koornneef et al., 2012; Ying, 2005; see Frazier and Clifton 2000 for an overview), while the online processing of such constructions revealed that strict identity reading is available at least at the syntax level (e.g., Shaphiro & Hestvik, 1995; Shaphiro et al., 2003). Although similar results are observed for the possessive pronouns as well, there are some studies showing that strict identity reading is generated with possessive pronouns under certain discourse status even in offline tasks (e.g., Storbeck & Kaiser, 2018). This might be explained with the "processing reality" (i.e., processing load) (Shaphiro & Hestvik, 1995, p. 525) of the VC concept, which involves reconstruction of the anaphor from the non-elided clause and change of this anaphor from a reflexive to a pronoun. In other words, since more computations are required in VC, this mechanism might cause more processing cost and make the strict identity reading less preferred.

2.1.5. VPE and reflexive anaphora research in second language acquisition

As for the second language (L2) acquisition, VPE and its interaction with reflexive anaphors based on Relevance Theory¹¹ (Sperber & Wilson, 1986, 1995) have been

¹¹The definition of "relevance" is that it is a universal tendency of human perceptual processes to expand relevance, namely, to automatically select potentially relevant material. Cognition of humans is equipped towards increasing relevance (Wilson & Sperber, 2004, p.610), it is the basis for the First, or Cognitive Principle of Relevance.

As a potential feature, "relevance" can be found not only in utterances but also memories, thoughts, inference assertions, and other observable occurrences (Wilson and Sperber 2004, p.608). According to the Relevance Theory, every internal representation or external stimuli providing input to cognitive processes may be admissible to a person at some time. Relevance expectations are increased by utterances, since the search for relevance is a human cognition's fundamental element that communicators may accomplish. According to RT, an input becomes relevant if its processing produces good cognitive consequences, namely, "a worthwhile difference to the individual's representation of the world—a true conclusion, for example" (Wilson & Sperber, 2004, p.608).

It should be emphasized, however, that input becomes relevant not only because of good cognitive outcomes, but also because of how simple or difficult it is to extract such cognitive effects, i.e., the required effort of processing. As Sperber and Wilson (2008, p.89) pointed out, there are two levels of significance:

i. The higher the cognitive results from processing an input, the more relevant it is.

investigated by some researchers (e.g. Epoge 2012; Gandón-Chapela & Gallardo del Puerto, 2019; Ying 2005, among others). The participants of these studies were L2 learners of English, whose L1 were: Spanish (Gandón-Chapela & Gallardo del Puerto, 2019), Chinese (Ying 2005) and Cameron English (Epoge, 2012), and L1 English speakers as the control group (except Epoge, 2012). All of these authors investigated the interpretation of VPE sentences with reflexive anaphora in different contextual conditions such as bare, as in (78), biased (referential), as in (79), and un-biased (non-referential) context, as in (80) (Epoge 2012; Gandón-Chapela & Gallardo del Puerto, 2019; Ying 2005).

(78) John defended himself and Bill did too.

(79) John defended himself and Bill did too. Bill was a good friend of John.

(80) John defended himself and Bill did too. Bill went to the restaurant afterwards.

(Gandón-Chapela & Gallardo del Puerto, 2019, p. 79)

These studies found that L2 learners of English preferred sloppy identity reading as the interpretation of reflexive anaphor in VPE constructions in isolated sentences. On the other hand, when the items were biased towards the strict identity reading within a brief discourse or when there were referential contextual cues towards the strict identity readings (e.g. Ying, 2005), they tended to display the strict identity interpretation.

Ying's (2005) experiment 1, in which the sentences in bare context were tested, indicated that the sloppy identity was preferred because of minimal processing cost, while the strict identity was not preferred because it was difficult. The reasons behind the processing cost of the strict identity reading were stated as: firstly, the reflexive was shifted into a pronoun and that reading was not the immediate reading; secondly, the distance between the reflexive and its higher antecedent was greater than the distance between the reflexive and its lower antecedent; and lastly, the reflexive's binding relationship in the elided site with its higher subject in the main clause was

ii. The less processing weight required to produce these effects, the greater the relevance.

not “within its single bounding node” (Ying, 2005, p. 563). However, in the referential contexts, biasing the strict identity reading, the strict identity reading was preferred more than the sloppy identity reading. In the non-referential context, although the difference between the strict and sloppy identity reading was not large, sloppy identity reading was preferred more by the native speakers and the advanced learner group. The lower proficiency group displayed almost the same preference for both readings. The findings of Ying (2005), thus, revealed that L2 speakers exhibited similar behaviors with the native speakers of English in terms of preference for the sloppy identity reading in bare contexts and preference for the strict identity reading in referential contexts. However, in terms of the degree of these preferences, and in terms of the preference tendency for the non-referential contexts, they showed different preference results i.e., the higher the proficiency level, the more similar behaviors with the native speakers were observed.

Gandón-Chapela & Gallardo del Puerto (2019) found that the preference for the sloppy interpretation was higher in native speakers of English than in L2 speakers in bare contexts, as in (78), and it was even higher in non-referential contexts, as in (80), in which the non-biasing context might reinforce their sloppy interpretation, while in referential contexts, as in (79), L2 speakers had a higher preference for sloppy reading than L1 speakers. Therefore, they argued that the interpretation preferences for L1 speakers were more marked than for L2 learners. This implies that the native speakers saw the apparent stimuli accessible in the given sentences as more ideally relevant. Namely, L1 speakers might have had to make stronger conclusions to fulfill the assumption of relevance. Also, they suggested that L2 speakers might get distracted by contextual cues, which might be the explanation behind the observation that L2 speakers preferred the sloppy identity reading less than native speakers of English in the non-referential contexts. They claimed that the contextual impacts in addition to the processing efforts such as the minimal processing cost which were proposed by the Relevance Theory (Sperber & Wilson, 1986, 1995) might force these behaviors (Ying 2005, Gandón-Chapela & Gallardo del Puerto, 2019). Gandón-Chapela & Gallardo del Puerto (2019) stated that such differences between the L1 and L2 English speakers in their findings displayed that computational load was caused by the syntax-pragmatics interface.

Epoge (2012) found that Cameron speakers of English tended to prefer sloppy identity reading when there was no (biasing) context and they preferred strict identity reading more when there was a referential context favoring the strict identity reading. Moreover, these trends increased as the proficiency levels of the L2 speakers of English increased. However, there were still sloppy identity reading interpretations despite the strict identity reading biasing, which reveals a general favor for the sloppy identity reading in the L2 speakers of English. The preference for the sloppy identity reading in the contexts without any biases was argued to be due to the minimal processing effort, as proposed by the Relevance Theory, while behaving towards the provided context, such as accessing the strict identity reading in biased contexts, was a result of contextual and cognitive factors (Epoge, 2012; Ying, 2005).

2.2. Right Node Raising (RNR)

RNR is a phenomenon that involves two (or more) conjuncts, as in (81), such that there is a missing element in the first conjunct and the identical element at the right edge of the second conjunct is construed with both conjuncts (Hartmann, 2000). For example, in (81), the object *the car*, called *the pivot*, in the second conjunct is interpreted in both conjuncts.

(81) Olivia bought and Evelyn sold the car.

RNR has been studied from the theoretical perspective for over fifty years. Many discussions exist and various analyses are proposed for the underlying structure of RNR construction. Nowadays, the phenomenon is analyzed in three different ways: Across-the-Board (ATB) movement of the pivot from both conjuncts, shown in (82), (e.g., Maling, 1972; Postal, 1974; Ross, 1967; Sabbagh, 2007, 2014, among others), (backward) deletion/gapping in the first conjunct, shown in (83) (e.g., Bošković, 1996; Hartmann, 2000; Wexler & Culicover, 1980; Wilder, 1997; among others), and the multi-domination/shared structure analysis, as in (84) (e.g., Goodall, 1987; Moltmann, 1992; Phillips, 1996). In this PhD thesis, I will be concerned with which of these three analyses might be correct only insofar as the interpretation of the construction with

anaphors provides support to one (or more) of them. In the absence of such evidence, I will remain agnostic to the correct representation of RNR.

(82) *John loves [e], and Mary hates [e] syntax.*

ATB-MOVEMENT ANALYSIS

(Sugawa, 2011, p.44)



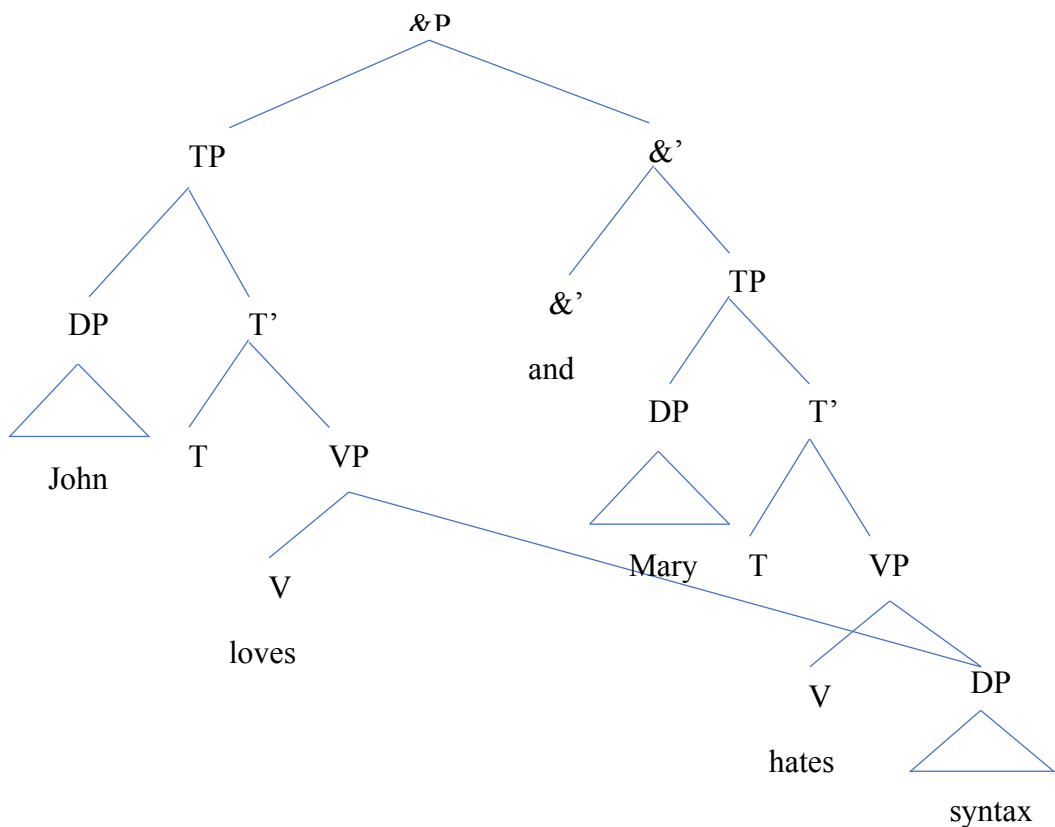
(83) *John loves [syntax] and Mary hates syntax.*

DELETION ANALYSIS

(Sugawa, 2011, p.50)

(84)

MULTIDOMINANCE ANALYSIS



(Sugawa, 2011, p.47)

RNR sentences have several unique properties.

- The same part of each conjunct corresponds to the right periphery of the second conjunct.

- The shared parts do not have to be a constituent. For instance, in (85), the object DP *a large amount of money* and the VP adjunct PP *from the bank* do not form a constituent; however, RNR is licensed.

(85) I borrowed [~~a large amount of money~~] [~~from the bank~~], and my sisters stole a large amount of money from the Chase Manhattan Bank. (Abbot, 1976, p. 639).

- RNR can also involve expressions below the word level as in (86).

(86) This analysis suffers from both UNDER-generation and OVER-generation.

(Hartmann, 2000, p. 57)

- There must be, although not always, a contrastive focus right before the RNR target (Hartmann, 2000) and the conjuncts must convey new information (Chaves, 2014). For instance, (87)(1)a consists of a contrastively focused pre-RNR element, the verb *likes*, which is in contrast with *dislikes* in the second conjunct, while in (87)(1)b there is no contrast; thus, the RNR is not licensed.

(87)

a. Olivia likes ~~the TV series~~, but Evelyn dislikes the TV series.

b. * Olivia likes ~~the TV series~~, and Evelyn likes the TV series.

- *The pivot* must be right peripheral in both conjuncts. Therefore, the sentences as in (88) are ungrammatical since the VP adjunct, *from the bank*, which is at the right edge of the first conjunct, is still pronounced while the constituent on the left, *a large sum of money*, is not (Duman, 2003).

(88) *I borrowed [~~a large amount of money~~] [~~from the bank~~], and my sisters stole a large amount of money from the Chase Manhattan Bank.

(Abbot, 1976).

2.2.1. *Hem... hem* analysis as RNR in Turkish

In this dissertation, sentences involving the correlative conjunction *hem...hem* are used as the Turkish counterpart of English RNR because there is reason to believe that *hem...hem* also involve a bi-clausal structure and that there is unpronounced material in the first conjunct (Gračanin Yuksek, 2022). If this is correct, the VP *kendini değerlendirdi* ‘evaluated him/herself’ is syntactically present inside the first conjunct in (89).

(89) Hem Ali hem Ayşe kendi-ni değerlendir-di.

Also Ali also Ayşe self -ACC.3SG evaluate -PAST.3SG

‘Both Ali and Ayşe evaluated themselves.’

Evidence that *hem...hem* coordination at least *can* involve a bi-clausal structure comes from the sentences in which the *hem...hem* coordination occupies the subject position. In (90) and (91), *hem...hem* must involve a small subject DP coordination, because the plural verb *gittik* ‘left.1PL’ shows agreement with a plural subject and neither of the individual conjuncts (*Ali, ben* ‘I’) is plural.

(90) Hem Ali hem ben okul -a git-ti -k.

Also Ali also I school-DAT go-PAST-1PL

‘Both Ali and I went to school.’

(91) Hem ben hem Ali okul -a git-ti -k.

Also I also Ali school-DAT go-PAST-1PL

‘Both Ali and I went to school.’

Extrapolation of one of the conjuncts from such small coordination (indicated by the plural verb) seems to be disallowed (possibly due to a violation of Coordinate Structure Constraint (Ross, 1967)), as shown by the ungrammaticality of (92).

(92) *Hem Ali okul -a git-ti -k hem ben.

*Also Ali school-DAT go-PAST-1PL also I

Lit.: ‘Both Ali went to school and I.

On the other hand, the verb in (93) shows the third person singular agreement *gitti* ‘left’, which in Turkish is compatible both with singular and with plural subjects. Thus, both (94)a) and (94)b) are compatible with the string in (93).

(93) Hem Ali hem Ayşe okul -a git-ti.

Also Ali also Ayşe school-DAT go-PAST.3SG

‘Both Ali and Ayşe went to school.’

(94) a. [Hem Ali okul -a git-ti], [hem Ayşe okul-a git-ti].

[Also Ali school-DAT go-PAST.3SG] [also Ayşe school-DAT go-PAST.3SG]

‘Ali went to school and Ayşe went to school.’

b. [Hem Ali hem Ayşe] okul -a git-ti.

[Also Ali also Ayşe] school-DAT go-PAST.3SG

‘Both Ali and Ayşe went to school.’

In contrast to the ungrammatical (92), in which one of the conjuncts is extraposed to the post-verbal position, (95) is grammatical, suggesting that the structure is in fact biclausal, with ellipsis in the second conjunct, as shown in (96).

(95) Hem Ali okul -a git-ti, hem Ayşe.

Also Ali school-DAT go-PAST.3SG, also Ayşe

Lit: ‘Both Ali went to school and Ayşe.’

(96) [Hem Ali okul -a git-ti], [hem Ayşe okul ~~-a~~ ~~git-ti~~].

[Also Ali school-DAT go -PAST.3SG] [also Ayşe school-DAT ~~go~~ -PAST.3SG]

‘Ali went to school and Ayşe went to school.’

This conclusion is confirmed by the grammaticality of (97)a), which shows that the pronounced verb *gittim* ‘went.1SG’ can agree only with the subject of the second conjunct in a *hem...hem* construction with coordinated subjects. This suggests that there is an elided verb in the first conjunct which agrees with the first conjunct.

(97) a. Hem Ali hem ben okul -a git-ti -m.

Also Ali also I school-DAT go-PAST-1SG.

‘Both Ali and I went to school.’

b. [Hem Ali okul -a git-ti] hem ben okul -a git-ti -m.

Also Ali school-DAT go-PAST-3SG] also I school-DAT go -PAST-1SG.

‘Ali went to school and I went to school.’

Similarly, “extraposition” of the second conjunct is possible if the verb agrees with the subject of the first conjunct only (in this case, *Ali*), as in (98)a). This, again, indicates a bi-clausal structure, this time with ellipsis in the second conjunct, as in (98)b).

(98) a. Hem Ali okul -a git-ti hem ben.

also Ali school-DAT go-PAST.3SG also I.

Lit: Both Ali went to school and I.

b. Hem Ali okul -a git-ti, hem ben okul -a git-ti -m.

also Ali school-DAT go -PAST.3SG also I school-DAT go-PAST-1SG

‘Ali went to school and I went to school.’

In addition, the sentences such as (99) and (100) become degraded with collective predicates.¹² If the sentences included simply the coordination of the subjects as DPs, we would expect both (99) and (100) to be felicitous because they would be similar to (101) and (102), which unambiguously connect two singular elements in the subject position. If *hem Ali hem Ayşe* only coordinates DPs but not clauses, then collective elements would be fine in (99) and (100). Yet, the collective meanings are not really sensible to the Turkish native speakers. This suggests clausal coordination of *hem... hem* construction.

(99)??Hem Ali hem Ayşe beraber okul -a git-ti.

Also Ali also Ayşe together school-DAT go-PAST.3SG

¹² Collective adverbs and predicates cannot be used without plural subjects – they are “true of a group and not of individual members of the group” (Taub, 1989, p.338).

(100) ??Hem Ali hem Ayşe buluş-tu.

Also Ali also Ayşe meet -PAST

(101) Ali ile /ve Ayşe beraber okul -a git-ti.

Ali with/and Ayşe together school-DAT go-PAST.3SG

(102) Ali ile /ve Ayşe buluş-tu.

Ali with/and Ayşe meet –PAST.3SG

Kornfilt (2012, p.193) stated that sentences such as (103), which are similar to (95), are grammatical while sentences such as (104), which are similar to (97), are ungrammatical. She suggests that such mismatches in the agreement in Turkish can be possible in forward gapping while they are not possible in backward gapping. However, as Köse (2019) stated, several native speakers of Turkish accept such sentences, as in (104), as grammatical.

(103) [[Kaz -ı sen ye -di -n], [hindi -yi de ben Ø]]

goose-ACC you eat-PAST-2SG turkey-ACC and I

‘You ate the goose and I (ate) the turkey’

(104) *[[Sen kaz -ı t_i], [ben de hindi -yi t_i]] [ye -di -m]_i

you goose-ACC I and turkey-ACC eat-PAST-1SG

‘You (ate) the goose and I ate the turkey’

(Kornfilt, 2012, p.193)

This also is parallel with İnce (2009)’s argument for the Turkish RNR structures as PF deletion: Ince (2009), in Turkish RNR with the PF deletion analysis, states that (105) is grammatical, where the verb in the first conjunct is gapped, as in (97). The surfacing verb in these sentences can only agree with the subject in the non-elliptical conjunct.

(105) a. Sen elma -y1, ben armud-u ye -di -m.
 You apple-ACC, I pear -ACC eat-PAST-1SG

b. [[Sen elma-y1 ye-di -n], [ben armud-u ye -di -m]]
 You apple-ACC eat-PAST-2SG, I pear -ACC eat-PAST-1SG]]
 *ye-di -n /ye -di -m.
 *eat-PAST-2SG/eat-PAST-1SG

‘ You (ate) the apple, I ate the pear.’ (Ince, 2009, p.4)

If the *hem hem* coordination involves deletion, it is backward deletion, just as is the case in English RNR. It is unclear if backward gapping in head-final languages such as Turkish is an instance of gapping or RNR since the RNR-ed material in such constructions is the verb in Turkish. The verb can be the sentence final element, thus the conjunct final element (Köse, 2019). However, Ince (2009) argued that backward gapping in Turkish are instances of RNR based on the different word order requirement of forward and backward gapping in Turkish: backward gapping requires parallel word orders across conjuncts, while there is no such requirement in forward gapping in Turkish. Therefore, if both require the deletion of the verb as part of the derivation, the same rules should apply in both gapping directions, which is not the case. This led Ince to argue that instances of backward deletion are instances of RNR. Ince (2009) discusses that PF deletion is the only way to derive RNR constructions in Turkish while Multiple Dominance and ATB movement could not generate the facts (see Wexler & Culicover 1980; Hartmann 2001; Wilder 1997 among others for the RNR analysis of PF deletion). As opposed to Ince (2009) Kornfilt (2012) and Johnson (2004) suggested that Turkish backward gapping/RNR is generated through ATB movement. In either case, *hem ... hem* can be analyzed as an instance of RNR; To illustrate, an example is given in (106).

(106)

a. [Hem Ali hem Ayşe] okul-a git-ti.
 [Also Ali also Ayşe] school-DAT go-PAST.3SG

b. [Hem [Ali okul-a git-ti] hem [Ayşe okul-a git-ti]].
 [Also [Ali school-DAT go-PAST.3SG] also [Ayşe school-DAT go-PAST.3SG]]

2.2.2 Vehicle Change

Barros & Vicente (2011) suggest that an RNR construction involves an instance of VP ellipsis since it displays the phenomenon of Vehicle change (VC). The VC, shown in the (b) examples below, is the phenomenon by which ellipsis seems to repair Principle C violation in (107)a), and Principle B violation in (108)a) (Barros & Vicente, 2011).

(107)

a. She_i hopes that he won't [], but I fear that the boss will fire Alice_i.

b. She_i hopes that he won't [fire her_i], but I fear that the boss will fire Alice_i.

(Barros & Vicente, 2011: 3).

(108)

a. Daniel_i couldn't [], so I nominated him_i.

b. Daniel_i couldn't [nominate himself_i], so I nominated him_i.

However, Chaves (2014) points out the weakness of the argument that RNR constructions involve VP ellipsis because they display instances of VC, as in (109) and (110), since instances such as (111)B) are not allowed due to gender mismatch. He claims that the sloppy identity reading is blocked by gender mismatches in RNR in which the pivot is an NP (NP RNR), as in (111)B), while the matching gender condition allows sloppy identity reading, as in (111)A). He argues that this type of RNR involves Backward Periphery Deletion instead of VP ellipsis, since VP RNR and NP RNR cases behave differently.

(109) Tom didn't ~~pass his math exam~~ but I'm sure Alice will [pass her math exam].

Allowing Sloppy identity- Analyzed as VP Ellipsis

(110) John will ~~make his bed~~ and Sue already has [made her bed]

Allowing Sloppy identity- Analyzed as VP Ellipsis

(111)

A. Chris_x likes ~~his_x bike~~ and Billy_y loves [his_y bike],

B. #Chris_x likes ~~his_x bike~~ and Sue_y loves [her_y bike]

Analyzed as Backward Periphery Deletion

Allowing Strict identity

Not Allowing Sloppy identity

(Höhle 1991, Jacobson 1999; as cited in Chaves, 2014, p.848)

All in all, in either analysis, RNR constructions involve VC, subject to certain restrictions. Similar to the VPE, one of the questions that I am trying to answer is how VC influences the elided anaphors' interpretations and speakers' preferences in RNR constructions.

2.3. RNR and VP Ellipsis

According to Ha (2006; ;2007; 2008a, 2008b;), there is parallelism between VP ellipsis and RNR; both involve the non-pronunciation of some part of the clause, as well as the ambiguity of pronoun interpretation. Therefore, Ha (2008a) discusses RNR favoring the ellipsis account (as opposed to the ATB movement and multidominance accounts). Firstly, he states that in both VP ellipsis and RNR, some entities in one of the conjuncts, which are shared by the other conjuncts, are non-pronounced, as in (112) and (113) (Ha, 2008a).

(112) John liked the opera, but Mary didn't <~~like the opera~~>. *VPE*

(113) John LIKED <~~the opera~~>, but Mary HATED – the opera. *RNR*
(Ha, 2008a, p.67)

He also points out that the interpretation of the pronouns in both structures is three-way ambiguous between the strict identity reading: (114)a) for VP ellipsis and (115)a) for RNR); the sloppy identity reading: (114)b), for VP ellipsis and (115)b) for RNR); and also the “third party” reading: (114)c) for VP ellipsis and (115)c) for RNR (Ha,

2006; 2007; 2008a; 2008b). In the current study, I do not examine the third-party reading; instead, I focus only on the strict and sloppy identity readings.

(114) John likes his father, and Bill does, too. *VPE*

a. John likes John's father and Bill likes John's father, too. *STRICT READING*

b. John likes John's father and Bill likes Bill's father, too. *SLOPPY READING*

c. John likes Chris' father and Bill likes Chris' father, too.
THIRD-PARTY READING
(Ha, 2008b, p.11)

(115) John likes _____, but Bill hates _____, his father. *RNR*

a. John likes Bill's father, but Bill hates Bill's father. *STRICT READING*

b. John likes John's father, but Bill hates Bill's father. *SLOPPY READING*

c. John likes Chris' father, but Bill hates Chris' father.
THIRD-PARTY READING
(Ha, 2008b, p.11)

Another similarity between ellipsis and RNR is that RNR displays a vehicle change effect, which is typically linked with ellipsis rather than movement or multi-dominance (Ha, 2007; 2008a; 2008b; Sugawa, 2011). Vehicle Change is observed in binding (as shown in (107) and (108) above) and negative polarity item licensing (as shown in (116) below) (Citko, 2017).

(116)

a. Mary didn't read any of the articles, but John did.

b. John read _____, but he hasn't understood _____, any of my books.
(Citko, 2017, p.23)

However, Citko (2017) points out that there some problems with the ellipsis account of RNR. For example, there is a lack of equivalence between the (a) and (b) examples in (117) and (118), which would be expected if (a) examples were simply elliptical versions of (b) examples (Abbott, 1976, 642; Citko, 2017, p.23).

(117)

- a. I borrowed _____, and my sisters stole _____, *a total of \$3000 from the bank.*

- b. I borrowed *a total of \$3000 from the bank*, and my sisters stole *a total of \$3000 from the bank.*

(118)

- a. John gave Mary _____, and Joan presented to Fred _____, *books that looked remarkably similar.*

- b. John gave Mary *books that looked remarkably similar*, and Joan presented to Fred *books that looked remarkably similar.*

(Abbott, 1976; p. 642)

Citko (2017) argues that another potential issue for ellipsis accounts of RNR involves the directionality of ellipsis. RNR can only involve backward deletion, while forward deletion is not possible, as shown in (119) below. By contrast, different ellipsis types such as gapping, sluicing, VP ellipsis, and pseudo-gapping work in a forward fashion in head-initial languages such as English (Citko, 2017). This contrast is another factor that I study in this thesis; i.e., I am investigating whether the directionality of ellipsis (forward or backward) has an effect on linguistic preference and processing of elided anaphors.

(119)

- a. Bill praised ~~a new movie by Woody Allen~~ and Pat criticized a new movie by Woody Allen.
- b. *Bill praised a new movie by Woody Allen and Pat criticized ~~a new movie by Woody Allen~~.

Lastly, Citko (2017) states that RNR might be expected to be limited to coordination in the case of its ellipsis account. However, examples in (120) from Hudson (1976) show different cases.

(120)

- a. Of the people questioned, those who liked ____ outnumbered by two to one those who disliked ____ *the way in which the devaluation of the pound had been handled.*
- b. I'd have said he was sitting on the edge of ____ rather than in the middle of ____ *the puddle.*
- c. It's interesting to compare the people who like ____ with the people who dislike ____ *the power of the big unions.*

(Hudson, 1976, p. 550)

On the nature of the RNR structure, Chaves (2014) suggests that relying on the empirical evidence, RNR is both a syntactic and not a syntactic operation because its examples apply to different phenomena. For instance, it applies to extraposition, which is a syntactic phenomenon in which a number of limited constituents (RelC, PP, NP) are allowed to be removed to the right of their canonical position. It can also be explained by Backward Periphery Deletion which suggests that RNR is not naturally syntactic but instead based on linearization. It can be put into use with basically every construction as long as their morphological forms are the same and they are not dependent regarding prosody. He resolved this paradox by suggesting that RNR is the fusion of VP/N' Ellipsis, Extraposition and (Backward) Periphery Deletion, since they

all share superficially similar structures and address the same strings. All of these theories appear to be similar superficially in that a shared string's overt comprehension is postponed in these phenomena. Many examples of alleged RNR can be envisioned by every adequately strong explanation of Extraposition and Ellipsis. The conflation of these three accounts makes the contradictory idiosyncrasies disappear and explains an ample range of examples of true RNR. For instance, Ellipsis and Extraposition can aim VPs, so certain RNRising structures of VP can be analyzed either way. In addition, as further range of strings are addressed by Deletion compared to Extraposition or Ellipsis, Deletion pursues that a number of RNR cases can be analyzed in different ways such as Backward Periphery Deletion (Chaves, 2014).

In our study, the RNR cases in English are NP RNR while it is VP RNR in Turkish. Still, the construction in both languages displays the same basic features in terms of unpronounced material and involvement of the VC mechanism. Since Turkish is gender neutral in grammar, the same results would be expected if the NP RNR were used in Turkish.

Although there are some studies mentioning in their discussions the VC phenomenon as one of the causes for the fact that strict identity reading interpretations are surpassed by the sloppy identity reading interpretations, as in Shaphiro et al. (2003) who briefly touched upon the effect of the VC mechanism in the discussion of the findings in their study investigating the interpretation of VPE construction with reflexive anaphors, to the best of my knowledge, there are no studies specifically investigating either the effect of VC in VPE and RNR or the comparison of the strict and sloppy identity interpretations in ambiguous RNR sentences with anaphors.

CHAPTER 3

OFFLINE AND ONLINE EXPERIMENTS

The basic goal of this study was to establish trends of anaphora interpretation in elliptical environments. I investigated first, how VPE and RNR differed from one another in terms of anaphor resolution; whether gender-match and mismatch conditions affected the interpretations of elided anaphors in the two constructions and also how VC interacted with different directionality of anaphora; namely, whether VC was, for example, (dis-)preferred in both constructions or was preferred in one and dis-preferred in the other. I examined these two elliptical structures specifically to see the effect of VC on the interpretation of elided anaphors in English as a head-initial language and in Turkish as a head-final language. Therefore, I investigated whether there were different trends in these structures in terms of the interpretation of anaphora depending on the head-directionality; i.e., whether the preference for the VC differs in the environments of forward and backward ellipsis in these languages. I collected our English judgments from L1 speakers of English and of Turkish, and from L2 English speakers with L1 Turkish. This was to see whether interpretations of elided anaphors in L2 English would be influenced in any way by the interpretive possibilities of participants' L1 Turkish.

In this dissertation, I aimed to fill a gap in the literature, which contains studies investigating preferences for strict vs. sloppy reading in VP ellipsis, but involves much fewer studies investigating RNR from the same perspective. Moreover, the literature completely lacks works that explore specifically VC in these contexts (except the studies, like Shaphiro et al. (2003), which shortly discussed the impact of the VC mechanism in their discussion of the findings).

This chapter presents the details of offline experiments that I conducted both in English and in Turkish, including the design, the methodology and the results.

3.1. Native Speaker Experiments

3.1.1. Participants

3.1.1.1. English experiment¹³

The sampling type was criterion convenience sampling, which led to snowball sampling since possible participants were asked to share the survey with the people that fit with the sampling criterion, which is being a native speaker of English. I reached out to the participants via online announcements by using emails and contacting online social and academic groups and social media. The participant group consisted of 27 native speakers of English (L1 speakers of English) from all over the world, but mostly from the UK (Age Min=20 Max=72; M=42.9, SD=3.29; female=19, male=8).

3.1.1.2. Turkish experiment

The sampling type was again criterion convenience sampling, leading to snowball sampling. I reached out to the participants by asking other people to share the survey with their students or with people they thought might be interested. The criterion was being a native speaker of Turkish. Thirty-three native speakers of Turkish (Age Min=20, Max=48; M=27.3, SD=5.73; female=23 and male=10) participated in the Turkish experiment.

¹³ We could not ensure that the participants in this (or any other experiment involving native speakers) are monolingual in the language that we tested because it is nowadays almost impossible to find such true monolingual participants. Thus, although the demographic questionnaire asked the participants to include other languages that they speak besides their own native language, we did not exclude participants based on this information.

3.1.2. Materials

3.1.2.1. English experiment

I had a total of 64 experimental items for English, which were divided into two lists by using Latin Square design. Therefore, each participant read 32 experimental sentences with an anaphoric element in the pivot. The tense of all the sentences was the simple past tense. There were approximately ten words (including both lexical and functional words) in each RNR and VPE target sentence and, therefore, the length of the sentences was controlled for (VPE reflexive condition = 10 words; VPE possessive condition = 12 words; RNR reflexive condition = 9 words; RNR possessive condition = 10 words). Each sentence started with a subject and ended with the anaphoric phrase in RNR sentences or with the expression ‘*did too*’ in VP ellipsis sentences. The conjunction word connecting the two conjuncts was *but* in RNR sentences while it was *and* in VP ellipsis sentences. The proper names in both conjuncts for both languages were controlled for; each had two syllables and their frequencies were similar. The verbs used in the experimental items were mostly selected from psych-verbs (e.g., *admire*) or verbs that can equally felicitously take reflexive pronouns and possessive pronouns as direct objects in order to ensure that they can be construed equally naturally with both possessive pronouns direct objects and reflexive pronouns direct objects and that the verb itself does not carry inherent bias towards strict or sloppy interpretation of the anaphor.¹⁴

Of the thirty-two experimental sentences in each list, 16 were RNR sentences and 16 were VPE sentences. Within each of these sets of 16 items, 8 sentences contained reflexive constructions and 8 possessive constructions. Finally, within the pronouns/reflexive sets, two sentences had a female subject as a possible antecedent in both conjuncts (F-F gender match); two sentences contained a male subject in both conjuncts (M-M gender match); two sentences were created with a female subject in

¹⁴ Although the items were carefully assembled so as not to favor one or the other reading either with reflexive or with possessive anaphors, they might still differ in the degree of semantic association between the verb and its object (I am grateful to Orhan Demir for reminding me of that). For example, there might be different semantic association between the two in the VP *praised his guest* and the VP *dreaded her husband*. In the future, it would be good to statistically measure this, so as to ensure that differences in the degree of semantic association do not cause possible differences in the results.

the first conjunct and a male subject in the second one, displaying a F-M gender mismatch of the subjects, and the last two sentences were formed by using a male subject in the first conjunct and a female in the second, showing a M-F gender mismatch. Thus, a single list contained four sentences in each gender (mis)match condition.

Each experimental sentence was followed by a statement, asking the participants to decide whether the statement is true or false. The true/false statements were distributed in such a way that in each of the four gender (mis)match conditions in a list (F-F, M-M, F-M, M-F), two statements were true under the sloppy reading interpretation of the anaphor, and two were true under the strict reading interpretation of the anaphor. The paradigms of the experimental items for both VPE and RNR are given in Table 5.

Table 5. The Experimental Item paradigms for both VPE and RNR in English

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|-----------------|---|---|
| REFL | F-F | ST | Iris dreaded herself, and Zoe did too. Zoe dreaded Iris. T / F | Zoe blamed, but Alice defended her client. Zoe blamed Alice's client. T / F |
| | | SL | Susan painted herself, and Charlotte did too. Charlotte painted herself. T / F | Emma admired, but Mary disliked herself. Emma admired herself. T / F |
| | M-M | ST | William praised himself, and Carlos did too. Carlos praised William. T / F | Owen liked, but Alan hated himself. Owen liked Alan. T / F |
| | | SL | Simon introduced himself, and Andrew did too. Andrew introduced himself. T / F | Billy glorified, but Leo condemned himself. Billy glorified himself. T / F |
| | F-M | ST | Lucy calmed herself, and Michael did too. Michael calmed Lucy. T / F | Kaylee adored, but Mason detested herself. Kaylee adored Mason. T / F |
| | | SL | Maya examined herself, and Liam did too. Liam examined himself. T / F | Molly disgraced, but Oscar promoted himself. Molly disgraced herself. T / F |
| | M-F | ST | Vincent financed himself, and Betty did too. Betty financed Vincent. T / F | Matthew stressed, but Kathy comforted herself. Matthew stressed Kathy. T / F |
| | | SL | Joey wiped himself, and Cora did too. Cora wiped herself. T / F | Jason betrayed, but Luna supported herself. Jason betrayed himself. T / F |

Table 5 (continued)

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|-----------------|--|--|
| POSS | F-F | ST | Iris dreaded her husband, and Zoe did too. Zoe dreaded Iris's husband. T / F | Zoe blamed, but Alice defended her client. Zoe blamed Alice's client. T / F |
| | | SL | Susan painted her student, and Charlotte did too. Charlotte painted her student. T / F | Emma admired, but Mary disliked her sister. Emma admired her sister. T / F |
| | M-M | ST | William praised his guest, and Carlos did too. Carlos praised William's guest. T / F | Owen liked, but Alan hated his roommate. Owen liked Alan's roommate. T / F |
| | | SL | Simon introduced his employer, and Andrew did too. Andrew introduced his employer. T / F | Billy glorified, but Leo condemned his associate. Billy glorified his associate. T / F |
| | F-M | ST | Lucy calmed her peer, and Michael did too. Michael calmed Lucy's peer. T / F | Kaylee adored, but Mason detested his friend. Kaylee adored Mason's friend. T / F |
| | | SL | Maya examined her patient, and Liam did too. Noah examined his patient. T / F | Molly disgraced, but Oscar promoted his goal-keeper. Molly disgraced her goal-keeper. T / F |
| | M-F | ST | Vincent financed his family, and Betty did too. Betty financed Vincent's family. T / F | Matthew stressed, but Kathy comforted her neighbor. Matthew stressed Kathy's neighbor. T / F |
| | | SL | Joey wiped his kid, and Cora did too. Cora wiped her kid. T / F | Jason betrayed, but Luna supported her classmate. Jason betrayed his classmate. T / F |

Within each construction (VPE and RNR), the same items were used for reflexive and possessive constructions to eliminate the item effect on the interpretation of reflexive

and possessive pronouns. However, only one of these two items (i.e., the one with either a reflexive pronoun or a possessive pronoun) was presented in each list.

In addition to experimental items, each list contained 32 fillers that included unambiguous RNR as in (121), unambiguous VPE, as in (122), and passive, as in (123).

(121) Owen missed, but Bella watched the play.

Owen didn't miss the play.

True/False

(122) Thomas called the woman, and Linda did too.

Thomas didn't call the woman.

True/False

(123) The department head was fired by Peter.

The department head wasn't fired.

True

False

The reason for using unambiguous RNR and VPE sentences was to confirm that the participants were familiar with these structures. In each of the three groups of fillers, half involved target sentences which had a “True” target truth-value, while the other half involved a target sentence which had a “False” target truth-value.

Thus, 64 items including experimental and filler sentences were presented to the participants in each list (see Table 6 for a summary of the experimental items in one list). All experimental sentences and filler sentences appear in the Appendices. Two randomized presentation lists were constructed by using Latin Square design provided by the Ixex Farm codes.

Table 6. The Experimental Item Numbers in Each List in English

| Gender/Ellipsis | Reading type | VPE | | RNR | | Total |
|-------------------------|-------------------------|-----------|------------|-----------|------------|-------|
| | | Reflexive | Possessive | Reflexive | Possessive | |
| Gender matching: M-M | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | 1 | VC: 1 | 1 | |
| Gender matching: F-F | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | 1 | VC: 1 | 1 | |
| Gender mismatching: F-M | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | 1 | VC: 1 | 1 | |
| Gender mismatching: M-M | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | 1 | VC: 1 | 1 | |
| Total | | 8 | 8 | 8 | 8 | 32 |

3.1.2.2. Turkish experiment

In the Turkish experimental task, the same types of materials were used with the same criteria, only in Turkish. I used *hem...hem* construction for the Turkish RNR and the *de* construction as the Turkish VPE construction. Most of the verbs in the Turkish items were the translations of English sentences to be able to set almost the same conditions in Turkish. However, there were some slight differences due to the different characteristics of the two languages. For instance, the Turkish experimental items ended with a verb in RNR sentences and with *de* (which is the counterpart of *did too*) in VPE items. I did not use any additional conjunctions in the Turkish task.

Like in the English experiment, in the Turkish task there were approximately 9 words (including both lexical and functional words) in each RNR and VP ellipsis target sentence and, therefore the length of the sentences was controlled for (VP Ellipsis Reflexive Condition = 8 words; VP Ellipsis Possessive Condition = 9 words; RNR

Reflexive Condition = 9 words; RNR Possessive Condition = 10 words) in Turkish (see Table 7 for a summary of the experimental items in one list).

Table 7. The Experimental Item Numbers in Each List in Turkish

| Gender/Ellipsis | Reading type | VPE | | RNR | | Total |
|-------------------------|-------------------------|-----------|------------|-----------|------------|-------|
| | | Reflexive | Possessive | Reflexive | Possessive | |
| Gender matching: M-M | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | VC: 1 | VC: 1 | VC: 1 | |
| Gender matching: F-F | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | VC: 1 | VC: 1 | VC: 1 | |
| Gender mismatching: F-M | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | VC: 1 | VC: 1 | VC: 1 | |
| Gender mismatching: M-F | Sloppy identity reading | 1 | 1 | 1 | 1 | 8 |
| | Strict identity reading | VC: 1 | VC: 1 | VC: 1 | VC: 1 | |
| Total | | 8 | 8 | 8 | 8 | 32 |

The paradigms of the experimental items for both VPE and RNR in Turkish are given in Table 8.

Table 8. The Experimental Paradigms for both VPE and RNR in Turkish

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|-----------------|--|--|
| REFL | F-F | SL | Serpil kendini ferahlattı, Özlem de. Özlem kendini ferahlattı. Doğru / Yanlış | Hem Fatma hem Beyza kendini övdü. Fatma kendini övdü. Doğru / Yanlış |
| | | | Serpil refreshed herself, Özlem did too. Özlem refreshed herself. True / False | Both Fatma and Beyza praised herself Fatma praised herself. True / False |
| | | ST | Sena kendini yatıştırdı, İrem de. İrem Sena'yı yatıştırdı. Doğru / Yanlış | Hem Ecem hem İdil kendini aşağıladı. Ecem İdil'i aşağıladı. Doğru / Yanlış |
| | | | Sena soothed herself, İrem did too. İrem soothed Sena. True / False | Both Ecem and İdil humiliated. Ecem humiliated İdil True / False |
| | M-M | SL | Kemal kendini düzeltti, Eren de. Eren kendini düzeltti. Doğru / Yanlış | Hem Çınar hem Efe kendini eleştirdi. Çınar kendini eleştirdi. Doğru / Yanlış |
| | | | Kemal corrected himself, Eren did too. Eren corrected himself. True / False | Both Çınar and Efe criticized himself. Çınar criticized himself True / False |
| | | ST | Caner kendini yerdi, Orçun da. Orçun Caner'i yerdi. Doğru / Yanlış | Hem Ahmet hem Mehmet kendini üzdü. Ahmet Mehmet'i üzdü. Doğru / Yanlış |
| | | | Caner criticized himself, Orçun too. Orçun criticized Caner-ACC. True / False | Both Ahmet and Mehmet upset himself Ahmet upset Mehmet True / False |

Table 8 (continued)

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|--|--|--|
| REFL | F-M | SL | İlgın kendini küçümsedi, Koray da. Koray kendini küçümsedi. Doğru / Yanlış | Hem Elif hem Mehmet kendini neşelendirdi. Elif kendini neşelendirdi. Doğru / Yanlış |
| | | | İlgın underestimated herself, and Koray did too. Koray underestimated himself. True / False | Both Elif and Mehmet cheered himself up. Elif cheer herself up. True / False |
| | ST | | Sevgi kendini gerdi, Ali de. Ali Sevgi'yi gerdi. Doğru / Yanlış | Hem Şeyma hem Berkay kendini savundu. Şeyma Berkay'ı savundu. Doğru / Yanlış |
| | | | Sevgi stress herself , and Ali did too. Ali stressed Sevgi out. True / False | Both Şeyma and Berkay defended himself Şeyma defended Berkay. True / False |
| | M-F | SL | Çağlar kendini yordu, Leyla da. Leyla kendini yordu. Doğru / Yanlış | Hem Emir hem Duru kendini cezalandırdı. Emir kendini cezalandırdı. Doğru / Yanlış |
| | | | Çağlar tired himself, and Leyla did too. Leyla tired herself. True / False | Both Emir and Duru punished herself. Emir punished himself True / False |
| ST | | Cemal kendini gizledi, Cansu da. Cansu Cemal'i gizledi. Doğru / Yanlış | Hem Ege hem Şeyda kendini affetti. Ege Şeyda'yı affetti. Doğru / Yanlış | |
| | | Cemal disguised, and Cansu did too. Cansu disguised Cemal. True / False | Both Ege and Şeyda forgave herself. Ege forgave Şeyda . True / False | |

Table 8 (continued)

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|---|---|---|
| POSS | F-F | SL | Serpil arkadaşını ferahlattı, Özlem de. Özlem kendi arkadaşını ferahlattı. Doğru / Yanlış | Hem Fatma hem Beyza arkadaşını övdü. Fatma kendi arkadaşını övdü. Doğru / Yanlış |
| | | | Serpil refreshed her friend, and Özlem did too. Serpil refreshed her own friend. True / False | Both Fatma and Beyza praised friend. Fatma praised her own friend. True / False |
| | | ST | Sena öğrencisini yatıştırdı, İrem de. İrem Sena'nın öğrencisini yatıştırdı. Doğru / Yanlış | Hem Ecem hem İdil abisini aşıladı. Ecem İdil'in abisini aşıladı. Doğru / Yanlış |
| | M-M | SL | Sena soothed her student and İrem did too. İrem soothed Sena's student. True / False | Both Ecem and İdil insulted her brother Ecem insulted İdil's brother . True / False |
| | | | Kemal öğrencisini düzeltti, Eren de. Eren kendi öğrencisini düzeltti. Doğru / Yanlış | Hem Çınar hem Efe kardeşini eleştirdi. Çınar kendi kardeşini eleştirdi. Doğru / Yanlış |
| | | ST | Kemal corrected his student, and Eren did too. Eren correct his own student. True / False | Both Çınar and Efe criticized his sibling. Çınar criticized his own sibling. True / False |
| | ST | Caner müşterisini yerdı, Orçun da. Orçun Caner'in müşterisini yerdı. Doğru / Yanlış | Hem Ahmet hem Mehmet kızını üzdü. Ahmet Mehmet'in kızını üzdü. Doğru / Yanlış | |
| | | Caner criticized his customer, and Orçun did too. Orçun criticized Caner's customer. True / False | Both Ahmet and Mehmet his upset daughter. Ahmet upset Mehmet's daughter. True / False | |

Table 8 (continued)

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|-----------------|---|--|
| POSS | | SL | İlgin müdürünü küçümsedi, Koray da. İlgin kendi müdürünü küçümsedi. Doğru / Yanlış | Hem Elif hem Mehmet patronunu neşelendirdi. Elif kendi patronunu neşelendirdi. Doğru / Yanlış |
| | | F-M | İlgin underestimated her manager, and Koray did too. İlgin underestimated her own manager. True / False | Both Elif and Mehmet cheered his boss up. Elif cheered her own boss up. True / False |
| | ST | | Sevgi hastasını gerdi, Ali de. Ali Sevgi'nin hastasını gerdi. Doğru / Yanlış | Hem Şeyma hem Berkay müvekkilini savundu. Şeyma Berkay'ın müvekkilini savundu. Doğru / Yanlış |
| | | | Sevgi stressed her patient out, and Ali did too. Ali stressed Sevgi's patient out. True / False | Both Şeyma and Berkay defend their client. Şeyma Berkay client. defend True / False |
| | M-F | SL | Çağlar sporcusunu yordu, Leyla da. Leyla kendi sporcusunu yordu. Doğru / Yanlış | Hem Emir hem Duru sevgilisini cezalandırdı. Emir kendi sevgilisini cezalandırdı. Doğru / Yanlış |
| | | | Çağlar tired his sportsman/sportswoman, and Leyla did too. Leyla tire her sportsman/sportswoman (gender neutral). True / False | Both Emir and Duru punished her boyfriend/girlfriend- Emir punished his own boyfriend(/girlfriend) (gender neutral). True / False |

Table 8 (continued)

| REF/POSS CONSTRUCTION | GENDER (MIS) MATCH | READING TYPE | VPE | RNR |
|--------------------------|--------------------------|-----------------|--|--|
| POSS | M-F | ST | Cemal işini gizledi, Cansu da. Cansu Cemal'in işini gizledi. Doğru / Yanlış | Hem Ege hem Şeyda kuzenini affetti. Ege Şeyda'nın kuzenini affetti. Doğru / Yanlış |
| | | | Cemal disguised his work, and Cansu did too. Cansu disguised Cemal's work. True / False | Both Ege and Şeyda forgave her cousin. Ege forgave Şeyda's cousin. True / False |

In addition, 32 fillers were added exemplifying unambiguous RNR as in (124), unambiguous VPE, as in (125), and passive, as in (126) in Turkish.

- (124) Hem Seda hem Cansu film -i izle -di.
 Also Seda also Cansu movie- ACC watch-PAST.3SG.
 Seda film -i izle -me -di.
 Seda movie-ACC watch-NEG-PAST.3SG.
 Doğru Yanlış
 True False
 'Both Seda and Cansu watched the movie.
 Seda didn't watch the movie.
 True False'

- (125) Çağlar kaza -y1 bildir-di, Kerim de.
 Çağlar incident- ACC report-PAST.3SG, Kerim too.
 Kerim kaza -y1 bildir -me -di.
 Kerim incident- ACC report-NEG-PAST.3SG.
 Doğru Yanlış
 True False
 'Çağlar reported the incident, and Kerim did too.
 Kerim didn't report the incident.
 True False'

- (126) Asker -e Müslüm tarafından yönerge ver -il -di.
 Soldier- DAT Müslüm by direction give-PASS-PAST.3SG
 Asker -e yönerge ver -il -di.
 Soldier- DAT direction give- PASS-PAST.3SG
 Doğru Yanlış
 True False
 ‘The soldier was given the directions by Müslüm.
 The soldier was given the directions.
 True False’

The rest of the controlled features of the materials and the tasks were the same for both English and Turkish experiment.

3.1.3. Procedure (both English and Turkish experiments)

In both Turkish and English experiments, the procedure of the experiments was the same. The participants were tested individually using an online survey tool IbeX Farm (Drummond, 2020). The IbeX Farm provided a platform that was specifically designed for self-paced reading experiments.¹⁵ Two presentation lists were constructed and randomized by using the IbeX Farm Latin Square codes. Each participant saw one list. The experiment was administered to the participants individually in a self-paced reading environment with cumulative moving window, both in English and in Turkish. In other words, with each press of the space bar, an additional word appeared on the screen without masking any of the previously revealed words. Thus, the participants were asked to react to complete sentences in isolation without any masking/priming conditions.¹⁶

¹⁵ “The IbeX Farm was a site for hosting psycholinguistic experiments using the [IbeX](https://spellout.net/ibexfarm) software. It ran from 2010 to September 30 2021 at <https://spellout.net/ibexfarm>. A new version of the IbeX Farm ran from December 31 2020 to September 30 2021 at <https://ibex.spellout.net>. The [code](https://ibex.spellout.net) for the original IbeX Farm was released under an open source license. The IbeX Farm was created and maintained by [Alex Drummond](https://ibex.spellout.net).” (Drummond, nd).

¹⁶ The pilot study showed that participants had a lot of difficulties making a true/false judgment when they no longer saw the sentence on the screen. That is why I used a *cumulative* moving window paradigm in the SPR experiment.

Following each isolated statement, as shown in Figure 1, the participants were asked to decide whether the provided statement is true (by pressing 1) or false (by pressing 2), based on their interpretation of the elliptical experimental sentence, as shown in Figure 2. Their answers indicated whether they did or did not access the sloppy or strict identity reading of the elliptical sentence.

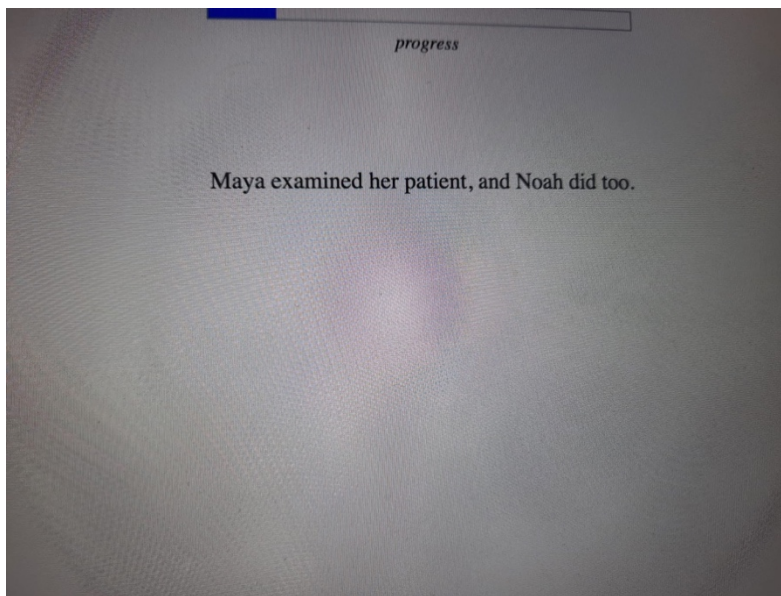


Figure 1. Experimental Item in Isolation

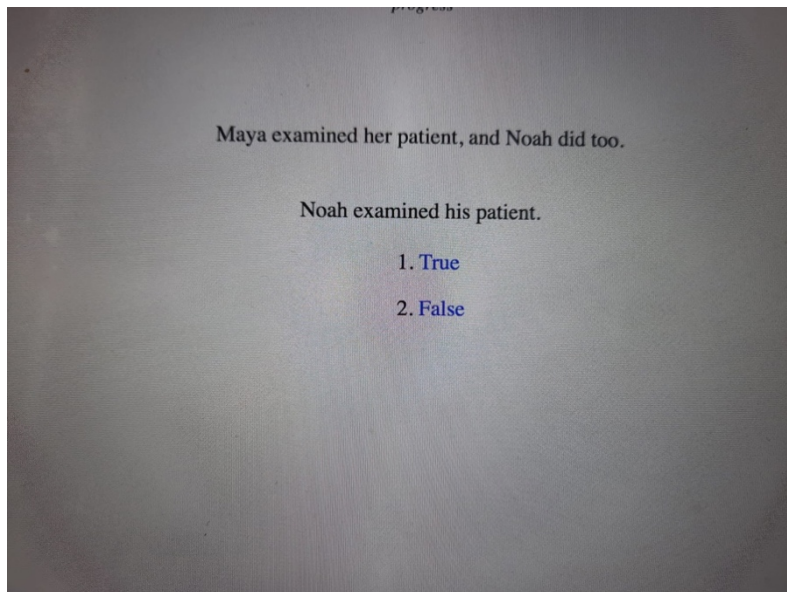


Figure 2. Experimental Item with True-False Value Judgement Questions

I measured the time that passed between the moment that the end-of-trial statement (*Noah examined his patient*) appeared on the screen and the moment the decision regarding the interpretation was made (indicated by the participant's pressing 1 or 2). Given that this time may have, and based on our pilot study, it did involve re-visiting the sentence, I calculated the time relative to the number of the words that were on the screen during the decision making (excluding TRUE and FALSE).

The reaction times of the judgment were measured to see if any of the experimental conditions (VC, forward/backward anaphora or gender (mis)match), would take longer to reach the decision, indicating more processing load.¹⁷

¹⁷ I am aware of the fact that complexity at the level of theoretical analysis does not necessarily have to translate into processing complexity, but in the lack of evidence to the contrary, I will assume that the two kinds of complexity go hand in hand. I would like to thank Umut Özge for reminding me of this consideration.

That said, psycholinguistic data on ellipsis can still assist us improve our understanding of ellipsis grammar. Experimental data on ellipsis processing can give a more nuanced perspective of ellipsis, assisting in determining what is taken into consideration by the processor and consequently, what should be taken into consideration in the grammar. Maintaining the possibility that the processor carries some of the accounting load for acceptability judgments is especially important in discussions of recycling or repair theories based on the notion that inputs, which might be syntactic mixes, can be repaired in understanding (Frazier, 2018).

The participants' responses indicated what antecedent the elided pronoun referred to (i.e., the results presented the sloppy vs strict identity preference). Before the experiment started, participants were instructed that for each item in the experiment, they were required to read a sentence (in English or in Turkish, depending on the experiment) and judge the statements based on those sentences by saying "True" or "False". Before they started the experiment, I presented them with seven practice items for them to get familiarized with and accustomed to the task. Participants could read the sentences and the statements and make their truth-value judgement at their own pace. However, once they made their choice, they did not have a chance to go back to the previous items.

For example, interpretation of VPE first requires access to an antecedent in memory, and then the integration of this antecedent's representation into the local context (Martin & McElree, 2008). Kroll (2020, p. 237) proposed a processing mechanism for ellipsis on the comprehension end (inspired by Harris, 2015):

Basic tasks of the processor in anaphoric ellipsis:

1. Identify the ellipsis gap site.
2. Determine the cues necessary for retrieval of the appropriate antecedent from memory, if the appropriate antecedent is not in focal attention.
3. Retrieve the appropriate discourse representation from memory.
4. Construct the elided phrase by regenerating syntactic structure to align with the selected discourse representation.

Based on such models, the processing information also might enlighten us about the retrieval information, therefore the whole interpretation process.

On the condition that syntactic structure is required in the interpretation at the ellipsis site, the same syntactic form should be observed in the antecedent; also, forms that are nonparallel should require extra repair operations to be comprehended or should be ungrammatical (Arregui et al., 2006, Frazier and Clifton, 2005). Shaphiro et al. (2003) said that most of the "restricted theories" propose that the first analysis of a phrase is exclusively based on syntactic information (lexical categories, phrasal categories, and maybe argument structure), and that additional syntactic information are then employed to aid reaching into a final comprehension. Also, as stated in Shaphiro et al. (2003), understanding the long-distance dependence on the basis of memory cost includes estimating the distance and integrating material between non-adjacent positions. The greater the distance between positions (and the more complicated the information), the greater the processing cost and the more difficult it is to comprehend sentences (e.g., Gibson, 1998; McElree, 2000).

Some studies do not support the copying and distance claim. For example, Martin and McElree (2008) examined online interpretation of VPE in an eye-tracking experiment in addition to four speed-accuracy supplementary agreement experiments and suggested that interpretation of ellipsis could involve a pointer to structures in existence in memory because they found no direct effect of distance and complexity of the antecedent on the time spent on the interpretation (see Kroll, 2020 for an opposite view about the proximity of the antecedent).

Based on these processing theories among others, I wanted to measure the total reaction time and see whether the necessity of the employment of VC or the direction of the ellipsis/anaphora has any effect on the interpretation of the anaphora. In addition, I wanted to see whether the reaction time results would be in line with the offline acceptability judgment tasks; whether the preferred or dis-preferred interpretations are computed in a parallel way or one requires more time than the other.

On average, participants took 10–15 minutes to complete the entire experiment. When they finished the experiment, they were informed that the experiment ended and asked to press the space bar to send the results. When they submitted the results, they saw contact information of the researcher for questions with a thank you message on the screen.

3.1.4. Analysis (both English and Turkish experiment)

I analyzed the offline data (true/false answers by participants) and the online data (the reaction time it took for participants to answer TRUE to end-of-trial statement) separately.

Recall from the Introduction that I predicted that VC was difficult because it involves a transformation of an underlying reflexive into a pronoun for the purposes of interpretation and I expected that it would, as such, be avoided if possible. This led us to expect that the strict identity reading would be preferred (or at least less dis-preferred) in those conditions in which it would not require VC than in the conditions where it would require VC. Thus, I expected, for example, that the strict identity reading in English VPE examples that contain a *reflexive* pronoun (in the antecedent and, by hypothesis, in the ellipsis site as well) would be more dis-preferred than in VPE examples that contain a *possessive* pronoun. I expected this because for the strict identity reading to obtain in reflexive constructions, VC is necessary: the reflexive in the ellipsis site needs to be “converted” into a pronoun. On the other hand, the same reading does not require VC in sentences where the antecedent and the ellipsis site contain a possessive pronoun to begin with. In other words, I expected the number of TRUE answers to statements that forced the strict identity reading in VPE with reflexives (e.g., *Iris praised herself and Mary did too. Mary praised Iris.*) to be lower than with possessives (e.g., *Iris praised her friend and Mary did too. Mary praised Iris’s friend.*).

Admittedly, the number of the experimental items in each sub-subcategory was low (only two sentences). The reason why I could not have more items in each category (e.g., VPE with reflexive pronoun in strict identity reading in gender match condition)

was that investigating VC in VPE and RNR requires collecting judgments on sentences that are very difficult for speakers to interpret and the sentences were very tiring for the participants (according to the feedback that I received in the pilot studies). Thus, I decided to redesign the experiments with a smaller number of items.

I first calculated the frequencies and mean percentages of the TRUE (1) and FALSE (2) answers each item and, therefore, for each condition, separately for each construction (VPE, RNR). Our first comparison involved checking whether gender (mis)match condition played a role in the way our participants interpreted VPE and RNR sentences. Recall that I included gender (mis)match condition in order to check the claims from the literature on RNR (Chaves, 2014) according to which the sloppy identity reading is not available unless the local and long-distance antecedent match in gender. Due to the low number of items in gender match and gender mismatch conditions, this comparison involved only descriptive statistical procedures. Our results indicated that the gender (mis)match condition does not affect the availability of the sloppy (or strict) identity reading, i.e., I found no evidence that gender match is required for the sloppy identity reading to obtain in RNR sentences. Therefore, for the remainder of the analysis, I collapsed the gender match and gender mismatch conditions and used inferential statistical procedures in the remainder of comparisons.

I next computed the following comparisons separately for VPE and for RNR:

- To see a possible effect of VC on the interpretation of anaphors, I compared the percentage of the strict identity readings in items with the reflexive construction (which requires VC) with the percentage of the strict identity readings in items with the possessive construction (which does not require VC) (via a Friedman test and I unpacked the significant results via Wilcoxon Signed Rank tests).
- I ran the same procedure on the sloppy identity readings, for control purposes.
- To see a possible interpretive bias for sloppy or strict identity readings in both VPE and RNR, I compared (via Wilcoxon Signed Rank tests) the preference rates of these readings by collapsing all the items in each reading.
- To see the possible impact of directionality of anaphora, I compared the percentage of the acceptance rates of the strict identity readings in items in

VPE which are instances of forward anaphora with the percentage of the strict identity readings in items with in RNR which are backward anaphora instances (via Wilcoxon Signed Rank tests). I made separate comparisons for reflexive and possessive constructions.

- To check the control group, I ran the same procedure with the sloppy identity readings in which all the instances included forward anaphora.
- Lastly, particularly for Turkish, to see the possible effect of possessive construction, which was different from English because of its null possessive anaphor, I compared (via Wilcoxon Signed Rank tests) the percentages of the items with possessive construction and reflexive constructions by collapsing other variables.
- To see the possible processing differences and cost, I ran all the the same procedure above to compare the mean scores of the reading times.

Our hypothesis was that in those items to which participants chose TRUE answer (indicating that they *could* access the reading – strict or sloppy – that they were presented with), the time that it took to access the reading would be longer when the reading required VC than when it did not. However, since the comparisons took into consideration only TRUE answers (because I was only interested in the *acceptance*, rather than rejection rates for each condition) and since the items to which the TRUE answer was given varied from one participant to another, I was not able to run such formal statistical analyses on the data.¹⁸

I still calculated the mean time (per word on the screen) that a participant took to reach the answer and compared this time between the items in different conditions, but the

¹⁸ I was careful that the task does not simply ask for the participants' *preferences* in how they interpret ambiguous pronouns in the elliptical constructions. If I had done that, perhaps asking questions similar to the one in (i), I would most probably find that the sloppy identity reading was preferred (on most items, most participants would choose '1' as the answer), as the literature suggests.

- i. John liked, but Bill disliked himself.
Who did John like?
1) John (himself)
2) Bill

Instead, the post-item statements *forced* the speakers to consider a specific reading (either strict or sloppy identity) and either accept it or reject it. This allowed us to interpret every true answer as an indication of the presence of a particular reading in any particular item.

reader should keep in mind that the results are meant only as informal support for the results that I obtained from offline data. The comparisons of reaction times were the same ones that I computed for the offline data.

3.1.5. Results: Offline and online experiment results

3.1.5.1. English experiment

The literature up to date contains numerous studies about the interpretation of anaphors in VP ellipsis (see Chapter 2 above) but for RNR, to the best of my knowledge, no studies exist that show which reading (strict identity or sloppy identity) is preferred. I experimentally tested speakers' preferences or dis-preferences for interpretations of elliptical anaphors that do or do not require VC for interpretation. Of particular interest to us is the strict identity reading in examples that involve reflexives (with which strict identity interpretation necessarily requires VC) as compared to examples that involve possessive constructions (with which no reading requires VC in English, but which requires VC in Turkish).

Frequencies and percentages of TRUE answers to statements forcing either the strict or the sloppy identity reading were calculated for English native speakers' interpretations of the anaphors in English VPE and RNR constructions with reflexive and possessive pronouns. Recall that participants were presented with the 32 experimental sentences: 16 VPE sentences and 16 RNR sentences. Of each 16 sentences, 8 forced the strict identity reading and 8 forced the sloppy identity reading. Within each group, half of the items presented a gender matching condition (F-F, M-M) and half of the sentences had gender mismatching condition (F-M, M-F).

In what follows, I present the effect of the following factors on the interpretation of anaphors in RNR and VPE:

- Gender (mis)match,
- Vehicle Change,
- Directionality of anaphora/ellipsis.

3.1.5.1.1. Effect of gender match on the interpretation of ambiguous anaphors in RNR in L1 English

3.1.5.1.1.1 Results

Based on the RNR literature, I would expect that in the sloppy identity reading condition (items followed by a statement that forced the sloppy identity reading) I would get much higher acceptance rates in the gender match condition than in the gender mismatch condition both with possessive and with reflexive pronouns. As shown in Table 9, which summarizes mean acceptance rates of various readings in RNR, I did not observe any favorable effect of gender match in the sloppy identity reading conditions, either with the reflexives (55.60% acceptance in the gender match and 57.40% in the gender mismatch condition) or with the possessive pronouns (66.70% in both gender match and gender mismatch conditions), as graphically shown in Figure 3. This is why for the remaining analyses, I did not separate gender match and gender mismatch conditions.

Table 9. Summary of the Mean Rates and Frequencies of Acceptance for Gender Match-Gender Mismatch Conditions in RNR by L1 English Speakers

| ANAPHOR TYPE | READING TYPE | GENDER MATCHING CONDITION | ACCEPTANCE RATES | FREQUENCY (N=54) |
|------------------------|-------------------------|---------------------------|------------------|------------------|
| REFLEXIVE CONSTRUCTION | SLOPPY IDENTITY READING | GENDER MATCH | 55,60% | 30 |
| | | GENDER MISMATCH | 57,4% | 31 |
| | STRICT IDENTITY READING | GENDER MATCH | 42,60% | 23 |
| | | GENDER MISMATCH | 63% | 34 |

Table 9 (continued)

| ANAPHOR TYPE | READING TYPE | GENDER MATCHING CONDITION | ACCEPTANCE RATES | FREQUENCY (N=54) |
|-------------------------|-------------------------|---------------------------|------------------|------------------|
| POSSESSIVE CONSTRUCTION | SLOPPY IDENTITY READING | GENDER MATCH | 66,7% | 36 |
| | | GENDER MISMATCH | 66,7% | 36 |
| | STRICT IDENTITY READING | GENDER MATCH | 79,6% | 43 |
| | | GENDER MISMATCH | 77,8% | 42 |

Note. “N” is the total item numbers seen by all the participants. N = 54 for each condition.

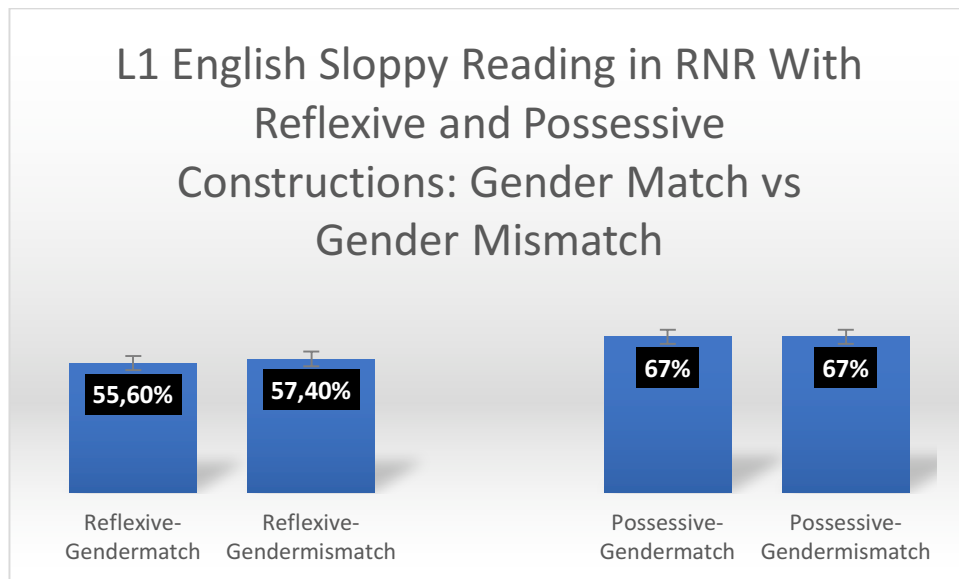


Figure 3. L1 English Sloppy Reading in RNR With Reflexive vs Possessive Constructions: Gender Match vs Gender Mismatch

To summarize, I first looked at whether the gender (mis)match between the two possible antecedents of the elided anaphor in RNR played a role in the availability of

the sloppy identity reading, as the literature suggested, to eliminate possible low acceptance rates on RNR in general because of this dis-preference. Based on the literature (see Ha, 2008; Chaves 2014) I expected to find more acceptance rates in the sloppy identity reading condition (items followed by a statement that forced the sloppy identity reading) in the gender match condition than in the gender mismatch condition both with possessive and with reflexive pronouns. However, I did not observe any favorable effect of gender match in the sloppy identity reading conditions, either with the reflexives in gender match and in gender mismatch condition or with the possessive pronouns in both gender match and gender mismatch conditions.

Thus, there were almost no differences between the acceptance of sentences like (127) and (128) on the one hand and between (129) and (130) on the other. This is why for the remaining analyses, I did not separate gender match and gender mismatch conditions. Our results, therefore, sharply contradict the claims in the RNR literature (Chaves, 2014) according to which gender match is necessary for the sloppy identity reading to obtain in NP RNR.

(127) John_i praised <himself_i>but Bill_k criticized himself_k.

RNR-Reflexive Gender Match Condition

(128) John_i praised <himself_i>but Mary_k criticized herself_k.

RNR-Reflexive-Gender Mismatch Condition

(129) John_i praised <his friend_i>but Bill_k criticized his friend_k.

RNR-Possessive-Gender Match Condition

(130) John_i praised <his friend_i>but Mary_k criticized her friend_k.

RNR-Possessive-Gender Mismatch Condition

3.1.5.1.2. Effect of Vehicle Change on the interpretation of ambiguous anaphors in VPE

3.1.5.1.2.1 Offline results

To check whether the need for VC plays a role in the interpretation of anaphors, I compared the strict reading in VPE with reflexive constructions and possessive

constructions. I expected to obtain more strict reading preferences with possessive constructions, where the strict identity reading does not require VC, than with reflexive constructions, where it does. I obtained significantly more strict identity reading preferences with possessive pronouns (M=85,20%) than with reflexive pronouns (M=36,10%), which supported our hypothesis that VC is problematic so it is not preferred ($Z=-4.096$, $p < .001$) (see Table 10 for the summary and Figure 4) for the graphical illustration.

On the other hand, I predicted not to observe the same effect in the sloppy identity reading, since the sloppy identity reading does not involve VC either with reflexives or with possessives. The acceptance rates of the sloppy identity reading in VPE with reflexive pronouns (M=93,5%) and with possessive pronouns (M=88%) were not significantly different from each other ($Z=-.992$, $p = .321$), as illustrated in Figure 5 (see Table 10 for the summary).

Table 10. Effects of VC in VPE (Offline Acceptance Rates) in L1 English

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|---------|
| Strict identity reading | 36,10% | 85,20% | < 0.05* |
| Sloppy identity reading | 93,5% | 88% | > 0.05 |

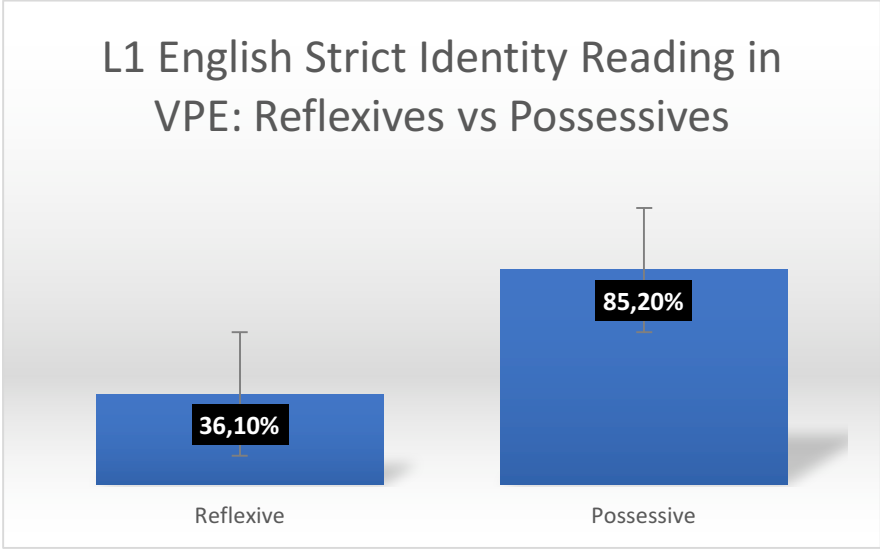


Figure 4. L1 English Strict Identity Reading in VPE: Reflexives vs Possessives

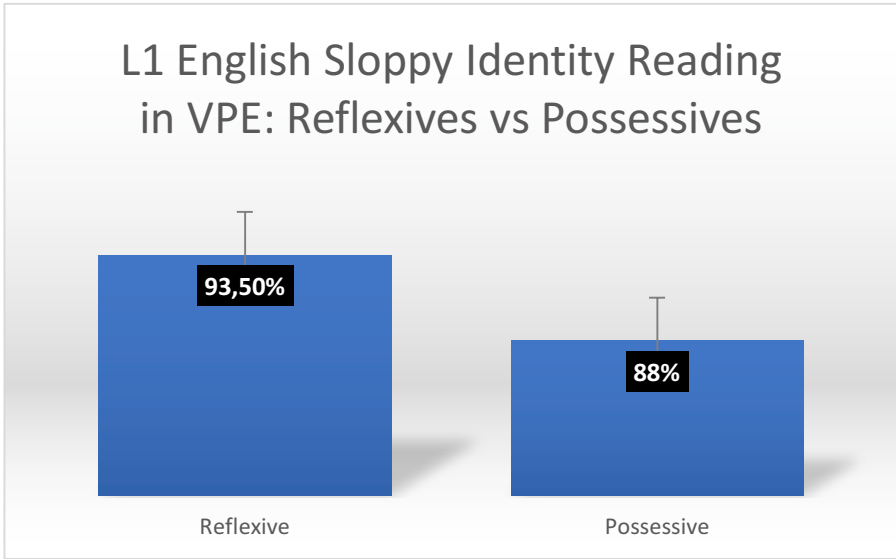


Figure 5. L1 English Sloppy Identity Reading in VPE: Reflexives vs Possessives

3.1.5.1.1.2 Online results

In addition, the analysis of the reading time results also revealed that the strict identity reading in VPE took significantly longer per word with reflexive constructions (M=652.44 ms) than with possessive constructions (M=531.90 ms), This is also in accordance with our hypothesis that VC requires more processing load, which is why it resulted in longer reading times for the participants ($Z=-2.282$, $p=.022$.) (see Table 11).

Also, the analysis of the reading time results of the sloppy identity reading showed that the reading times in both conditions (reflexive: M=406.40 ms versus possessive anaphors: M=374.51 ms) did not differ significantly ($Z=-.048$, $p=.962$) (see Table 11). As predicted, since neither involves VC, approximately equal acceptance rates for each condition were obtained and they were processed similarly while reading.

Table 11. Effects of VC in VPE (Reading Times) in L1 English

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|----------------------------|---|--|---------|
| Strict identity reading | 652.44 | 531.90 | < 0.05* |
| Sloppy identity reading | 406.40 | 374.51 | > 0.05 |

3.1.5.1.3. Effect of Vehicle Change on the interpretation of ambiguous anaphors in RNR

3.1.5.1.3.1 Offline results

Similarly, I tested RNR for the effect of VC. I obtained higher acceptance rates of the strict identity reading with possessive pronouns (M=78,7%) than with reflexive pronouns (M=52,8%). The difference was significant ($Z= -3.376$, $p=.001$), as illustrated in Figure 6 (see Table 12 for summary).

Our results showed that the acceptance rates of the sloppy identity reading in RNR with reflexives and possessives were similar, i.e., there were no significant differences based on the Wilcoxon test ($Z = -1.466$, $p = .143$). This reading was accepted 56,5% of the time with reflexive pronouns and 66,7% of the time with the possessive pronouns, ($Z = -.505$, $p = .614$), as shown in Figure 7 (see Table 12 for summary).

Table 12. Effects of VC in RNR (Offline Acceptance Rates) in L1 English

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|---------|
| Strict identity reading | 52,8% | 78,7% | < 0.05* |
| Sloppy identity reading | 56,5% | 66,7% | > 0.05 |

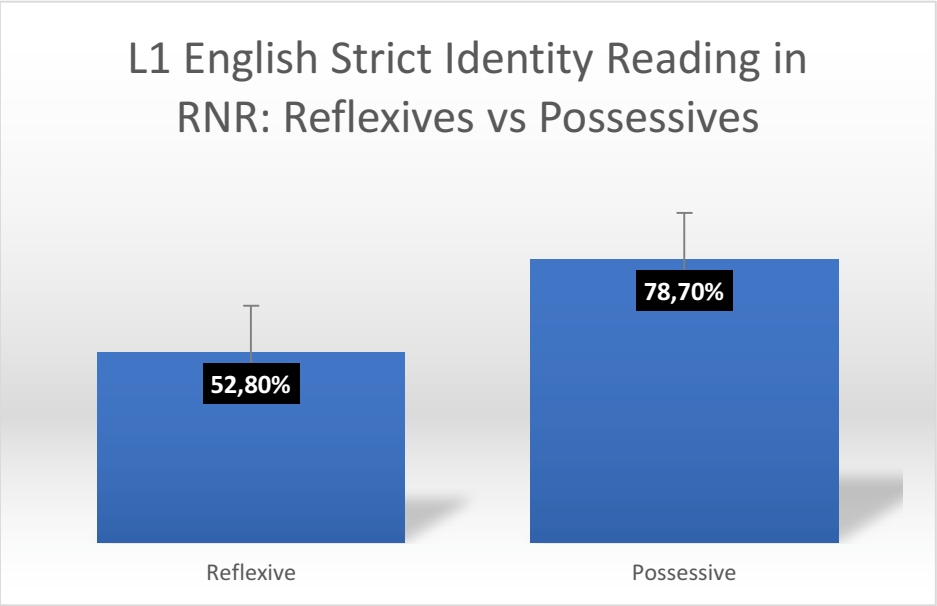


Figure 6. L1 English Strict Identity Reading in RNR: Reflexives vs Possessives

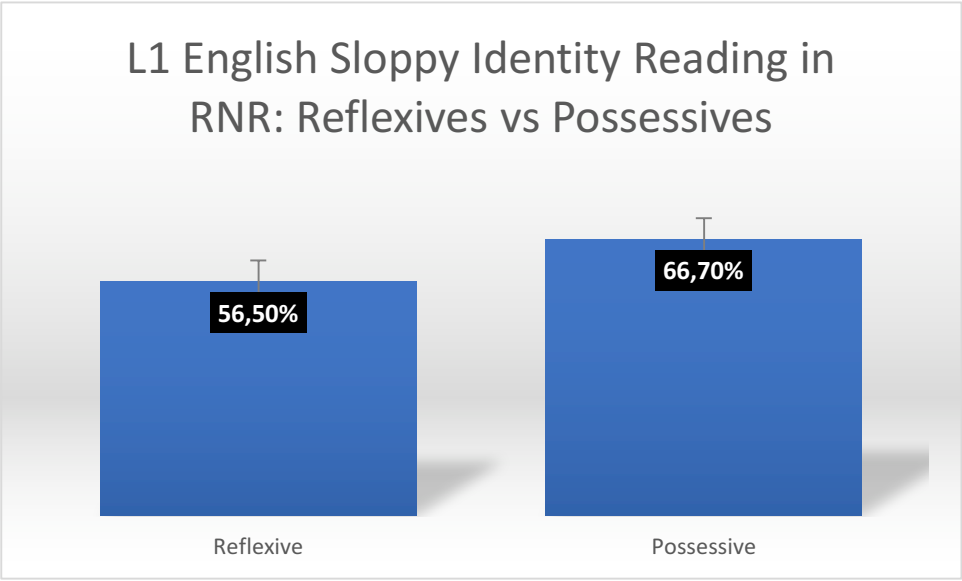


Figure 7. L1 English Sloppy Identity Reading in RNR: Reflexives vs Possessives

3.1.5.1.3.2 Online results ¹⁹

On the other hand, although the reading time in the strict identity reading condition in reflexive constructions (M=737.34 ms) was not significantly different than in possessive constructions (M=537.13 ms) it approached significance ($Z = -1.946$, $p = .052$). This difference again supports the claim that VC is confusing (see Table for summary).

Parallel to our expectations, the analysis of the reading time results of the sloppy identity reading revealed that the reading times in both conditions (reflexive: M=634.69 ms versus possessive anaphors: M=579.82 ms) did not differ significantly ($Z = -.505$, $p = .624$) (see Table 13). As predicted, since neither involves VC, approximately equal number of acceptance rates for each condition was obtained and they were processed similarly while reading.

¹⁹ Our online experiment has a limitation in terms of a confounding factor. I have a garden path in English RNR sentences such as *Sue praised but Mary blamed herself* because after reading a transitive verb such as *praised*, the reader expects to encounter the direct object, and when that does not happen, the parser needs to reanalyze the structure, which leads to a garden path effect (Bever, 1970; Ferreira 2003; Ferreira et al., 2001). This effect probably would have showed itself in the time that it took for a person to read (and react to) the sentence: It would influence the amount of time a person would spend on reading the conjunction *but* and perhaps there would be a spillover effect for the rest of the sentence. However, importantly, I did not measure the reading times of the sentences: The initial reading of that sentence was not a part of the measurement. The measurement started after the sentence was already read and the statement to which speakers had to react to appeared on the screen. Therefore, it is likely that the meaning of the original sentence has already been settled and any garden path effect has already been recovered from. However, I did not verify that this is really the case – that participants have indeed recovered from the garden path effect at the time that they made their choice regarding the interpretation of the sentence. Thus, it is still possible that the effects of the garden path in English RNR examples lingered on and affected my online results. This should be amended in the future research. However, recall that our processing results are only supplementary to the offline data; i.e., I analyze the online data only to see whether or not they support the offline acceptance rates. Thus, I decided to keep our online RNR data, regardless of the garden path effect.

Table 13. Effects of VC in RNR (Reading Times) in L1 English

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|----------------------------|---|---|---|
| Strict identity reading | 737.34 | 537.13 | > 0.05 (=0.052, approaching significance) |
| Sloppy identity reading | 634.69 | 579.82 | > 0.05 |

To summarize, in order to check if VC requirement played a role in the anaphora interpretation, I compared the strict reading in VPE and RNR with reflexive constructions and possessive constructions. I hypothesized that I should obtain more strict reading preferences with possessive constructions, where the strict identity reading does not require VC, than with reflexive constructions, where it does. I obtained more strict identity reading preferences with possessive pronouns than with reflexive pronouns, which supported our hypothesis that VC was complex so it was not preferred.

On the other hand, the reported differences in the acceptance of the strict reading in VPE and RNR only point to the effect of VC if they are not replicated in the availability of the sloppy reading (in which case, it would seem that speakers have fewer difficulties in general in processing possessive pronouns than in processing reflexive pronouns). However, if the reflexive and possessive pronouns did not differ in the availability of the *sloppy* reading, then the observed difference in the availability of the *strict* reading does point to the cost associated with VC. Therefore, I predicted not to observe the same effect in the sloppy identity reading, since the sloppy identity reading does not involve VC either with reflexives or with possessives. The acceptance rates of the sloppy identity reading in both RNR and VPE with reflexive pronouns and with possessive pronouns were similar.

In addition, the analysis of the reading time results also revealed that the strict identity reading in VPE and RNR took participants significantly longer (per word) with reflexive constructions than with possessive constructions. This is also in accordance with our hypothesis that VC requires more burden on the processing, which is why it resulted in longer reading times for the participants.

Also, in VPE and RNR sentences, the analysis of the reading time results of the sloppy identity reading showed that the reading times in both conditions did not differ significantly. As predicted, since neither involves VC, approximately equal number of acceptance rates for each condition was obtained and they were processed similarly while reading, which again supports the claim that VC is difficult.

3.1.5.1.4. Results and discussion of overall strict vs sloppy identity reading preferences

To see if there were any differences between the general acceptance of sloppy and strict identity readings in the two elliptical constructions, I compared those readings in VPE and RNR by combining reflexives and possessives. Keeping other variables constant, sloppy identity reading acceptance scores ($M=76,15\%$) was significantly higher than strict identity reading acceptance scores ($M=63,18\%$) ($Z=-2.752$, $p=.006$). This is in keeping with the literature on anaphor interpretation under ellipsis, which reports that the sloppy identity reading is in general preferred to the strict identity reading (Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Ying, 2005; Koornef et al., 2012; see Frazier & Clifton, 2000 for a review). However, as it was observed, the strict identity reading was higher than 60%, lending support to studies (Shapiro & Hestvik, 1995; Shapiro et al., 2003) which showed that although the strict identity reading is not the preferred reading, it is still relatively easily accessible by speakers.

Even though I did not add any contextual cues, our end-of-trial questions forced the participants to access either the sloppy or strict interpretation. Since those questions

played a role as if they were contextual cues, these results are also parallel with the literature (Gandón-Chapela & Gallardo del Puerto, 2019; Ying, 2005, among others).

3.1.5.1.5. Effect of the directionality of anaphora

3.1.5.1.5.1 Offline results and discussion

In order to see whether the directionality of anaphora played a role in the interpretation of deleted anaphors, I compared the strict identity reading in VPE, involving *forward* anaphora, and strict identity reading in RNR, containing *backward* anaphora, separately for reflexives and for possessives. If forward anaphora is easier than backward anaphora, I expected to see more strict identity readings in VPE than in RNR. However, neither of the results supported this claim. First, there were no differences between the results of possessive pronouns in VPE (M=85,20%) and in RNR (M=78,7%). This suggests that forward anaphora with possessive pronouns is not favored compared to backward anaphora with possessive pronouns ($Z=-1.259^c$, $p =.208$) (see Figure 9). Surprisingly, with reflexive pronouns, I obtained higher acceptance rates for the strict identity reading in RNR sentences (M=52,8%), which involve backward anaphora, than in VPE sentences (M=36,10%), which involve forward anaphora ($Z=-1.986$, $p =.047$) (see Figure 8). I next compared the strict identity reading between VPE and RNR by collapsing the items with reflexive and possessive pronouns. I could collapse these conditions because their interpretations are parallel in both constructions: strict identity readings with possessive pronouns do not require VC either in VPE or in RNR, and with reflexive pronouns, they require VC in both constructions. The strict identity reading in VPE was accepted at a rate of 60,62% and in RNR at the rate of 65,62%. Wilcoxon Test results revealed that there was no significant effect of anaphora directionality on the interpretation ($Z=-1.263$, $p =.206$).

Thus, results of comparisons of the strict identity reading (in which VPE and RNR differ in the directionality of anaphora) showed no preference for forward anaphora; on the contrary, they revealed that backward anaphora was favored over forward anaphora with reflexive pronouns (whose interpretation also involves VC).

The results of comparisons of strict identity readings are summarized below in Table 14.

Table 14. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) in L1 English

| | VPE Strict identity reading (forward anaphora forward ellipsis) | RNR Strict identity reading (backward anaphora backward ellipsis) | Result |
|-------------------------|--|--|---------|
| Reflexive construction | 36,10% | 52,8% | < 0.05* |
| Possessive construction | 85,20% | 78,7% | > 0.05 |

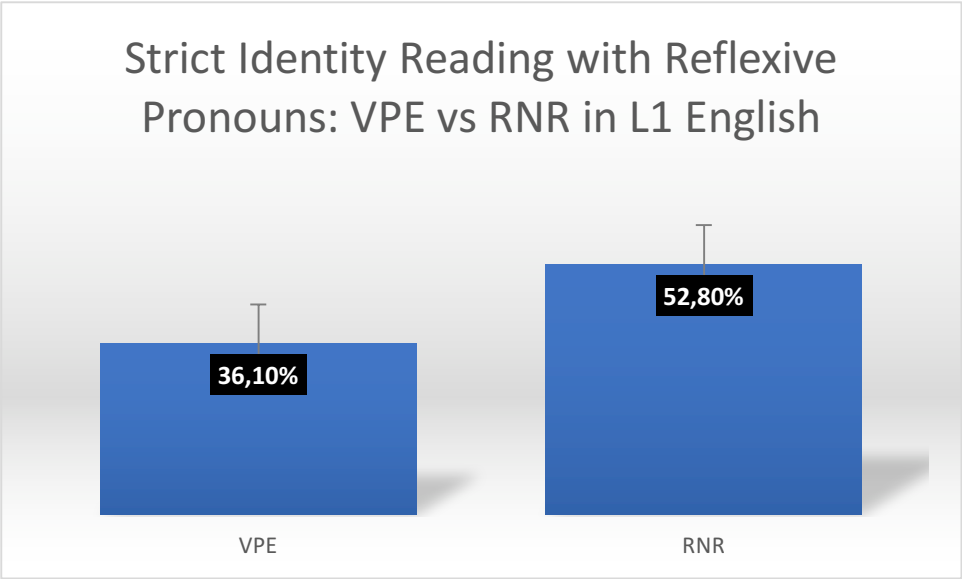


Figure 8. Strict Identity Reading with Reflexive Pronouns: VPE vs RNR in L1 English

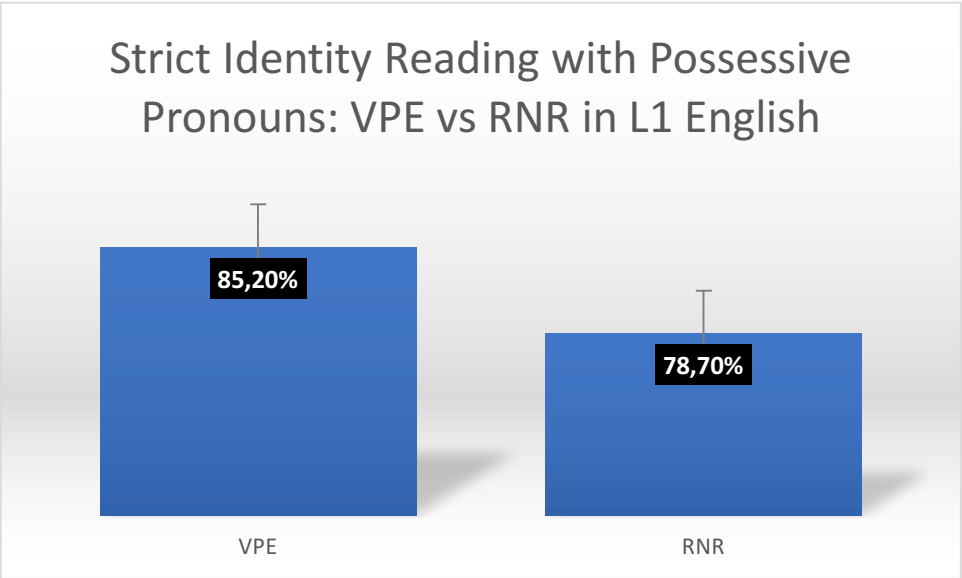


Figure 9. Strict Identity Reading with Possessive Pronouns: VPE vs RNR in L1 English

I next repeated the same comparison for the sloppy identity reading. Both VPE and RNR require forward anaphora in sloppy identity reading with both reflexive and possessive pronouns – in both constructions, the sloppy identity reading requires the anaphor to be co-referential with an antecedent that *precedes* it. Therefore, I expected to see similar results in both. Contrary to our expectation, however, the acceptance rate of sloppy identity readings in VPE was significantly higher than in RNR both in the possessive and in the reflexive construction ($Z=-3.881$, $p < .001$), (see Table 15 for the summary and see Figure 10 and Figure 11 for the graphical illustrations). The same result obtained when I collapsed the items with reflexive and possessive construction: I compared the overall sloppy identity reading in VPE ($M=90,62\%$) with RNR ($M=61,5\%$). Wilcoxon Test results showed that the sloppy identity reading was accepted significantly more.

Since the sloppy identity reading involves forward anaphora in both constructions, the observed difference cannot be related to the directionality of anaphora. However, since the two constructions differ in the directionality of ellipsis (VPE involves forward ellipsis, and RNR involves backwards ellipsis), it is conceivable that the sloppy identity reading in VPE is accepted more due to the forward direction of ellipsis that is involved in this construction.

Table 15. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) in L1 English

| | VPE Sloppy identity reading (forward anaphora) | RNR Sloppy identity reading (forward anaphora) | Result |
|-------------------------|---|---|---------|
| Reflexive construction | 93,5% | 56,5% | < 0.05* |
| Possessive construction | 88% | 66,7% | < 0.05* |

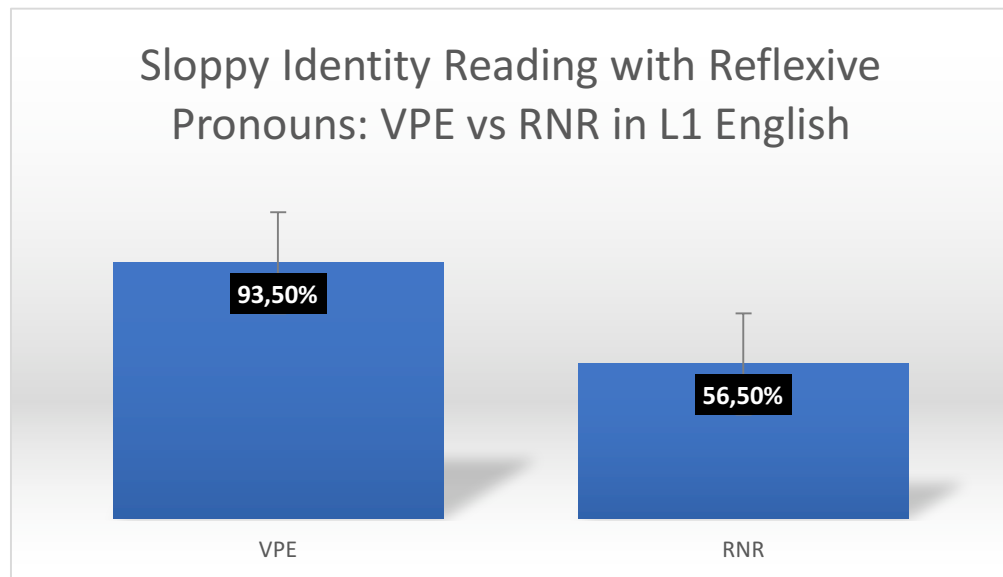


Figure 10. Sloppy Identity Reading with Reflexive Pronouns: VPE vs RNR in L1 English

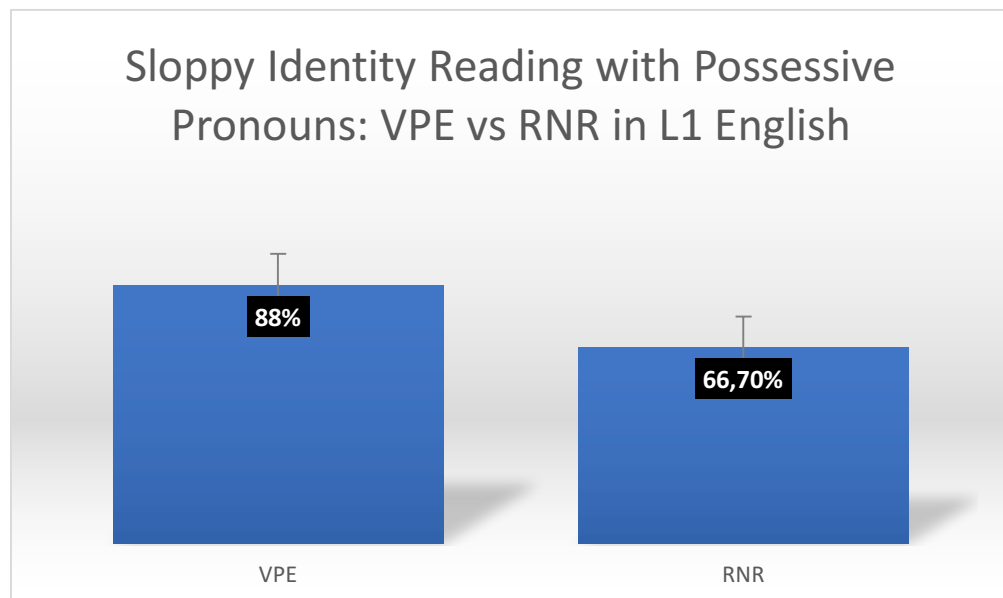


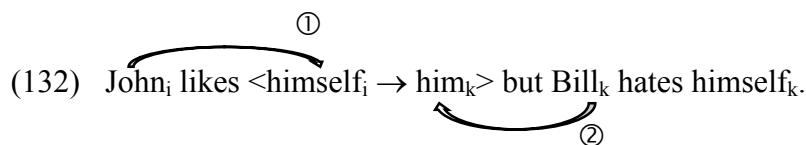
Figure 11. Sloppy Identity Reading with Possessive Pronouns: VPE vs RNR in L1 English

However, if backward ellipsis is disfavored, as this result suggests, it is difficult to reconcile it with the result (reported above) obtained from the comparisons of the strict identity reading preferences with reflexive pronouns in the two constructions, which

revealed that speakers preferred backward anaphora in RNR (which also involves backward ellipsis). It is possible, however, that the reason for this preference for backward anaphora/ellipsis in RNR is the fact that in VPE, at the level where interpretation takes place (i.e., after the VP from the first conjunct has been copied into the ellipsis site), there is a possible antecedent for the anaphor (the subject of the second conjunct), which intervenes between the anaphor and the intended referent (the subject of the first conjunct), as illustrated in (131).



It is possible that speakers at first interpret the reflexive as bound by this local binder (*Bill* in (131)), as required by Principle A of the Binding Theory. Once they are forced to consider the *strict* identity reading, which requires the anaphor to be co-referential with the subject of the first conjunct, it is difficult for speakers to establish a co-reference between the reflexive and a (both linearly and structurally) long-distance antecedent across a legitimate local binder. In the strict identity reading in RNR, the situation is different because the binder of the elided reflexive (which is subsequently interpreted as a pronoun through VC) does not intervene between the ultimate binder (the subject of the second conjunct and the anaphor, as illustrated in (132)), so it might be easier for speakers to “cancel” the legitimate binding relation (between *John* and *himself*) and establish the coreference needed for the strict identity reading to obtain.



If this explanation is on the right track, I would expect backward anaphora/ellipsis to be preferred only with reflexive, and not with possessive pronouns since only reflexives require a binder, which is what I found.

Thus, a possible generalization that would be compatible with both of the contradictory results that I obtained is that, everything else being equal, backward ellipsis is dispreferred, but this dispreference can be overridden if other factors come into play,

such as ignoring a legitimate binder which is both structurally and linearly closer than the one that the anaphor is resolved to.

Lastly, I also checked whether or not there was interpretation differences between the two elliptical constructions. I collapsed all the items and compared the percentages of TRUE answers to RNR (M=63,62%) and VPE sentences (M=75,68%). A Wilcoxon Test results revealed that there was a significant effect construction type ($Z=-1.263$, $p=.206$), suggesting that participants were significantly more likely to choose the TRUE answer to VPE sentences than to RNR sentences.

3.1.5.1.5.2 Online Results and Discussion

There were also significant differences in the sloppy identity reading with both reflexive (VPE M=406.40 ms; RNR M=634.69 ms) and possessive constructions (VPE M=374.51 ms; RNR M=579.82 ms). In other words, RNR sentences were read in longer times ($Z=-2.955$, $p=.003$ for reflexives and $Z=-3.315$, $p=.001$ for possessives) (see Table 16). This result was also replicated when I collapsed reflexive and possessive constructions: I found that the sloppy identity reading in VPE sentences (M=390,46 ms) was read in shorter times than in RNR sentences (M=607,25 ms) ($Z=-3.556$, $p<.001$), suggesting that RNR as backward ellipsis was less preferred.

Table 16. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) (Reading Times) in L1 English

| | VPE Sloppy identity reading (forward anaphora) (millisecond) | RNR Sloppy identity reading (forward anaphora) (millisecond) | Result |
|-------------------------|--|--|---------|
| Reflexive construction | 406.40 | 634.69 | < 0.05* |
| Possessive construction | 374.51 | 579.82 | < 0.05* |

In terms of reading times, there were no differences among the strict identity readings with VPE and RNR either with reflexive (VPE: M=652.44 ms; RNR: M=737.34 ms) or with possessive pronouns (VPE: M=531.90 ms; RNR: M=537.13 ms), suggesting that the directionality of ellipsis does not modulate the ease of processing this reading ($Z=-.961$, $p=.337$ for reflexives and $Z=-.264$, $p=.792$ for possessives). That result also might be because the strict reading in VPE involves an intervening the antecedent (which slows participants down), but RNR involves backward ellipsis (which is harder), but not an intervener.

Table 17. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) in L1 English

| | VPE Strict identity reading (forward anaphora (forward ellipsis) (millisecond) | RNR Strict identity reading (backward anaphora (backward ellipsis) (millisecond) | Result |
|-------------------------|--|--|--------|
| Reflexive construction | 652.44 | 737.34 | > 0.05 |
| Possessive construction | 531.90 | 537.13 | > 0.05 |

Also, when I compared the reading times of the RNR construction in general and the reading times of the VPE construction in general, I found that RNR sentences (M=622,34 ms) took participants more time to read than VPE (M=491,31 ms) sentences than RNR sentences ($Z=-3.604$, $p < .001$).

To summarize, both VPE and RNR required forward anaphora in the sloppy identity reading with both reflexive and possessive pronouns. Therefore, I expected to see similar results in both. Contrary to our expectation, however, the acceptance rate of sloppy identity readings in VPE were significantly higher than in RNR both in the possessive and in the reflexive construction. Similarly, the online reading time results displayed that there were significant differences in the sloppy identity reading with both reflexive and possessive constructions, i.e., RNR sentences were read in longer

times. In other words, English native speakers were more willing to accept the sloppy identity reading in sentences like (133) and (134) than in sentences like (135) and (136).

(133) John praised himself and Bill did too. *Reflexive Construction-VPE*

(134) John praised his friend and Bill did too. *Possessive Construction-VPE*

(135) John praised but Bill criticized himself. *Reflexive Construction-RNR*

(136) John praised but Bill criticized his friend. *Possessive Construction-RNR*

There might be several reasons for this result. It might be because of the fact that RNR involves backward ellipsis while VPE involves forward ellipsis. Another explanation might be because of the conjunctions *and* and *but*, i.e., because of the *parallel* vs *contrastive* coherence relations instantiated in VPE and RNR respectively. Parallel coherence relations were compared with the cause-effect relations in the ellipsis literature and the sloppy identity reading was found to be preferred in the former (Frazier et al., 1984; Kehler, 1993, 1995, 2000, 2002; Frazier & Clifton, 2006). However, in order to make sure that this is the case, first, I must investigate other ellipsis constructions using different parallel and contrasting cohesive relations. In addition, the structures used in different languages in the literature were not parallel and did not have the same type of discourse relations.

Unlike the sloppy identity reading, which was the result of forward anaphora both in VPE and in RNR, the strict identity reading involved forward anaphora in VPE, but backward anaphora in RNR. In both cases, the anaphor and its antecedent were in different clauses, so structurally, the two involved a parallel configuration. In order to see whether the directionality of anaphora played a role in the interpretation of deleted anaphors, I compared the strict identity reading in VPE, involving forward anaphora, and strict identity reading in RNR, containing backward anaphora, separately for reflexives and for possessives. If forward anaphora was easier than backward anaphora, I expected to see more strict identity readings in VPE than in RNR. Neither

of the results supported this claim. First, there were no differences between the results of possessive pronouns in VPE and in RNR, which suggested that forward anaphora with possessive and backward anaphora with possessive was accepted similarly. Surprisingly, I obtained higher acceptance rates for the strict identity reading in RNR sentences than in VPE sentences with reflexive pronouns. This suggested that backward anaphora (and backward ellipsis) was easier than forward anaphora (and forward ellipsis). For this, I suggested an explanation in terms of the interference of the legitimate binding antecedent for the reflexive in the (reconstructed) ellipsis site, which intervened between the anaphor and its ultimate antecedent. This also suggest that the process of VC kicks in relatively late in the processing of the anaphor resolution.

3.1.5.1.6. Conclusion

To sum up the results I discussed here:

- Although the literature suggested the unacceptability of gender mismatch in the sloppy identity reading in RNR, I did not see any consistent results in line with this argument; that is why I further analyzed the data by collapsing the items in gender match and gender mismatch conditions.
- Next, as expected, I obtained results suggesting that VC was difficult and therefore, dispreferred; I observed more strict identity readings with possessives than with reflexives in both RNR and VPE.
- Regarding the anaphora directionality, I observed no clear effect of it on the interpretation. As for the sloppy identity reading, VPE, which involves forward ellipsis was more favored than RNR which involves backward ellipsis. However, as for the strict identity reading, I found mixed results. The results of possessive constructions displayed that there were no differences between forward anaphora and backward anaphora in terms of ease. However, the results of the reflexive construction revealed that backward anaphora was accepted more than forward anaphora, which might be explained by the intervention of the antecedent and the anaphora in VPE with reflexive constructions. However, I also obtained the effect of construction: VPE as an

instance of forward anaphora was overall accepted more than RNR as an instance of backward anaphora.

- Lastly, I obtained significantly more sloppy identity reading preferences than strict identity reading preferences across the board. However, these differences did not reach the extent that the literature suggested of over-preference of sloppy identity reading in bare contexts.

3.1.5.2. Turkish experiment

In order to see whether the setting of the head-directionality parameter plays a role in the interpretation of deleted anaphors in VPE and RNR, I also tested a group of native Turkish speakers on VPE and RNR constructions in Turkish. Recall from 3.1.2. above that our materials in the English and the Turkish experiments were parallel to each other in that in both languages, VPE involved forward ellipsis and anaphora in both strict and sloppy readings and RNR involved backward ellipsis in all cases, with forward anaphora in sloppy readings and backward anaphora in strict readings. Nevertheless, our expectations in the Turkish experiment were slightly different from those in the English experiment due to the fact that,

- (i) unlike English, Turkish has a possessive anaphor *kendi* ‘self’s’ and
- (ii) Turkish is a pro-drop language in which possession is most naturally expressed by omitting the possessor anaphor altogether.

Due to the latter difference, materials that I used for possessive constructions in the Turkish experiment were different from those I used in the English experiment in that the possessive anaphor was missing even from the non-elliptical conjunct, as shown in (137). Given the fact that the unpronounced anaphor in the first conjunct (represented as *pro*) could in principle be both a pronoun (*onun* ‘his/her/its’) and a reflexive (*kendi* ‘self’s’), (137) is ambiguous in whether the evaluated worker is Pelin’s worker or somebody else’s worker.

- (137) Pelin *pro* işçi -si -ni değerlendir-di, Melis de.
 Pelin *pro* worker-3.SG.POSS-ACC evaluate -PAST.3SG Melis too
 ‘Pelin evaluated her own worker / her (somebody else’s) worker, and Melis did too.’

In fact, the null possessive anaphor in the non-elliptical conjunct is three-way ambiguous: It can function as a reflexive anaphor (yielding the interpretation of *kendi iscisini* ‘self’s worker’), or a possessive pronoun (*onun iscisini* ‘his/her worker’ yielding the interpretation of either ‘Melis’s worker’ or a third-party interpretation, ‘worker of someone other than both Pelin and Melis’).

The resolution of this ambiguity played an important role in our study. Recall that in English VPE and RNR, the sloppy identity reading requires no VC mechanism either in reflexive or in possessive constructions, but the strict identity reading requires VC in the reflexive constructions (where the elided anaphor – e.g., *herself* – should be replaced by a pronoun *her*) but not in possessive constructions (where e.g., *her friend* remains *her friend*). In Turkish, due to the presence of a possessive reflexive, VC is required not only to obtain the strict reading in reflexive constructions, but also in possessive constructions (if indeed the non-pronounced anaphor in the non-elliptical conjunct is the reflexive possessive *kendi* ‘self’s’). It was, therefore, important for us to show that this is indeed the case.

We, therefore, investigated the interpretation of the unpronounced possessor in the non-elliptical conjuncts in Turkish experimental sentences to show that the possessive anaphor in this conjunct was never interpreted as *onun* ‘his/her its’ or *başkasının* ‘someone else’s’), which would indicate that there is no requirement of VC in the possessive constructions in Turkish. This would also show that there is no sloppy reading in Turkish possessive constructions because the unpronounced possessor element in the non-elliptical conjunct is not locally bound.

3.1.5.2.1. Interpretation of null anaphors in non-elliptical conjuncts in Turkish VPE and RNR

3.1.5.2.1.1. Participants

Convenient sampling was used in this study. The questionnaire was administered to the students (n=60) studying at the Educational Faculty in Eskişehir Osmangazi University in Eskişehir, Turkey. The students who participated in the study were rewarded with extra course credits. 43 of the participants were female and 17 of the participants were male. Their ages ranged between 18 to 27 (M=20,76).

3.1.5.2.1.2. Materials & procedure

I prepared 28 experimental items with possessive pronouns in Turkish. I mostly used the experimental items from the main Turkish experiment in this thesis by modifying them since this had a different design from the previous experiment. Examples included 14 VPE sentences (*de* construction) and 14 RNR sentences (*hem...hem* construction) and each contained a question which participants were supposed to answer. The question resolved the ambiguity of the pronoun in the elliptical conjunct (yielding either the strict or the sloppy interpretation), and asked for the referent of the non-pronounced possessive anaphor in the non-elliptical conjunct (participants were instructed to circle all the options that applied). For example, (138) below is an example of a VPE experimental sentence, followed by a question that resolved ambiguity of the elided pronoun to the sloppy interpretation and asked about the referent of the non-pronounced possessor anaphor in the first conjunct.

- (138) Akın avukat-ı -nı alkışla -dı, Hilal de.
Akın lawyer-POSS-ACC applaud-PAST.3SG, Hilal too.
Hilal kendi avukat-ı -nı alkışla -dı ise Akın kim-i
Hilal self lawyer-POSS-ACC applaud-PAST.3SG if Akın who-ACC
alkışla-dı?
applaud- PAST.3SG

- a) kendi (Akın-'ın) avukat-ı -nı
self (Akin - GEN.3SG) lawyer- POSS-ACC
- b) Hilal-'ın avukat-ı -nı
Hilal-GEN.3SG lawyer- POSS-ACC
- c) başka biri-nin avukat-ı -nı
Someone else- GEN.3SG lawyer-POSS-ACC

'Akın applauded *pro*'s lawyer and Hilal did too.

If Hilal applauded Akın's lawyer, whom did Akın applaud?

- a) His own (Akın's) lawyer
b) Hilal's lawyer
c) Someone else's lawyer'

I had two experimental lists. Each of the 28 items (14 VPE and 14 RNR) appeared in both lists, but the question that followed the experimental sentence in list A resolved the ambiguity of the deleted anaphor to the *sloppy* identity reading and the questions that followed the item in list B resolved the ambiguity of the deleted anaphor to the *strict* identity reading. Therefore, each participant saw 28 items in total, and a single item was resolved only in one way (strict / sloppy reading). In half of the follow-up questions in each list, the ambiguity of the deleted anaphor was resolved to the sloppy identity reading while in the other half, strict identity reading.

The survey was prepared on Google Forms and sent to the participants through the messaging system of the LMS of the Eskişehir Osmangazi University.

3.1.5.2.1.3. Analysis

A preliminary analysis explored the distribution of the samples, which were not normally distributed, as indicated by the results of the Kolmogorov-Smirnov tests ($p < 0.05$). Consequently, I used non-parametric tests to analyze the results. I used four Wilcoxon tests for the binary comparisons within a single construction (VPE / RNR) and a single ambiguity resolution (strict / sloppy). For example, I compared how often participant chose only the option *kendi* 'self's' in the VPE strict identity reading

ambiguity resolution vs. the sum of all other possible options or option combinations in the same condition (only *onun* ‘his/her/its’, only *başkasının* ‘someone else’s’, both *kendi* ‘self’s’ and *onun* ‘his/her/its’, all possible answers: *kendi* ‘self’s’, *başkasının* ‘someone else’s’, *onun* ‘his/her/its’ and all other possible combinations). I did the same comparison for the VPE with the strict identity reading resolution, as well as for RNR in each ambiguity resolution condition.

3.1.5.2.1.4. Results and discussion

Four Wilcoxon signed rank tests were conducted to compare the preference for only the reflexive possessive *kendi* ‘self’s’ with other possible options for the empty possessor in the non-elliptical conjunct in both VPE and RNR in strict and sloppy identity reading conditions. I found that in all four conditions (VPE: strict/sloppy; RNR: strict/sloppy), the answer where only *kendi* ‘self’s’ was chosen as the empty possessor in the non-elliptical conjunct was chosen significantly more than all other answers. Table 18 presents the numerical results.

Table 18. Results of the Turkish Possessive Construction Interpretation Task^a

| CONSTRUCTION TYPE | READING TYPE | KENDI ‘SELF’ VS OTHER POSSIBLE OPTIONS | M | SD | Z | P |
|-------------------|--------------|---|------|------|-------|------|
| VPE | Sloppy | All Other Options Besides <i>kendi</i> ‘self’ | 1,78 | 1,77 | 5.468 | .000 |
| | | Only <i>kendi</i> ‘self’ | 5,20 | 1,81 | | |
| | Strict | All Other Options Besides <i>kendi</i> ‘self’ | 1,80 | 1,99 | 4.777 | .000 |
| | | Only <i>kendi</i> ‘self’ | 5,22 | 2 | | |
| RNR | Sloppy | All Other Options Besides <i>kendi</i> ‘self’ | 2,25 | 1,93 | 4.002 | .000 |
| | | Only <i>kendi</i> ‘self’ | 4,77 | 1,94 | | |
| | Strict | All Other Options Besides <i>kendi</i> ‘self’ | 2,25 | 2,02 | 3.385 | .001 |
| | | Only <i>kendi</i> ‘self’ | 4,53 | 2,07 | | |

a. Wilcoxon Sign Test

The participants in both groups (List A and List B) consistently chose the answer *his/her own friend*, showing that they interpreted the possessive construction in the non-elliptical (first) conjunct as containing the possessive reflexive *kendi* ‘self’s’ regardless of how they resolved the ambiguity of the experimental item (i.e., whether they interpreted it as having a strict or a sloppy reading).²⁰ This in turn means that, as opposed to English, the VC mechanism is involved in anaphor resolution in elliptical possessive constructions in Turkish. Thus, if VC affects the interpretation of elided anaphors in Turkish VPE and RNR, it should do so not only in reflexive constructions (as is the case in English), but also in possessive constructions.

3.1.5.2.1.5. Conclusion

To summarize, as stated above, I checked and confirmed that the *pro* in the non-elliptical conjunct is interpreted as a possessive reflexive *kendi* ‘self’s’, regardless of the interpretation assigned to the elided anaphor (sloppy identity, strict identity). Thus, in Turkish, VC is necessary to access the strict identity reading not only in the reflexive construction, but also in the possessive construction. Thus, I expected the sloppy identity reading (which requires no VC) to be preferred to strict identity reading (which requires VC) both in reflexive and in possessive constructions in Turkish.

3.1.5.2.2. Effect of gender-match condition on the interpretation of ambiguous elided anaphors in RNR construction in Turkish

3.1.5.2.2.1 Results and discussion

In Turkish, there is no grammatical gender. This means that subject of different gender are resumed by the same anaphor (in our case, reflexive/possessive pronoun). Thus, gender match condition was not expected to be favored in any of our experimental conditions and it was not expected to modulate the availability of the sloppy identity reading in RNR. Nevertheless, for completeness I examined the effect of the gender

²⁰ As seen in the Table 18, the general acceptance rate displayed a significant preference for *kendi* with higher acceptance rates, so I have made the generalization of it as having *kendi* in the place of the unpronounced possessive pronoun. However, other ‘*pronoun-antecedent*’ options are still available for some participants, especially in RNR.

match condition on the acceptance of the strict and sloppy identity readings in RNR sentences. Table 19 summarizes the raw results I obtained in the Turkish experiment.

Table 19. Summary of Results for Gender (Mis)match Conditions in RNR by L1 Turkish Speakers

| ANAPHOR TYPE | READING TYPE | GENDER MATCHING CONDITION | ACCEPTANCE RATES | FREQUENCY (N=66) |
|-------------------------|-------------------------|---------------------------|------------------|------------------|
| REFLEXIVE CONSTRUCTION | SLOPPY IDENTITY READING | GENDER MATCH | 97% | 64 |
| | | GENDER MISMATCH | 98,5% | 65 |
| | STRICT IDENTITY READING | GENDER MATCH | 1,5% | 1 |
| | | GENDER MISMATCH | 0% | 0 |
| POSSESSIVE CONSTRUCTION | SLOPPY IDENTITY READING | GENDER MATCH | 48,5% | 32 |
| | | GENDER MISMATCH | 84,8% | 56 |
| | STRICT IDENTITY READING | GENDER MATCH | 15,2% | 10 |
| | | GENDER MISMATCH | 15,2% | 10 |

Note. “N” is the total item numbers seen by all the participants. N = 66 for each condition.

As the results show, in no condition was the gender match condition favored to gender mismatch condition in RNR. Gender (mis)match only seemed to modulate the accessibility of the sloppy reading in possessive constructions, but it did so by making this reading more accessible in the gender *mismatch* condition (84,80%) rather than gender match condition (48,50%). This difference is shown in Figure 12. Given the fact that Turkish does not even have grammatical gender, this finding is surprising and mysterious for us and I have no explanation for it.

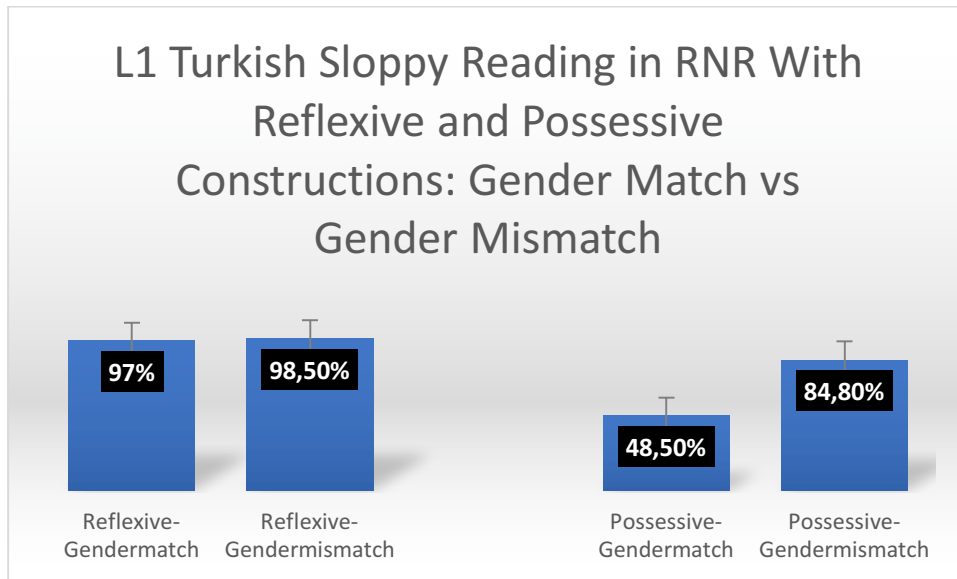


Figure 12. Strict Identity Reading with Possessive Pronouns: VPE vs RNR in L1 English

Since gender mismatch did not affect the availability of the sloppy identity reading (as is claimed in the RNR literature for English), for the remaining analyses I collapsed the items in the gender match and gender mismatch conditions.

3.1.5.2.3 Effect of Vehicle Change on the interpretation of ambiguous anaphors in VPE in Turkish

Recall that in English, to check whether the need for VC plays a role in the interpretation of deleted anaphors, I compared the acceptance rates of the strict identity readings with reflexives (which requires VC) and strict identity readings with possessives (which does not) both in VPE and RNR. However, in Turkish, as opposed to English, VC mechanism is involved in the strict identity readings not only with reflexive constructions, but also with possessive constructions (both in VPE and RNR). Thus, I expected the sloppy identity reading to be favored compared to the strict identity reading both in reflexive and possessive constructions. I also expected to find

similar acceptance rates for the strict identity reading in both construction types (reflexive/possessive).

3.1.5.2.3.1 Offline results and discussion

I obtained similar preferences for the strict identity reading with possessive pronouns (M=8,30%) and with reflexive pronouns (M=18,20%), which supported our hypothesis that since both constructions involve VC, there should be no preference for one over the other pronoun type ($Z=-1.545$, $p = .122$), see Table 20 for the summary and Figure 13 for the graphical representation.

Likewise, I predicted not to observe a significant difference in the sloppy identity reading between possessive and reflexive constructions, since the sloppy identity reading does not involve VC either with reflexives or with possessives. The acceptance rates of the sloppy identity reading in VPE with reflexive pronouns (M=93,2%) and with possessive pronouns (M=84,1%) were not significantly different from each other ($Z=-1.429$, $p = .153$), see Figure 14 for the graphical representation.

Table 20. Effects of VC in VPE (Offline Acceptance Rates) in Turkish

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|--------|
| Strict identity reading | 8,30% | 18,20% | > 0.05 |
| Sloppy identity reading | 93,2% | 84,1% | > 0.05 |

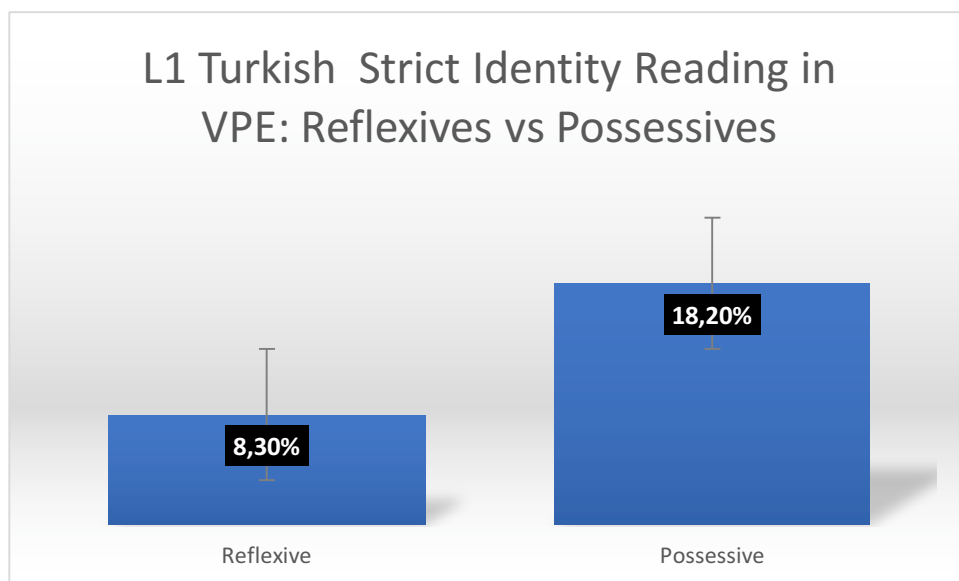


Figure 13. L1 Turkish Strict Identity Reading in VPE: Reflexives vs Possessives

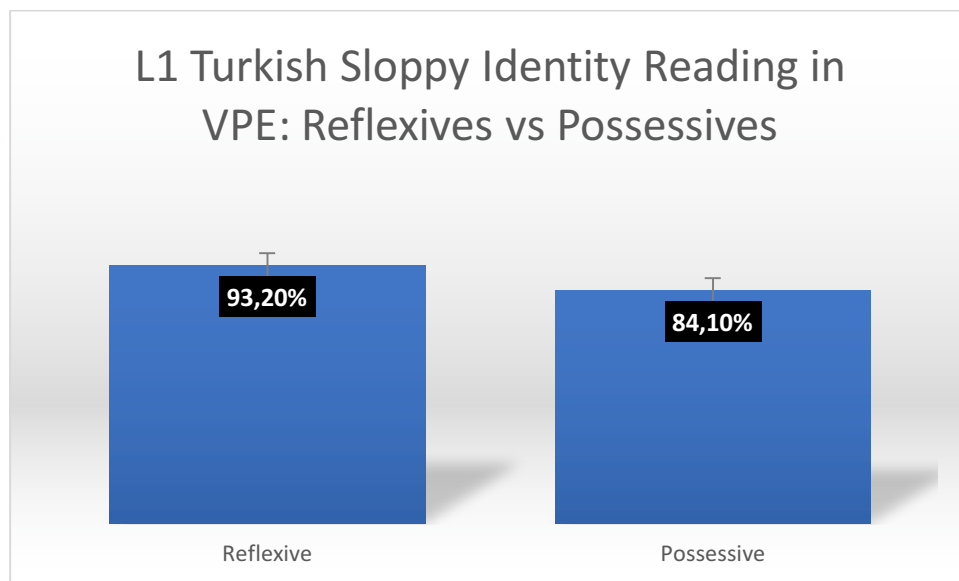


Figure 14. L1 Turkish Sloppy Identity Reading in VPE: Reflexives vs Possessives

Recall that in English, I found a significant difference between the acceptance rates of the sloppy and strict identity readings in the possessive construction, but not with the reflexive construction. That in Turkish, which unlike English has a reflexive

possessive anaphor, I found a significant difference between the two readings in both constructions shows that the source of the difference is not the nature of the construction and the semantic relations that need to be established in the two kinds of sentences, but rather the fact that the strict reading requires VC with *reflexive* elements, regardless of the meaning that they convey.

3.1.5.2.3.1 Online results and discussion

The analysis of the reading time results also revealed that the strict identity reading with reflexive constructions (M= 551.44 ms) and with possessive constructions (M=584.57 ms) were read in similar time durations. This is also in accordance with our hypothesis that since each construction involves VC, both require similar processing load ($Z=-1.147$, $p= .251$), see Table 21.

On the other hand, the reaction time results showed that the reading times of the sloppy identity reading in VPE in reflexive conditions (M=362.73 ms) were shorter than possessive anaphors (M=865.18 ms) ($Z=-3.039$, $p=.002.$); i.e., that the processing time of possessives was longer than reflexive constructions, see Table 21.

Table 21. Effects of VC in VPE (Reading Times) in Turkish

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|----------------------------|---|---|---------|
| Strict identity reading | 551.44 | 584.57 | > 0.05 |
| Sloppy identity reading | 362.73 | 865.18 | < 0.05* |

This finding did not parallel the finding in the offline experiment, where the acceptance rate of the sloppy reading in the reflexive construction was higher, but not significantly higher than in the possessive construction.

3.1.5.2.4 Effect of Vehicle Change on the interpretation of ambiguous anaphors in RNR

3.1.5.2.4.1 Offline results and discussion

I also tested RNR for the effect of VC. I obtained higher acceptance rates of the strict identity reading with possessive pronouns ($M=15,20\%$) than with reflexive pronouns ($M=0,89\%$). In other words, Turkish participants were less likely to interpret the reflexive *kendini* ‘oneself’ in (139) as co-referential with Ali than they were to interpret the unpronounced reflexive in the possessive phrase *arkadaşını* ‘one’s friend’ in (140) as co-referential with Ali. The difference was significant ($Z=-2.399, p=.016$). I did not expect this result to obtain since the interpretation of both the possessive and the reflexive anaphor requires VC in order to co-refer with the long-distance antecedent. However, I note that although there were differences between the two anaphor types with strict identity reading, the acceptance rates of both constructions were very low, at most 15% (see Table 22 for the summary and Figure 15 for the illustration), suggesting that this reading is overall dispreferred.

(139) Hem Ali hem Ayşe kendi-ni beğen-di.
Also Ali also Ayşe self -ACC like -PAST.3SG
‘Both Ali and Ayşe liked herself.’

(140) Hem Ali hem Ayşe arkadaş-ı -nı beğen-di.
Also Ali also Ayşe friend -POSS.3SG-ACC like -PAST.3SG
‘Both Ali and Ayşe liked her friend.’

The higher rates of the strict identity reading in the possessive construction in Turkish relative to the reflexive construction might be explained by the fact that the possessive construction is ambiguous because it contains an unpronounced anaphor which, in principle, might be interpreted both as *kendi* ‘self’ and *onun* ‘his/her/its’. For example, (141) is ambiguous; the friend can be *Ali’s own friend* or be *somebody else’s friend*.

- (141) Ali arkadaş-ı -nı beğen-di.
 Ali friend -POSS.3SG-ACC like -PAST.3SG
 ‘Ali liked (her/his) friend.’

Recall also that in the experiment where I investigated the nature of the anaphor in the non-elliptical conjunct in VPE and RNR (which looked like (141)), this anaphor was interpreted as a possessive reflexive *kendi* ‘self’s’ in the vast majority of cases, but there still were participants who reported that this anaphor may be interpreted as a possessive pronoun. I also found that the acceptance of the other options (such as the *third party* or the possessive pronoun *onun* ‘its/his/her’) was higher in RNR than in VPE. By contrast, (142) is not ambiguous since it contains a pronounced reflexive pronoun *kendi* ‘self’.

- (142) Ali kendi-ni beğen-di.
 Ali self -ACC like -PAST.3SG
 ‘Ali liked himself’

Thus, a sentence like (140) *Hem Ali hem Ayşe arkadaşını beğendi* ‘Both Ali and Ayşe liked her friend’, requires VC to reach the strict reading interpretation ‘Ali and Ayşe both liked Ayşe’s friend’ if the null anaphor in the second conjunct is interpreted as the reflexive *kendi* ‘self’s’. But, if this non-pronounced anaphor is interpreted as a possessive pronoun *onun* ‘his/her/its’, then the strict identity reading does not require VC, as is the case in the English possessive construction. It is possible that some of our participants posited a non-reflexive possessive pronoun in the non-elliptical conjunct, which allowed them to access the strict identity reading without VC. Importantly, this option was not available in the reflexive construction, where the non-elliptical conjunct contains an overt reflexive, making VC necessary for the strict identity reading to obtain.

To sum up, the difference between the reflexive construction (which contains an overt anaphor in the non-elliptical conjunct) and the possessive construction (which contains a null anaphor in the non-elliptical conjunct) in Turkish can explain the low, but still

significant difference between the acceptance rates of the strict readings in RNR in the possessive constructions, compared to VPE sentences.

Table 22. Effects of VC in RNR (Offline Acceptance Rates) in Turkish

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|---------|
| Strict identity reading | 0,89% | 15,20% | < 0.05* |
| Sloppy identity reading | 97,70% | 66,7% | < 0.05* |

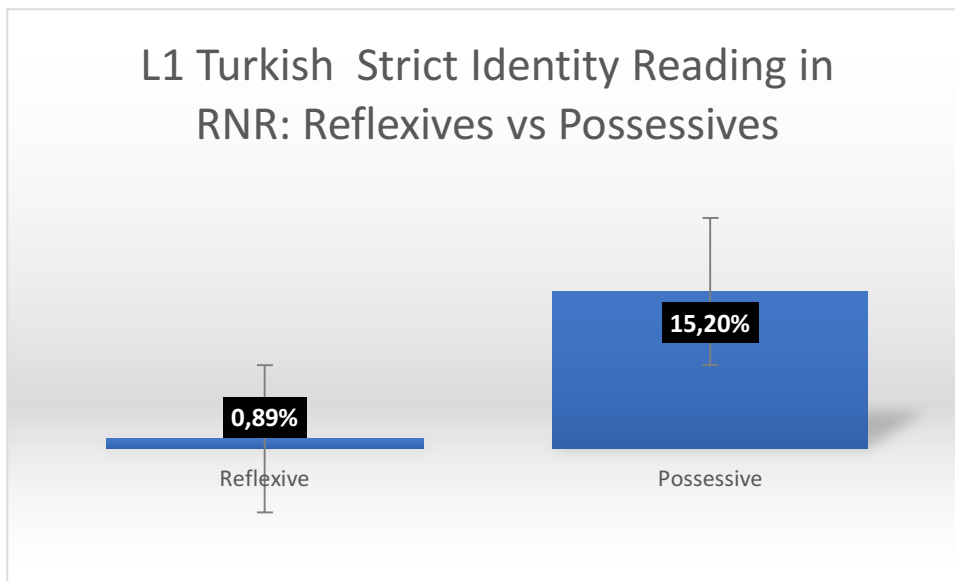


Figure 15. L1 Turkish Strict Identity Reading in RNR: Reflexives vs Possessives

When it comes to the sloppy identity reading, our results show that this reading was accepted 97,7% of the time with reflexive pronouns and 66,7% of the time with the possessive pronouns. Based on the Wilcoxon test ($Z = -5.063$, $p < .001$), the difference was statistically significant. This finding is parallel to the trend that I found in VPE, where the sloppy identity reading was accepted more with reflexives (93,20%) than

with possessives (84,10%), but the difference did not reach statistical significance. In both constructions, possessive anaphora seems to be less preferred. The explanation for this result might presumably also make reference to other possible reference options of the unpronounced possessive pronoun in the overt conjunct (see paragraph above for a detailed explanation), which creates ambiguity and if the required reading is not the first one that comes to their minds, might result in the rejection of the intended reading by the participants.

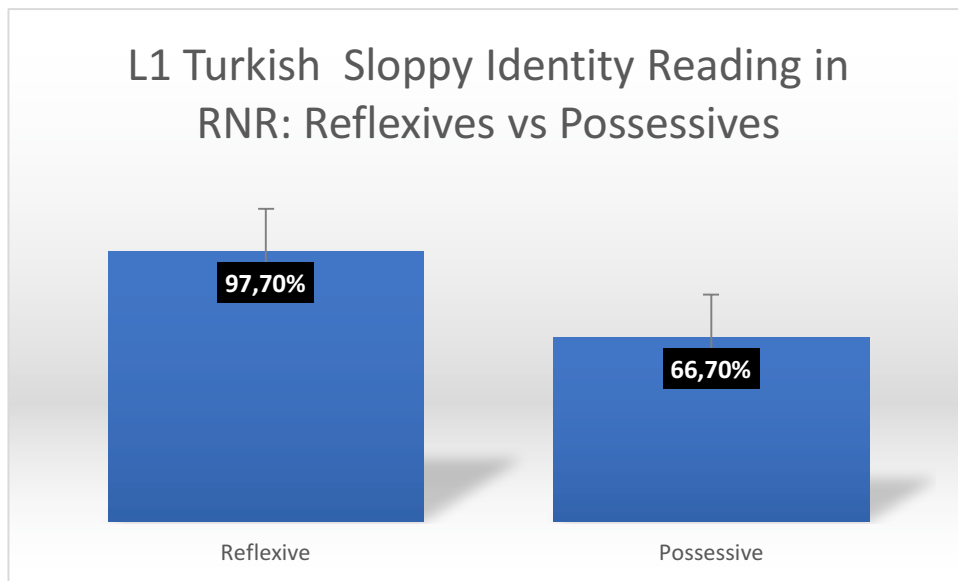


Figure 16. L1 Turkish Sloppy Identity Reading in RNR: Reflexives vs Possessives

3.1.5.2.4.2 Online results and discussion

Likewise, the reading time in the strict identity reading condition in the reflexive construction ($M=435.76$ ms) was significantly different from the reading time in the same condition in the possessive construction ($M=573.23$ ms) ($Z= -2.352$, $p=.019$). Although the participants accepted the reflexive constructions with strict identity reading at almost zero level, its interpretive processing must be easier in RNR, see Table 23. This is expected if the computation of meaning in the possessive construction involved first resolving the ambiguity of the anaphor in the non-elliptical conjunct. On the one hand, this ambiguity increased the acceptance rates of the strict

identity reading in RNR sentences, but on the other, it prolonged the time that the participants needed to reach a decision about the presence of the reading that they were forced to consider.

The same reasoning might explain the fact that the reading times of the sloppy identity reading in the reflexive construction (M=419.20 ms) and the possessive construction (M=768.65 ms) were significantly different from each other ($Z = -2.948$, $p = .003$). The reading times display parallel results with the acceptance rates, since the possessive construction was accepted less, therefore its processing while reading was costlier, see Table 23.

Table 23. Effects of VC in RNR (reading times) in Turkish

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|---------|
| Strict identity reading | 435.76 | 573.23 | < 0.05* |
| Sloppy identity reading | 419.20 | 768.65 | < 0.05* |

To sum up, the findings in L1 Turkish experiment did not completely confirm our expectation that VC is indeed problematic. However, the very low overall acceptance rates for the strict identity readings, in both reflexives and possessives, compared to the overall acceptance rates of the sloppy identity reading, still supported our hypothesis that the structures involving VC mechanism are accepted less than the ones without VC.

In both VPE and RNR, the acceptance rates of the strict identity readings in the possessive construction was higher than in the reflexive one. Additionally, I observed generally higher reading times of the possessive construction compared to the reflexive construction. This suggests that the possessive construction might carry a higher processing requirement, most probably due to its ambiguous null possessive pronoun.

Although there were no significant differences with the sloppy reading in VPE, possessive constructions were accepted less and computed in longer times in both RNR and VPE constructions. As explicated above, in the sentences such as (143) and (144), the dropped *kendi* ‘self’ might have been activated more than once for both conjuncts, due to the fact that it is not pronounced even in the non-elliptical conjunct.

(143) Ali arkadaş-I -nı savun-du, Mehmet de VPE
 Ali friend -POSS.3SG-ACC defend-PAST.3SG, Mehmet too
 ‘Ali defended his friend, and Mehmet did too.’

(144) Hem Ayşe hem Zeynep arkadaş-ı -nı savun -du RNR
 Also Ayşe also Zeynep friend -POSS.3SG-ACC defend-PAST.3SG
 ‘Both Ayşe and Zeynep defended her friend.’

The online results of both VPE and RNR with strict identity reading revealed that in Turkish this reading, particularly in the reflexive construction, might be so unnatural, infrequent and/or completely ungrammatical to the readers that they did not spend much time at all considering this reading and instead, rejected it immediately. If there were any ambiguities, more time would be expected to be spent on these sentences. It was suggested in the studies that people do not always arrive at a thorough and united interpretation of text as they read it (Ferreira et al., 2002; Sanford & Sturt, 2002). Rather, they argue that readers construct a "good-enough" representation of the discourse for the work at hand. Underspecified discourse components may be present in this representation. According to Sanford and Sturt (2002), the level of processing a reader engages in influences the amount of detail in their resultant representation of speech. Ferreira and colleagues offer empirical support for this approach, demonstrating that during sentence processing, readers occasionally construct underspecified syntactic representations (Christianson et al., 2001; Ferreira, 2003). Therefore, the interpretation of the elliptical sentences containing strict identity reading may be ‘good enough’ and contained underspecified representations by allowing processing to continue without keeping up a full analysis. The speakers might adopt a behavior of rejection by having shallow processing, therefore, I might have similar findings on the online processing.

3.1.5.2.5 Results and discussion of overall strict vs sloppy identity reading preferences in L1 Turkish

As I did in L1 English experiment, based on the findings I obtained, I also compared the sloppy and strict identity readings across the board, by collapsing all other variables. I found that the sloppy identity reading was accepted ($M=85,41\%$) more than the strict identity reading ($M=10,60\%$) ($Z= -2.948$, $p=.003$) with a (huge) significant difference. This over-preference for the sloppy identity reading is in line with the literature (Gandón-Chapela & Gallardo del Puerto, 2019; Epoge 2012; Park 2016; Ying, 2005). However, the very low acceptance rates of the strict identity reading (at most 18% in the possessive construction with VPE) was lower than expected. This can be (at least partially) explained by appealing to the difficulty and processing load of VC since VC is involved in the processing of all the items with strict identity reading in VPE and RNR in Turkish. As mentioned before, even though I did not add any referential or non-referential contextual cues in our experimental items, I forced the participants to consider either the sloppy or the strict interpretation in our judgment questions. Those questions, thus, played a role as if they were referential contextual cues, leading participants to access a certain reading, so the high rejection rates of the strict identity readings could be explained with the underlying VC mechanism involved in these strict identity readings. On the other hand, the reading times of the sentences with the two readings ($M= 536,25$ ms for strict identity reading, $M= 603,94$ ms for sloppy identity reading) did not differ ($Z= -.564$, $p=.573$). This might be in line with the ‘good enough’ and underspecification models of anaphora resolution (see Christianson et al., 2001; Ferreira, 2003; Ferreira et al., 2002; Sanford & Sturt, 2002). The Turkish speakers, might employ a shallow processing for the items with the strict identity reading- they accepted them with very low percentages (which was almost zero at some examples). Since those items all involved VC, I expected to find a processing cost on these items, however, the native speakers might dislike and/or reject these items without undergoing a full linguistic sentential analysis so that they would process them fast.

3.1.5.2.6 Effect of directionality of anaphora in Turkish

3.1.5.2.6.1 Offline results and discussion

To check a possible effect of the directionality of anaphora on the interpretation of elided anaphors, I compared the acceptance rates of the strict identity reading in VPE (which involves forward anaphora) with the acceptance rates of the strict identity reading in RNR (which involves backward anaphora), separately for the possessive and the reflexive construction. I found no differences between the acceptance of the strict identity reading with possessive pronouns in VPE (M=18,2%) and in RNR (M=15,2%) (see Figure 17). Similarly, I found no significant difference in the acceptance rates for the strict identity reading in RNR (M=0,8%) and in VPE (M=8,3%) sentences with reflexive pronouns ($Z=-1.730$, $p = .084$) (see Figure 18). These results suggest that there is no effect of anaphora directionality (or the directionality of ellipsis) on the anaphora interpretation in Turkish elliptical structures.

Table 24. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) in L1 Turkish

| | VPE Strict identity reading (forward anaphora forward ellipsis) | RNR Strict identity reading (backward anaphora backward ellipsis) | Result |
|----------------------------|--|--|--------|
| Reflexive construction | 8,3% | 0,8% | > 0.05 |
| Possessive construction | 18,20% | 15,2% | > 0.05 |

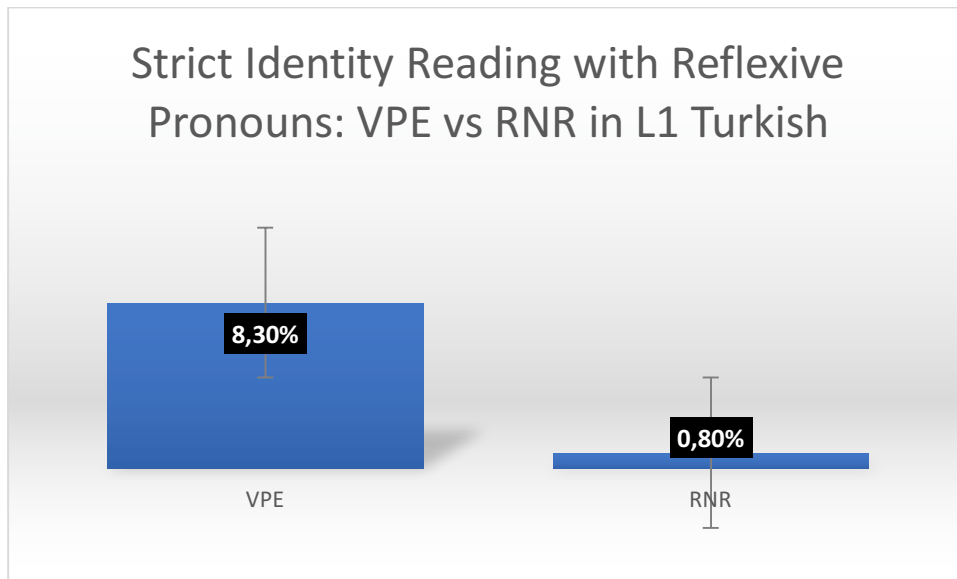


Figure 17. Strict Identity Reading with Reflexive Pronouns: VPE vs RNR in L1 Turkish

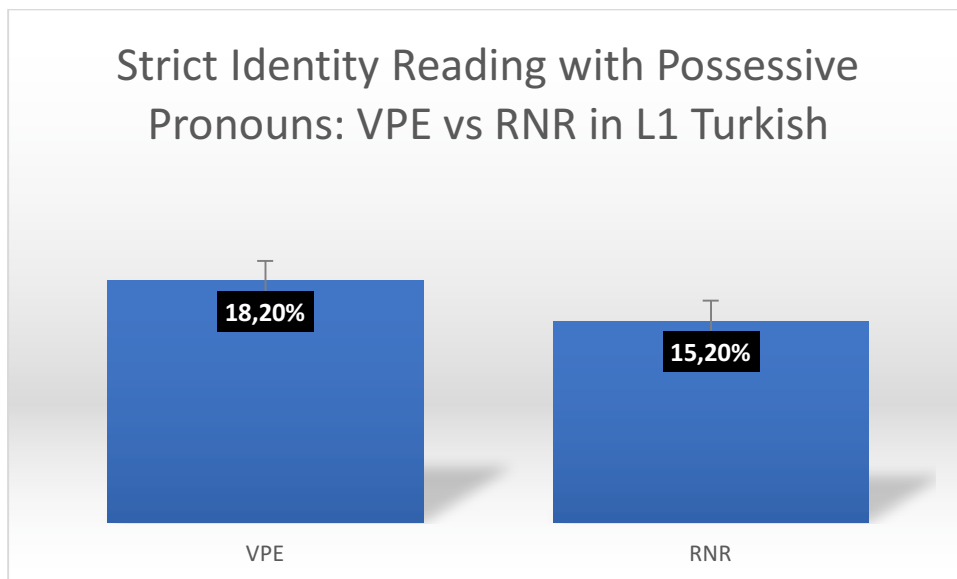


Figure 18. Strict Identity Reading with Possessive Pronouns: VPE vs RNR in L1 Turkish

On the other hand, the acceptance rate of the sloppy identity readings in VPE (M=84,1%) was significantly higher than in RNR (M=66,7%) in the possessive construction ((Z=-2.975, p =.003) (see Figure 20). Since the sloppy identity reading

involves forward anaphora in both VPE and RNR, this difference cannot be related to the directionality of anaphora. However, it might stem from the difference in the directionality of ellipsis, which is forward in VPE, but backward in RNR. However, there were no significant differences in the accessibility of the sloppy identity reading in the reflexive construction ($Z=-.649$, $p=.516$), see Figure 19.

Table 25. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) in L1 Turkish

| | VPE Sloppy identity reading (forward anaphora) | RNR Sloppy identity reading (forward anaphora) | Result |
|-------------------------|---|---|---------|
| Reflexive construction | 93,2% | 97,7% | > 0.05 |
| Possessive construction | 84,1% | 66,7% | < 0.05* |

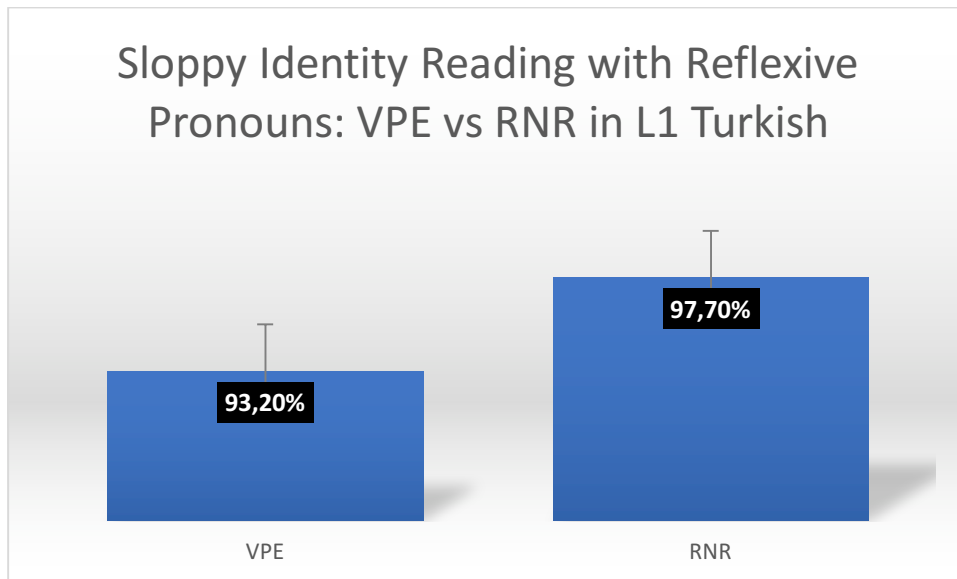


Figure 19. Sloppy Identity Reading with Reflexive Pronouns: VPE vs RNR in L1 Turkish

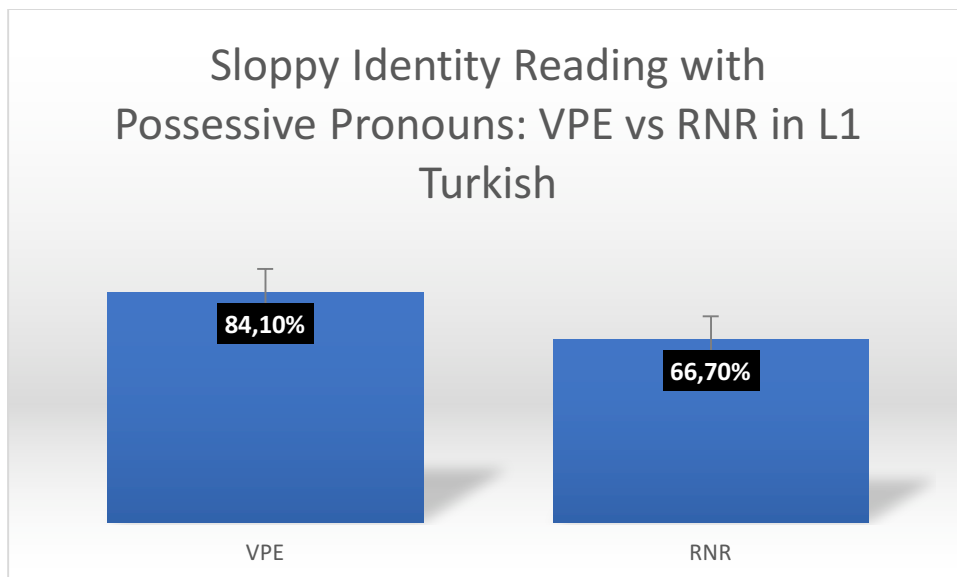


Figure 20. Sloppy Identity Reading with Possessive Pronouns: VPE vs RNR in L1 Turkish

When I collapsed the items in the reflexive and possessive constructions and compared the strict readings in VPE (M=13,25%) and in RNR (M=7,95%) to see the effect of the directionality of anaphora, a Wilcoxon test revealed that there was no significant difference ($Z=-1.733$, $p=.083$). In both constructions, the strict identity reading was accepted at a very low rate. Also, I compared the RNR and VPE sentences with the sloppy identity reading, and found that sloppy identity reading in VPE (M=88,63%) was accepted more than the sloppy identity reading in RNR (M=82,19%) ($Z=-2.354$, $p=.019$).

Lastly, I also collapsed all the items compared the acceptance rates of VPE sentences in general (M=49,24%) with those of RNR (M=45,07%). A Wilcoxon Sign Test revealed that there was a significant difference between them ($Z=-2.567$, $p=.010$), indicating that VPE construction was accepted more than RNR construction.

All of the results taken together suggest that there is no preference for forward anaphora in Turkish. However, the fact that VPE (forward ellipsis) was preferred more than RNR (backward ellipsis) overall and in the sloppy identity reading suggests that forward ellipsis is slightly more preferred to backward ellipsis. In Turkish participants' offline results, I did not observe the preference for backward anaphora in the strict identity reading with reflexives, which I had observed with English participants. I explained this preference in English by appealing to Principle A of the binding theory, which requires a reflexive to be locally bound by a c-commanding antecedent, which in the strict identity reading is not the case either in VPE or in RNR, but in the strict reading in VPE, a legitimate binder intervenes between the anaphor and the long-distance coreferent, which is not the case in RNR. In Turkish, however, this effect was not observed. This difference between the two languages might stem from the fact that Turkish, unlike English, is a scrambling language, so it might in general tolerate intervention effects to a greater degree than English, where word order is rigid, at least in the final anaphora resolution.

3.1.5.2.6.2 Online results and discussion

In terms of language processing, the reaction times of the strict identity reading with the reflexive construction in VPE (M=551.44 ms) was significantly higher than in

RNR (M=435.76 ms), which might suggest that forward anaphora (or forward ellipsis) was more difficult to process than backward anaphora (or backward ellipsis). However, I did not get a significant difference with the possessive construction (VPE M=584.57 ms; RNR M=573.23 ms). (Recall that this is the result that I obtained in the offline experiment with native English speakers.) However, when I collapsed the reflexives and possessives and compared the reading times of the strict identity reading in VPE (M=568 ms) and RNR (M=504,50 ms), I found no significant effect ($Z=-1.821$, $p =.069$). This suggests that there was no effect of directionality of anaphora (or ellipsis) on the online interpretation of the VPE and RNR sentences.

Table 26. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) (Reading Times) in L1 Turkish

| | VPE Strict identity reading (forward anaphora (forward ellipsis) (millisecond) | RNR Strict identity reading (backward anaphora (backward ellipsis) (millisecond) | Result |
|-------------------------|--|--|---------|
| Reflexive construction | 551.44 | 435.76 | < 0.05* |
| Possessive construction | 584.57 | 573.23 | > 0.05 |

As for the sloppy identity reading, the difference represented above was not reflected in the reading times. There were no significant differences in the sloppy identity reading either with the reflexive (VPE M=362.73 ms; RNR M=419.20 ms) or with the the possessive construction (VPE M=865.18 ms; RNR M=768.65 ms) ($Z=-1.193$, $p =.233$ for reflexives and $Z=-.343$, $p =.731$ for possessives). The same non-significant difference persisted when I compared the reading times obtained for the sloppy identity reading in VPE (M=593,93 ms) and RNR sentences (M=613,95 ms) ($Z=-.741$, $p =.330$). This is not surprising since the sloppy identity reading requires forward anaphora in both constructions.

Table 27. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) (Reading Times) in L1 Turkish

| | VPE Sloppy identity reading (forward anaphora) (forward ellipsis) (millisecond) | RNR Sloppy identity reading (forward anaphora) (backward ellipsis) (millisecond) | Result |
|----------------------------|---|--|--------|
| Reflexive construction | 362.73 | 419.20 | >0.05 |
| Possessive construction | 865.18 | 768.65 | > 0.05 |

The fact that the difference found in the reflexive construction for the strict reading was not replicated for the sloppy reading suggests that this difference is related to the directionality of anaphora, rather than to the directionality of ellipsis, given that VPE and RNR always differ in the directionality of ellipsis, but not in the directionality of anaphora (both require forward anaphora in the sloppy identity reading, while in the strict identity reading VPE requires forward anaphora and RNR backward anaphora). What is surprising is that forward anaphora was harder than backward anaphora, but this might be related to the fact that in the reflexive construction, like in English, there is an intervening legitimate antecedent for the elided anaphor that has to be ignored for the strict reading to obtain. This intervention effect did not reveal itself in the offline judgments (presumably because speakers could recover from it, given the scrambling nature of Turkish), but was nevertheless detectable in the reading times. The fact that the same effect did not show itself in the possessive construction of the strict reading is perhaps related to the fact that the null anaphor in the possessive construction may be interpreted as a non-reflexive. Therefore, as the reading durations of the possessive constructions were long in all cases, the whole reading process in these constructions, regardless of having the strict or sloppy reading, may take long times leading non-significant differences.

Overall, participants seemed to find it easier to process the reflexive construction (collapsing all the items that contained a reflexive construction) (M=442,28 ms) than

the possessive constructions ($M=697,91$ ms): the reaction times to the possessive construction were significantly higher than to the reflexive construction ($Z=-4.049$, $p < .001$), which can be accounted for by the fact that the possessive construction, but not the reflexive construction contains an (inherently) ambiguous null possessive element, which may in principle be interpreted both as a possessive anaphor or as a possessive pronoun, and this interpretation affects the processing of the entire sentence in a non-trivial manner.

Lastly, I collapsed all the variables and compared the mean reading times of the VPE ($M=590,98$ ms) and RNR sentences ($M=549,21$ ms), a Wilcoxon Test results displayed no significant difference between the reaction times of the RNR and VPE constructions ($Z=-.641$, $p = .521$).

Although I obtained mixed results of the reaction times given to the VPE and RNR sentences, which mostly showed longer reading times of the VPE sentences, the results revealed that directionality of anaphora/ellipsis did not have a major effect on the processing of the anaphora in these two elliptical structures.

To sum up, in order to check whether the directionality of anaphora plays a role in the interpretation of elided anaphors in Turkish, I compared the strict and sloppy identity readings in VPE and in RNR separately for reflexives and for possessives. If backward anaphora requires more demand in processing than forward anaphora (Sorace & Filiaci, 2006), I expected more strict identity readings in VPE than in RNR both in possessive and in reflexive structures. This is because the strict identity reading involves forward anaphora in VPE, but backward anaphora in RNR. On the other hand, I expected similar acceptance rates for the sloppy identity readings, where forward anaphora is involved both in VPE and in RNR. However, neither of the results supported this claim: it seems that the expected dispreference for backward anaphora was overridden by other, construction specific factors.

Based on the overall comparison of VPE and RNR, I can argue that there was an effect of the construction type (RNR versus VPE) in Turkish, which in turn suggests that, with the directionality of anaphora and the VC kept constant (forward anaphora, no

VC), participants found it easier to interpret sentences that involve forward ellipsis (VPE) and preferred them more compared to those that involve backward ellipsis (RNR).

Also, participants, in general, found it easier to comprehend sentences involving the reflexive construction than sentences that involve the possessive constructions. A possible reason for the possessive construction taking more time to process may be because the unpronounced possessive pronoun in the non-elliptical conjunct can in principle be interpreted as a reflexive or as a possessive. Hence, the null pronoun in the non-elided conjunct itself might be the first ambiguity to be resolved, adding up to the elided possessive pronoun (see offline results of this section for a more comprehensive discussion).

3.1.5.2.7 Conclusion

To sum up the results I reported here:

- Although the literature suggested the unacceptability of gender mismatching condition on the acceptance the RNR sloppy identity reading with reflexive construction, at least in English, I did not obtain results in line with this argument (possibly because of Turkish gender-neutral grammar). There was only one result with the sloppy identity reading, which was completely mysterious for us, which favored the gender *mismatch* condition. Based on the general findings, however, which showed the absence of gender (mis)match effect, I analyzed the rest of the data by collapsing the items in gender match and gender mismatch condition.
- Next, although I obtained mixed results for the VC comparison regarding statistics, I clearly observed the difference between the conditions that do and do not contain VC, especially when I compare the Turkish and English results. For instance, in English, the strict identity reading in both VPE and RNR with reflexives (whose interpretation requires VC) was more difficult to access than with possessives (whose interpretation does not require VC). No differences were observed between reflexives and possessives in the sloppy reading (which never requires VC). In Turkish, on the other hand, there was no difference

between the strict reading in the reflexive or in the possessive construction in VPE. This is expected because this language has a possessive reflexive (which is used in the possessive construction) and its interpretation also requires VC in the strict reading. I suspect that the results I obtained for RNR in Turkish, which parallel the results I obtained for RNR in English, indicating that the strict reading is easier to obtain with the possessive construction than with the reflexive construction, are due to the fact that the possessive construction in Turkish involve a null anaphor in the non-elliptical conjunct, which may be interpreted as a non-reflexive (although it was mostly interpreted as a reflexive). Under the non-reflexive interpretation of the null possessive anaphor, the strict reading no longer requires VC, and this fact may have contributed to the increased acceptance of the strict reading in the possessive construction relative to the reflexive construction.

- The acceptance rates of the possessives were fairly lower in Turkish than in English. Also, there was a significantly huge gap between the acceptance rates of the overall strict identity readings- they were 15% at most- and the acceptance rates of the sloppy identity reading- they were above 80%- in Turkish. Since the items with possessive construction, requiring VC, was accepted with very low rates in Turkish, this could not be explained only with the preference of the sloppy identity reading over strict identity reading, but it may be an indicator of the effect of VC which must be difficult.
- In our offline results, I observed no effect of directionality of anaphora but an effect of directionality of ellipsis (or effect of construction type) in Turkish: VPE sentences, which contain forward ellipsis were preferred to RNR sentences, which involve backward ellipsis.
- Lastly, I observed the distracting effect of the possessive construction on the interpretation, which I speculate might be related to possible underlying ambiguity of the null possessive pronoun in the non-elided conjunct.

3.1.5.3 Effect of head parameter: Comparison of the native speaker experiments in English and in Turkish

3.1.5.3.1 Comparison and discussion of the native speaker results in English and Turkish

When I compared the trends obtained in the Turkish experiment with those obtained in the English experiment, it was clear that VC has a detrimental effect on the interpretation of anaphors.

In English VPE, I obtained a clear difference between the acceptance of the strict identity reading in the possessive constructions (which does not require VC) relative to the reflexive construction; however, this trend was not replicated in Turkish, in which both the reflexive and the possessive constructions require VC (see Table 28).

Table 28. Effects of VC in VPE (Offline Acceptance Rates) in English and Turkish

| | Reflexive construction | Possessive construction | Result |
|------------------------------------|------------------------|-------------------------|---------|
| Strict identity reading in Turkish | 8,30% | 18,20% | > 0.05 |
| Strict identity reading in English | 36,10% | 85,20% | < 0.05* |

In RNR, on the other hand (see Table 29), the acceptance of the strict identity reading was higher in the possessive construction than in the reflexive construction in both languages. I did not expect to obtain this difference in Turkish RNR, given that both constructions require VC; I believe that this is due to the fact that Turkish possessive construction contains a null possessive anaphor in the non-elliptical conjunct, which, if interpreted as a pronoun allows for this reading to be accessed without VC. This may account for the significantly higher, but still relatively low acceptance (15,20%) of the strict identity reading in the possessive construction in Turkish RNR.

Table 29. Effects of VC in RNR (Offline Acceptance Rates) in English and Turkish

| | Reflexive construction | Possessive construction | Result |
|------------------------------------|------------------------|-------------------------|---------|
| Strict identity reading in Turkish | 0,89% | 15,20% | < 0.05* |
| Strict identity reading in English | 52,8% | 78,7% | < 0.05* |

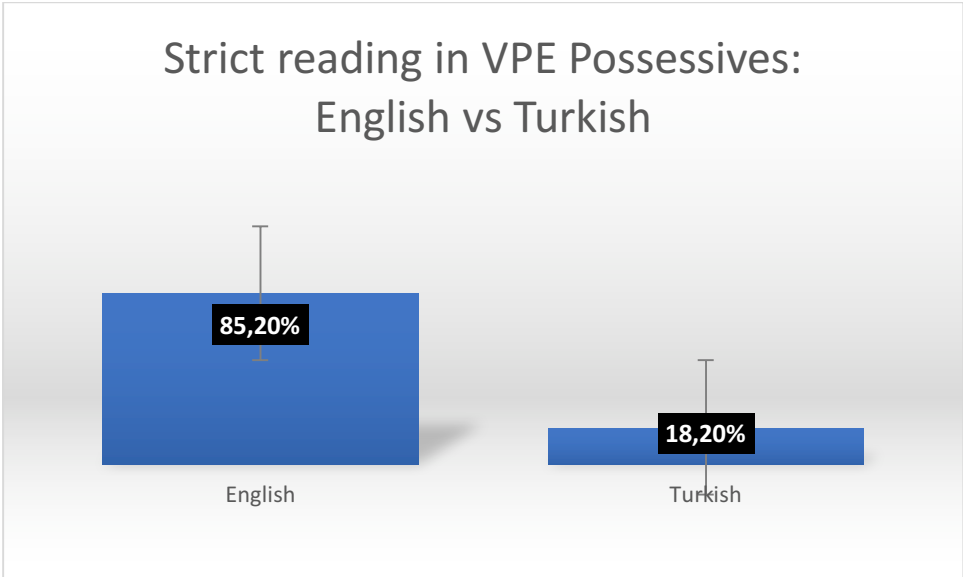


Figure 21. Strict Reading in VPE Possessives: English vs Turkish

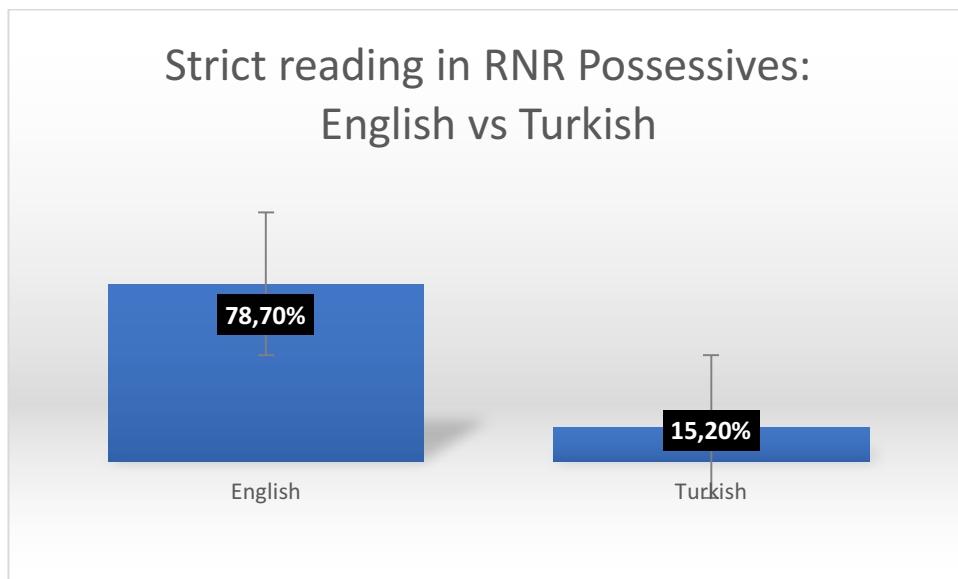


Figure 22. Strict Reading in RNR Possessives: English vs Turkish

To the extent that these trends are real, they suggest that VC is hard to comprehend and when VC mechanism is not involved in the computation of the strict identity reading in elliptical structures, the acceptance rate of this reading increases.

Also, according to the reading times, the reading times of the strict identity reading with possessive constructions in Turkish (M=584,57 ms for VPE and M=573,23 ms for RNR) were slightly higher than the English structures (M=531,90 ms for VPE and M=537,13 ms for RNR). However, it does not seem to be an important difference, see Table 30 and 31 for summary.

Table 30. Effects of VC in VPE (Reading Times) in English and Turkish

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|---------------------------------------|---|---|---------|
| Strict identity reading in Turkish | 551.44 | 584.57 | > 0.05 |
| Strict identity reading in English | 652.44 | 531.90 | < 0.05* |

Table 31. Effects of VC in RNR (Reading Times) in English and Turkish

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|---------------------------------------|---|---|---------|
| Strict identity reading in Turkish | 435.76 | 573.23 | < 0.05* |
| Strict identity reading in English | 737.34 | 537.13 | > 0.05 |

On the other hand, since the availability of the sloppy identity reading is not modulated by VC either in reflexive or in possessive constructions in either of the languages, I expected that this reading would be accepted to approximately equal rates in both. This expectation was met for VPE with possessive construction with very similar acceptance rates (88% in English and 84,10% in Turkish), and for RNR with completely the same acceptance rates (66,7% in English and in Turkish). However, while the acceptance rates of the sloppy reading with reflexive anaphora in VPE was almost the same, it was very different in RNR (in English M=56,5% while in Turkish M=97,7%), see Table 32 and 33 for summary.

Table 32. Effects of VC in VPE (Offline Acceptance Rates) in English and Turkish

| | Reflexive construction | Possessive construction | Result |
|---------------------------------------|------------------------|-------------------------|--------|
| Sloppy identity reading in English | 93,5% | 88% | > 0.05 |
| Sloppy identity reading in Turkish | 93,2% | 84,1% | > 0.05 |

Table 33. Effects of VC in RNR (Offline Acceptance Rates) in English and Turkish

| | Reflexive construction | Possessive construction | Result |
|---------------------------------------|------------------------|-------------------------|---------|
| Sloppy identity reading in English | 56,5% | 66,7% | > 0.05 |
| Sloppy identity reading in Turkish | 97,70% | 66,7% | < 0.05* |

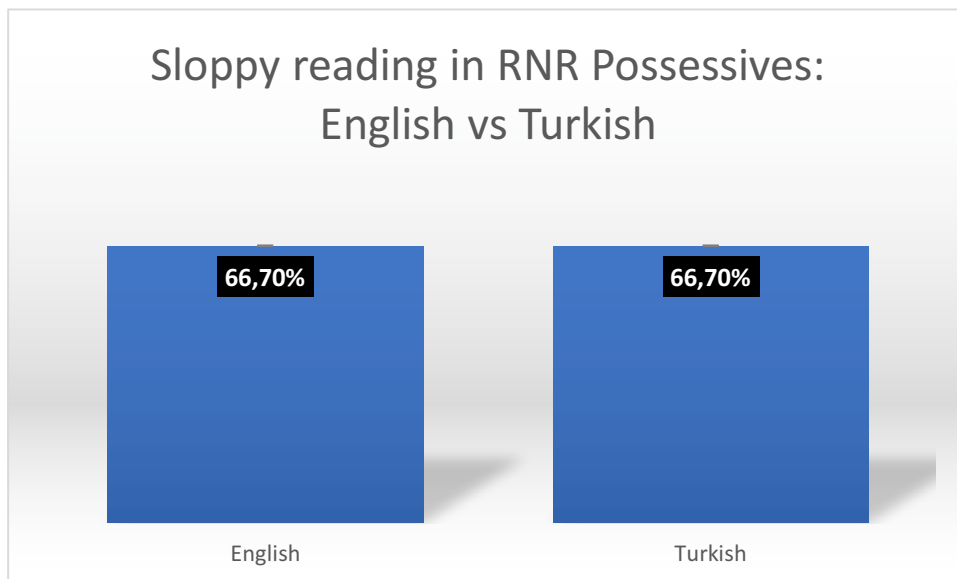


Figure 23. Sloppy reading in RNR Possessives: English vs Turkish

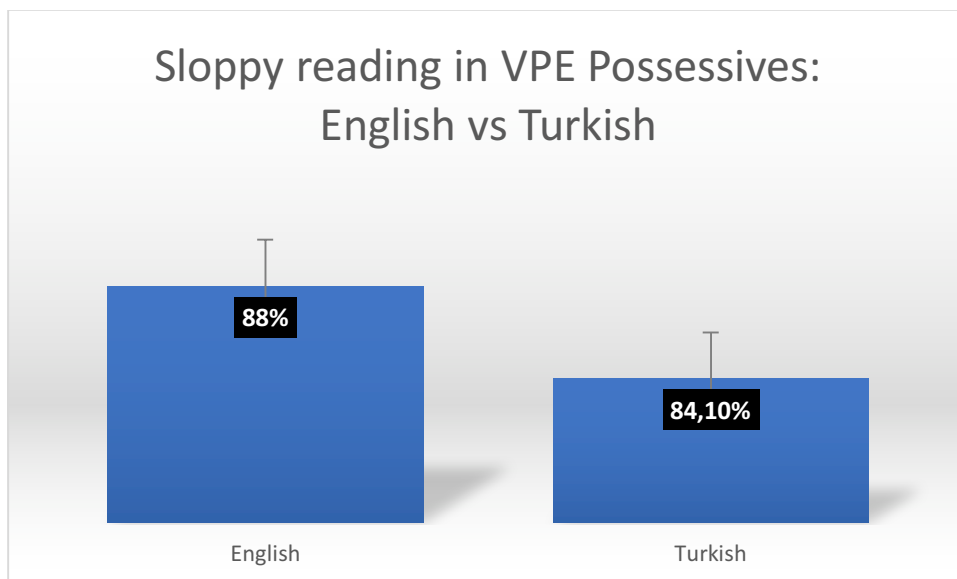


Figure 24. Sloppy Reading in VPE Possessives: English vs Turkish

However, in terms of language processing, the reading times of the sloppy identity readings in possessive constructions in English seems to be lower than the Turkish constructions while it is vice versa with reflexive constructions, which can be

explained by the processing cost caused by the existence of a null possessive anaphor in the possessive construction in Turkish.

Table 34. Effects of VC in VPE (Reading Times) in English and Turkish

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|---------------------------------------|---|---|---------|
| Sloppy identity reading in English | 406.40 | 374.51 | > 0.05 |
| Sloppy identity reading in Turkish | 362.73 | 865.18 | < 0.05* |

Table 35. Effects of VC in RNR (reading times) in English and Turkish

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|---------------------------------------|---|---|---------|
| Sloppy identity reading in English | 634.69 | 579.82 | > 0.05 |
| Sloppy identity reading in Turkish | 419.20 | 768.65 | < 0.05* |

To wrap up, our results show that speakers accepted both the sloppy and the strict identity reading in VPE and in RNR, especially in English. This finding corroborates the findings of Ong & Brasoveanu (2014), Shaphiro and Hestvik (1995) and Shaphiro et al., (2003) among others, who show that despite the preference for the sloppy identity reading, both readings are available to speakers. In Turkish, the preference for the sloppy identity reading was more pronounced given that the acceptance rate of

the strict identity reading was at most 18,20% (as opposed to English, where it never dropped below 36.10%).

Our overall results displayed that configurations whose interpretation requires VC are dispreferred by the native speakers of Turkish and English compared to those in which VC does not play a role. In English, the dispreference for VC revealed itself in the significantly higher acceptance rates of constructions where VC is not needed for the interpretation that the participants were forced to consider, compared to those in which VC is needed. In Turkish, no construction was such that it never required VC and, therefore, no reading/construction was consistently preferred to others. It, thus, appears that VC is processed similarly in English and in Turkish and that the directionality of the language did not directly matter in the interpretation of anaphora. The same can be said when it comes to the directionality of anaphora/ellipsis. English and Turkish behave similarly in this respect: in both languages, I found that backward ellipsis was dispreferred compared to forward ellipsis and all else being equal, no effect of directionality of anaphora was observed. I exceptionally observed preference for backward ellipsis/anaphora in (English offline and Turkish online results) in those constructions that required overriding Principle A of the Binding theory, namely, in RNR sentences with the strict identity reading. However, since overall the acceptance of the strict identity reading in VPE seems quite similar to the RNR, it appears that the directionality of anaphora does not play a role in the resolution of anaphor ambiguities in elliptical structures. Also, the reading times did not display similar results in either language. As for the processing of the structures requiring VC, the the reading times displayed a similar trend with the offline interpretation results. However, the dislike of RNR construction was reflected in the results as higher reading time in English; namely, although the acceptance rate of the RNR with VC was higher, its processing time was found to longer. It was the opposite in Turkish, which might be because of the stricter rejection of RNR with reflexives requiring VC did not need a second thought on such constructions. As for the anaphora/ellipsis direction impacts on the processing, in Turkish, the only reading time difference between the RNR and VPE sentences were observed under the reflexive construction with strict identity reading: VPE as forward anaphora/ellipsis was processed slower than the RNR as backward anaphora/ellipsis. However, I observed that the RNR as backward ellipsis and forward

anaphora with sloppy identity reading under both reflexive and possessive constructions were read longer than the VPE as forward anaphora/ellipsis while no difference was observed between the reading times of RNR as backward ellipsis/anaphora and VPE as forward ellipsis/anaphora. Therefore, based on these mixed and inconsistent results, I imply that directionality of anaphora as well as the directionality ellipsis may not have a role in the process of ambiguous anaphors in elliptical constructions.

Based on our results, it can be implied that English speakers did not like the RNR construction since the acceptance rates were lower for in these sentences; i.e., they accepted the RNR construction at the rate of at most about 80%. Also, English speakers overall preferred RNR with possessive than reflexives (they did not like the RNR construction with reflexives regardless of whether its interpretation requires VC or not). However, this was not the case for Turkish, because Turkish participants accepted RNR sentences at the rate of over 90% of the time with some contexts. However, based on the overall findings, RNR was dis-preferred compared to VPE in Turkish, as well.

In terms of reading times, I got mixed results in English and Turkish due to several reasons as mentioned above. Overall, based on the descriptive comparison of Turkish and English, Turkish results suggested that, the results were mostly affected by the possessive constructions, which were ambiguous: It took longer times to process in each case. In addition, it seems that the English participants mostly dislike the RNR which was observed as longer reading times compared to Turkish.

All in all, I did not observe a constant effect of the head directionality on the interpretation of anaphora under a number of variables.

3.2. L2 English experiment

The reason for comparing L2 participant data in my dissertation is to see whether VC is acquired and processed in the same way with L1 English speakers and also to see if there are any effects of the participants' L1, which is Turkish, on their L2

interpretation. Theories such as Shallow Parsing Hypothesis (Clahsen & Felser, 2006)²¹ suggests that L2 speakers compute language differently from native speakers; i.e., they basically rely more on semantic and discourse cues or other types of non-grammatical information when L1 speakers tend to first parse syntactic information. However, the literature also suggested that similarities between L1 and L2 have been observed to lead to successful acquisition in various areas of L2 (Foucart & Frenck-Mestre, 2011; Sabourin & Haverkort, 2003; & Sabourin & Stowe, 2008 among others, for processing; Olsen, 2012, for phonetic similarity; among others). For example, some theories (Bernhardt & Kamil, 1995; Cummins, 1991) state that language operations and processes are interrelated and transferable, therefore, based on this hypothesis, since there are VC operations in both Turkish and English, the L2 English participants would display similar behaviors with the L1 English speakers at least in the similar structures.

In first step of the study, I tried to explore what interpretations were available to English and Turkish native speakers. In the next phase of the study, I intended to investigate whether Turkish speakers of L2 English with high proficiency levels displayed the same interpretation behaviors with the native speakers of English. Also, I aimed to explore whether or not any possible differences in their interpretation of ambiguous anaphors in elliptical constructions could be traced to the effect of L1 Turkish.

²¹ In Shallow Structure Hypothesis (SSH henceforth) (Clahsen & Felser, 2006) L2 learners struggle to represent discontinuous relationships with hierarchical structures. This argument is based on parasitic gaps in subject islands (Boxell & Felser, 2017) and early filler-gap dependency studies (Marinis et al. 2005; Felser & Roberts 2007). Its latest version (Clahsen & Felser, 2017; Felser, 2015) is centered on two new assertions. The first unique argument is that L2 learners do not struggle with forwards-looking dependencies, which are involved in backward anaphora resolution, while they have difficulty in backwards-looking dependencies, which are involved in forward anaphora resolution. The key distinction between the two is that in the forwards-looking dependencies (with backwards anaphora), there is generally no requirement for the processing system to check if the requisite c-command relationship does really obtain (Felser, 2015). As a result, when L2 speakers do not need movement in syntax, non-local dependency processing would be like the native speakers. Looking backward (with forward anaphora), on the other hand, entails discovering syntactic relationships (Felser et al. 2009; Felser & Cummings, 2012). The second distinguishing feature of SSH is that L2 learners depend on non-syntactic signals (e.g., semantic cues, topic prominence) rather than syntactic cues. This argument conveniently connects to the first claim. The reason for L2 speakers' non-native outcome with retrospective dependencies is precisely because L2 speakers use syntax less than the native speakers.

3.2.1. L2 English participants

The sampling type was in criterion, convenient, snowball and voluntary type. I reached out to participants through our institutions' Learning Management System by offering extra course credits to the students taking our courses. I also reached other participants by asking other people to share the survey with their classroom or with the people they thought might be interested. The criterion was being a native speaker of Turkish with a high proficiency level of English.

The participant group consisted of 136 Turkish learners of English²² but I could only analyze the data of 107 of these participants (Age Min=18, Max=40; M=20.8, SD=.28; female=71, male 36) based on their English Proficiency Level Criterion. The proficiency levels of the 107 L2 speakers were B2 to C1 levels, based on their own assessment of their English proficiency levels on a 1 (*poor*)-10 (*excellent*) scale for four basic skills (writing, reading, listening and speaking). This is one of the approaches that are used commonly to establish the language proficiency in the studies in which the measurement of the language proficiency cannot be done directly (e.g., Marian et al., 2007). In addition, the data for this thesis was collected during the pandemic of Covid19, when people were experiencing lockdowns locally and worldwide and there was little face-to-face contact at all. Moreover, full online education was adopted in those times. That is why I could not administer a full proficiency level test to our L2 English participants. In addition, studies showed that measurements of language proficiency based on self-rating significantly correlated with objectively measured language proficiency (e.g., Blanche and Merino, 1989; Marian et al., 2007; Ross, 1998).

The mean scores of the proficiency levels of these four skills were calculated per participant; thus, the final proficiency levels were obtained. Among these proficiency

²²My participants group consisted of students who had been studying in the Foreign Language Education Departments in Turkey, in which they had to take additional third language courses in their curriculum. That is why my participants were multilingual students who knew at least three languages at various proficiency levels. Therefore, although the question asking for the additional foreign language information was part of the demographic data form, I did not exclude or categorize our participants based on this information.

levels, only the ones having proficiency scores higher than 7 points ($M=8.22$; $SD=.07$) were included in the analyses.

3.2.2. L2 English materials, procedure & analysis

This experiment used the same materials, procedures and analyses that were used in the L1 English experiment. The only difference between the materials in the two experiments concerned the questions on the demographic data form. I asked the participants to self-rate their own English proficiency levels on a 1 (*poor*)-10 (*excellent*) scale for four basic skills separately: writing, reading, listening and speaking. In addition, I asked (optionally) their student ID no so that the instructor of the course through which this survey was shared, could track the students who did the survey and give them extra course credit for participation in the experiment. However, the ones who did the survey voluntarily could skip this information since it was not obligatory.

As for the analysis of the data, I ran the same procedure with the native speaker data; except for the comparison of the L1 English and L2 English results: I compared the native and non-native English data via Mann Whitney U tests.

3.2.3. Results of offline and online experiments

3.2.3.1. Effect of gender match condition on the interpretation of ambiguous anaphors in RNR construction in L2 English

The first question that I examined in the L1 English experiment, as in the other experiment, was whether the strict identity reading was preferred in the gender mismatch condition, where the elided anaphor (reflexive/possessive pronoun) would have to be interpreted as being of a different gender in order for the sloppy reading to arise and whether the sloppy identity reading was favored in the gender match condition. As explicated before, I expected to find a rejection of the sloppy identity reading in RNR sentences under gender mismatch condition based on what the literature suggested (e.g. Chaves, 2014). However, recall that I found no consistent

effect of gender match condition in the behavior of the native speakers of either of the languages (English/Turkish).

Table 36 summarizes the mean acceptance rates of RNR by L2 English Speakers (i.e., assignment of 1 “True” by condition).

Table 36. Summary of Results for Gender Match-Gender Mismatch Conditions in RNR by L2 English Speakers

| ANAPHOR TYPE | READING TYPE | GENDER MATCH CONDITION | ACCEPTANCE RATES | FREQUENCY (N=214) |
|--------------------------------|----------------------------|-------------------------------|-------------------------|--------------------------|
| REFLEXIVE CONSTRUCTIO N | SLOPPY IDENTITY READING | GENDER MATCH | 65% | 139 |
| | | GENDER MISMATCH | 55,1% | 118 |
| | STRICT IDENTITY READING | GENDER MATCH | 45,3% | 97 |
| | | GENDER MISMATCH | 58,4% | 125 |
| POSSESSIVE CONSTRUCTIO N | SLOPPY IDENTITY READING | GENDER MATCH | 85% | 182 |
| | | GENDER MISMATCH | 75,7% | 162 |
| | STRICT IDENTITY READING | GENDER MATCH | 65,4% | 140 |
| | | GENDER MISMATCH | 72,4% | 155 |

Note. “N” is the total item number seen by all the participants. N = 214 for each condition.

As in the L1 data, I did not observe clear evidence that the sloppy identity reading is not available in the gender mismatch condition either with reflexives or with possessives (See Figure 25). I did observe slightly higher rates of the acceptance of the sloppy reading in the gender match condition than in the gender mismatch condition, as predicted by the literature, but the sloppy identity reading was still clearly available in the gender mismatch condition (since it was accepted at 55,1% with reflexives and 75,7% with possessives), see Figure 25.

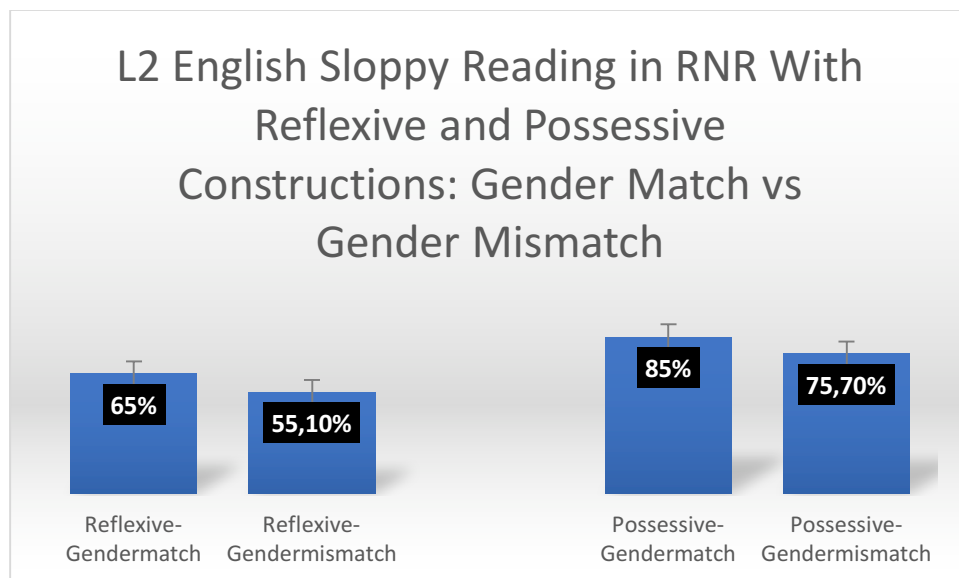


Figure 25. L2 English Sloppy Reading in RNR With Reflexive and Possessive Constructions: Gender Match vs Gender Mismatch

All in all, regarding the gender (mis)match, although it seemed not to display a significant difference, our L2 English data displayed results that were somewhat closer to our initial hypotheses (based on the RNR literature) than our L1 English results, whereas the L1 Turkish data did not display such a pattern. Nevertheless, given the high acceptance of the sloppy identity reading in gender mismatch condition, the sloppy identity reading was still clearly available in the gender mismatch condition (since it was accepted at 55,1% with reflexives and 75,7% with possessives). Thus, it seems unjustified to assume that this reading is not available to L2 learners of English. For this reason, I analyzed the L2 data without separating gender match and gender mismatch condition.²³

²³ Overall, L2 learners' acceptance rates of RNR sentences were fairly similar to those of the native speakers, except for the fact that L2ers tended to accept the sloppy identity reading at a slightly higher rate than the native speakers did.

3.2.3.2. Effect of Vehicle Change on the interpretation of ambiguous anaphors in VPE

3.2.3.2.1 Offline results and discussion

I hypothesized that if VC plays a role in the interpretation of deleted anaphors by L2 English speakers, the acceptance rates of the strict identity reading in VPE with reflexives (which requires VC) would be lower than the acceptance rates of the strict identity reading with possessives (which does not require VC). As seen in Table 37, I obtained significantly more strict identity reading preferences with possessive pronouns (M=58,6%) than with reflexive pronouns (M=35,3%), which supported our hypothesis that VC was complicated so it was not preferred ($Z=-5.625$, $p < .001$), see Table 36.

On the other hand, I predicted not to observe the same effect in the sloppy identity reading, since the sloppy identity reading does not involve VC either with reflexives or with possessives. The acceptance rates of the sloppy identity reading in VPE with reflexive pronouns (M=85,5%) and with possessive pronouns (M=84,8%) were not significantly different from each other ($Z=-.325$, $p = .745$.) (see Table 37).

Table 37. Effects of VC in VPE (Offline Acceptance Rates) by L2 English Speakers

| | Reflexive construction | Possessive construction | Result |
|-------------------------|------------------------|-------------------------|---------|
| Strict identity reading | 35,3% | 58,6% | < 0.05* |
| Sloppy identity reading | 85,5% | 84,8% | > 0.05 |

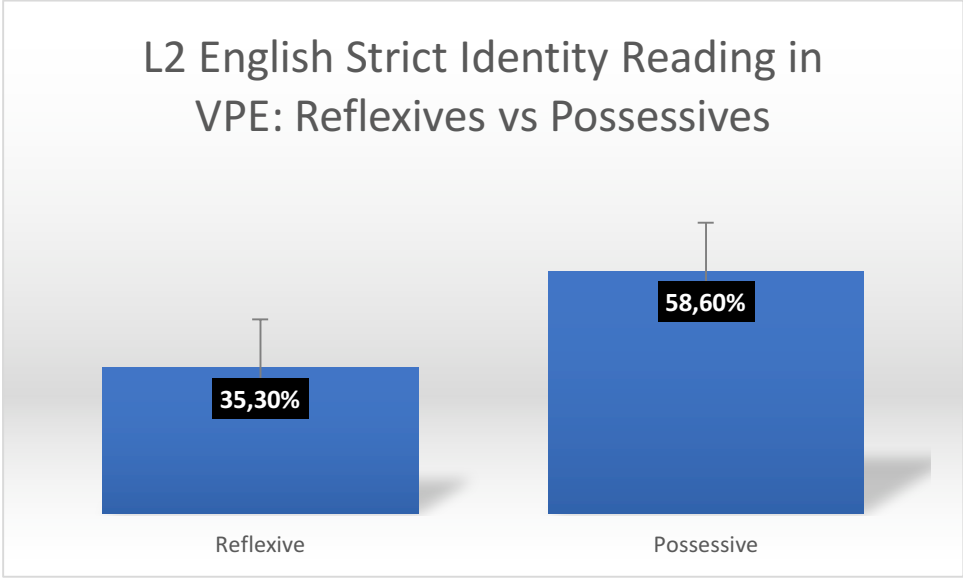


Figure 26. L2 English Strict Identity Reading in VPE: Reflexives vs Possessives

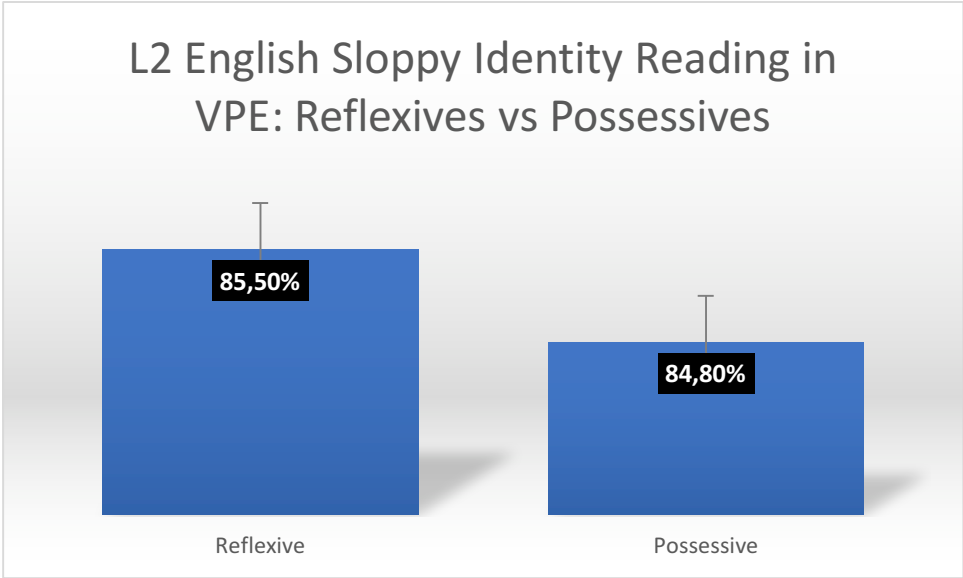


Figure 27. L2 English Sloppy Identity Reading in VPE: Reflexives vs Possessives

3.2.3.2.2 Online results and discussion

The analysis of the L2 English reading time results revealed that participants devoted similar time to read the sentences with the strict identity reading with reflexive constructions (M= 800,81 ms) and with possessive constructions (M=1089,95 ms) ($Z=-.948$, $p= .343$). Although the statistical scores did not support the processing difficulty of VC in these contexts with a significant difference, the time required to read sentences involving VC was still higher than the ones without VC.

The analysis of the reading time results also showed that the reading times in both conditions (reflexive (M=674,68 ms) versus possessive anaphors (M=684,62 ms)) did not differ significantly ($Z=-.258$, $p =.796$.) with the sloppy reading. As predicted, since neither involves VC, approximately equal number of acceptance rates for each condition was obtained and they were processed similarly while reading.

Table 38. Effects of VC in VPE (Reading Times) by L2 English Speakers

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|----------------------------|---|---|--------|
| Strict identity reading | 800,81 | 1089,95 | > 0.05 |
| Sloppy identity reading | 674,68 | 684,62 | > 0.05 |

3.2.3.3. Effect of Vehicle Change on the interpretation of ambiguous anaphors in RNR

3.2.3.3.1 Offline results and discussion

Following the same reasoning as with VPE above, I expected the acceptance rates of the strict identity reading in RNR to be lower with reflexives than with possessives.

Contrary to the expectations, however, our results showed that, based on the Wilcoxon test, there were significant differences between the acceptance rates of the sloppy and strict identity readings in RNR *both* with reflexives and with possessives. The strict identity reading was accepted 51,9% of the time with reflexives and 68,9% of the time with possessives ($Z = -4.625$, $p < .001$), suggesting the effect of VC. However, the sloppy reading was also accepted 60% of the time with reflexive pronouns and 80,4% of the time with possessive pronouns although neither anaphor required VC ($Z = -5.175$, $p < .001$). See Figure 28 and Figure 29 for the summary of the results.

Table 39. Effects of VC in RNR (Offline Acceptance Rates) by L2 English Speakers

| | Reflexive construction | Possessive construction | Result |
|----------------------------|---------------------------|----------------------------|---------|
| Strict identity reading | 51,9% | 68,9% | < 0.05* |
| Sloppy identity reading | 60% | 80,4% | < 0.05* |

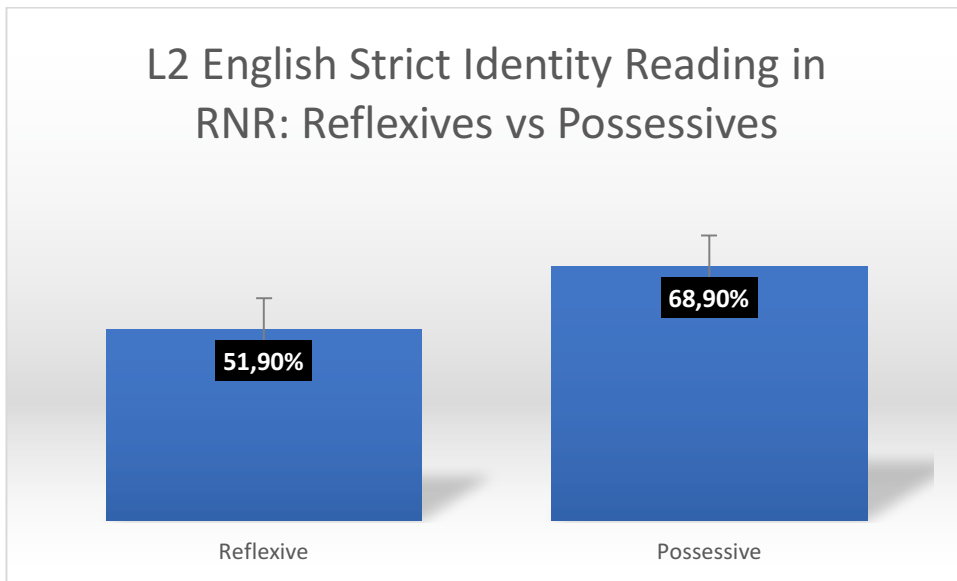


Figure 28. L2 English Strict Identity Reading in RNR: Reflexives vs Possessives

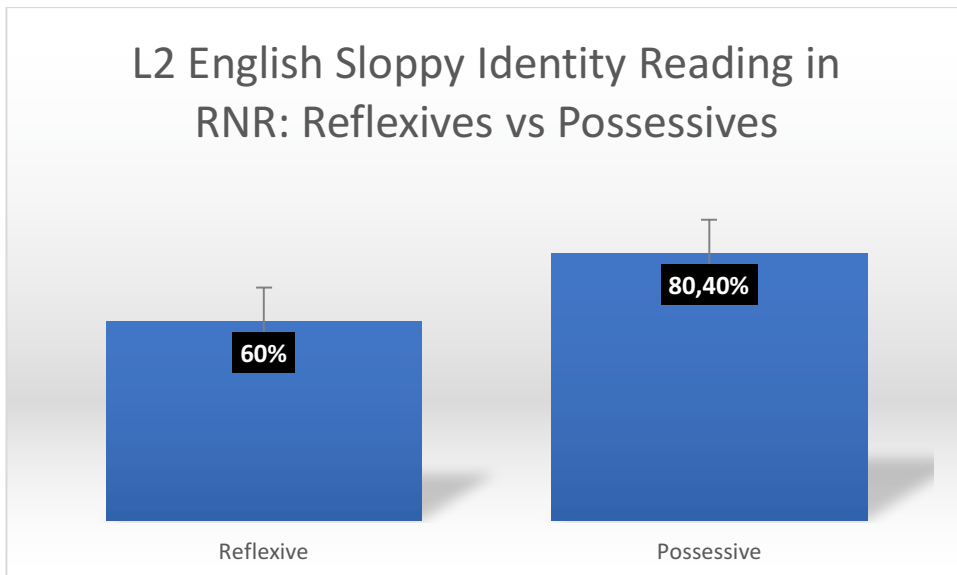


Figure 29. L2 English Sloppy Identity Reading in RNR: Reflexives vs Possessives

These results replicate neither the results of English native speakers (where the sloppy identity reading – which does not require VC – was accepted approximately the same in both the reflexive and the possessive construction), nor of Turkish native speakers, where the sloppy identity reading was accepted significantly more with the reflexive construction than with the possessive construction. Nevertheless, although there was no significant difference, L1 English speakers preferred the items in RNR with possessive constructions with sloppy identity reading more than the ones with reflexive constructions (i.e. they accepted the possessive pronouns around 10% more than the reflexive pronouns) as the L2 speakers did. This may suggest that backward ellipsis together with reflexives makes the interpretation harder than with possessives in native and non-native English. To be specific, reflexive constructions under backward ellipsis might be more marked than possessive pronouns in English, particularly in L2 English. However, the processing of these items did not reveal such a difference although, overall, the time spent on reading the items with possessive constructions were higher in both VPE and RNR, the difference was not found to be significant. Although I do not rely too much on the reading times because of aforementioned limitations, the general higher processing times somehow support Fabricius-Hansen et al. (2017)' argument that possessives must be more difficult than regular pronouns because of their anaphoric or deictic characteristics and their relational expressions. Therefore, they proposed that the following subtasks are required in the anaphoric possessive processing:

- identifying (the lexical head of) its host DP,
- finding a proper antecedent (i.e., anaphoric resolution), and
- using that and the relational meaning of the possessive to establish a referent for the host DP. (p. 2).

3.2.3.3.2. Online results and discussion

Although the observed reading time spent on the possessive construction in RNR was very high, the Wilcoxon Test displayed that the reading times of the sloppy identity reading in reflexive constructions ($M=914,52$ ms) and possessive constructions ($M=1615,89$ ms) were not significantly different from each other ($Z= -.926$, $p=.354$

for sloppy; $Z = -1.336$, $p = .181$ for strict). RNR construction itself seems to be difficult to process.

Table 40. Effects of VC in RNR (Reading Times) by L2 English Speakers

| | Reflexive construction (millisecond) | Possessive construction (millisecond) | Result |
|----------------------------|---|---|----------|
| Strict identity reading | 906 | 1241,45 | > 0.05 |
| Sloppy identity reading | 914,52 | 1615,89 | > 0.05 |

Overall, when I compare the strict identity readings with reflexives ($M = 43,57\%$) and possessives ($M = 63,75\%$), I found that there was a significant difference ($Z = -6.091$, $p < .001$). This overall suggest that, like L1 English speakers, L2 English speakers also found VC mechanism more difficult and preferred less the reading that required it.

However, I expected the sloppy reading to be similar in both reflexive and possessive constructions since this reading does not involve VC, but our L2 participants accepted reflexive constructions with sloppy reading ($M = 72,75\%$) significantly less than possessive constructions ($M = 82,5\%$), too ($Z = -3.897$, $p < .001$). This suggests that L2 speakers find possessive constructions preferable and easier than reflexive constructions even with sloppy readings.

To summarize, I hypothesized that if VC plays a role in the interpretation of deleted anaphors by L2 English speakers, the acceptance rates of the strict identity reading with reflexives (which requires VC) would be lower than the acceptance rates of the strict identity reading with possessives (which does not require VC). I indeed obtained more strict readings with possessives than with reflexives in VPE, which seems to suggest that VC might require difficulty in processing in English as a second language as well. This was confirmed by the fact that the same difference between reflexive and possessive pronouns in VPE was not observed in the acceptance rates of the sloppy

identity reading: L2 English speakers accepted the sloppy identity readings with possessives and with reflexives in VPE with almost the same extent, as expected since neither involves VC.

Moreover, L2 English speakers accepted the strict identity readings with possessives more than with reflexives in RNR, suggesting again that VC was hard. However, surprisingly, I obtained the same result in RNR for the sloppy identity reading, as well: L2 English speakers accepted the sloppy identity reading with possessives more than with reflexives, which was not expected since neither of them involved VC. This affected the whole acceptance rate of the sloppy identity reading in both elliptical constructions across reflexives and possessives: in the overall comparison, the L2 speakers preferred possessive constructions more than reflexive constructions. This might reveal that the main effect of difficulty and/or unacceptability of the reflexive pronouns in backward anaphora in general affected the overall comprehension of reflexive and possessive constructions. As explicated above, this might suggest that, although possessive pronouns were expected to be more difficult due its more complex structure, possessive pronouns in backward anaphora might be less marked in especially L2 English. Also, the difficulties observed in these reflexive structures seems to reflect on the interpretation of the structures requiring VC by making them more difficult, as well.

3.2.3.4 Strict vs sloppy identity reading preferences in general

As in the L1 English experiment, I also wanted to see whether or not there were any interpretation differences between the sloppy and strict identity readings in VPE and RNR with both reflexives and possessives. There was a difference between the acceptance rates of the sloppy identity reading and strict identity reading in L2 English (by collapsing all the variables and keeping other variables constant; sloppy identity reading acceptance scores (M=77,62%) was significantly higher than strict identity reading acceptance scores (M=53,62%) ($Z = -2.752$, $p = .006$). However, as it was observed, the strict identity reading was slightly higher than 50%, which still can be taken as an evidence for the availability of strict reading in those elliptical structures and the computational burden of VC mechanism.

3.2.3.5. The effect of directionality of anaphora

3.2.3.5.1 Offline results and discussion

To check whether the directionality of anaphora plays a role in the interpretation of the elided pronouns (reflexive/possessive) in elliptical structures (VPE/RNR), I compared the acceptance rates of the strict identity reading in VPE and RNR (separately for reflexive and for possessive pronouns) in L2 English experiment, too. Recall that the strict identity reading in VPE involves forward anaphora, while the same reading in RNR involves backward anaphora, which I hypothesized would be more difficult to process (Sorace & Filiaci, 2006).

Both VPE and RNR require forward anaphora in the sloppy identity reading with both reflexive and possessive constructions. Therefore, I expected to see similar results in both. Contrary to our expectation, however, the acceptance rate of sloppy identity readings in VPE (M=85,5%) were significantly higher than in RNR (M= 60%) in the reflexive construction ($Z=-3.881$, $p <.001$). This is what I also found both in L1 English and L1 Turkish experiments consistently. However, there were no significant differences between VPE and RNR in the possessive construction ($Z=-1.576$, $p <.115$) (see Table 41; Figure 30 and Figure 31), which probably suggested that there was an effect of elliptical construction on the interpretation (RNR was more difficult than VPE). When I collapse all the items and compare the sloppy identity readings in VPE (M=85,12%) and RNR (M=70,12%), I found a significant difference ($Z=-5.918$, $p <.001$). Based on these findings, RNR itself seems to be costlier for the L2 speakers of English with the sloppy identity reading. This might be related with the fact that RNR involves backward ellipsis, while VPE involves forward ellipsis. The possible resolution process of RNR first involves a garden patch effect then the parser starts to look for the antecedent VP, which can only be resolved at the end of the second clause. Only after the resolution of the VP, the resolution of the anaphor, might begin. Based on Ariel (1990)'s Accessibility Theory²⁴, regarding the antecedent and anaphora

²⁴ According to Ariel (1990), the antecedent accessibility may be affected by four factors: Distance, competition, salience and unity. First, regarding the distance, the shorter distance between the anaphor and the antecedent give higher accessibility to an antecedent while it is vice versa with longer distance. Second, in terms of the competition, high accessibility is gained by the antecedent when there are fewer possible antecedents of an anaphor. Third, as for salience, high accessibility is gained by an antecedent

relationship to examine the referential dependence in terms of processing, at least distance and competition factors (of anaphor and antecedent relations) are met for the antecedent to have a lower accessibility compared to VPE. In VPE, the possible VP antecedent is faced before the empty position. The resolution might need to extract the optimum VP antecedent from the working memory. However, in RNR, the parser may try to solve the VP-antecedent relation without any discourse markers. Presumably, after the resolution of the VP antecedent, the parser starts searching for the antecedent of the anaphor in the VP. In RNR, the possible antecedents for both bound and co-referential variables are in similar distance. This might confuse the readers in reaching a sloppy identity reading, as they could interpret the pronouns as reflexive or personal pronoun due to two close candidate antecedents (e.g. subject of the first clause and subject of second clause). However, in VPE, regarding the resolution of the anaphora, the bound variable- which allows sloppy identity reading- is closer, which has a higher accessibility marker and fits with the Principle A of the Binding Theory. Therefore, the first choice might be to take the pronoun as reflexive and reach a sloppy identity reading.

Table 41. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) by L2 English Speakers

| | VPE Sloppy identity reading (forward anaphora) | RNR Sloppy identity reading (forward anaphora) | Result |
|-------------------------|---|---|---------|
| Reflexive construction | 85,5% | 60% | < 0.05* |
| Possessive construction | 84,8% | 80% | > 0.05 |

when it exists in a salient location, like topic position. Lastly, in terms of unity, high accessibility is gained by an antecedent when it is within the same world, frame, segment of paragraph, perspective of the anaphor. Ariel continued by suggesting three groups of accessibility markers as high (e.g. pronouns), intermediate (e.g. demonstratives) and low (definite expressions) accessibility markers. The first group involves for example, pronouns. According to Ariel (1990)'s theory, the first group group refer to text-dependent expressions such as third person pronouns, also by assuming that they are the most common markers and mostly used in consecutive contexts. She also argues that reflexives are among the high accessibility markers, regarding Principle A of the Binding Theory, while pronouns must be among the lower accessibility marker than the reflexives. Therefore, reflexives must refer to an antecedent with a high accessibility within the local domain as *distance* and *unity* criteria are satisfied there. However, a pronoun, as a lower accessibility marker, must not refer to an antecedent in the local domain, which was anticipated to be highly accessible, based on the *distance* and *unity* criteria. The accessibility of the antecedent is low in the global domain of the pronoun, thus there is no problem in the binding.

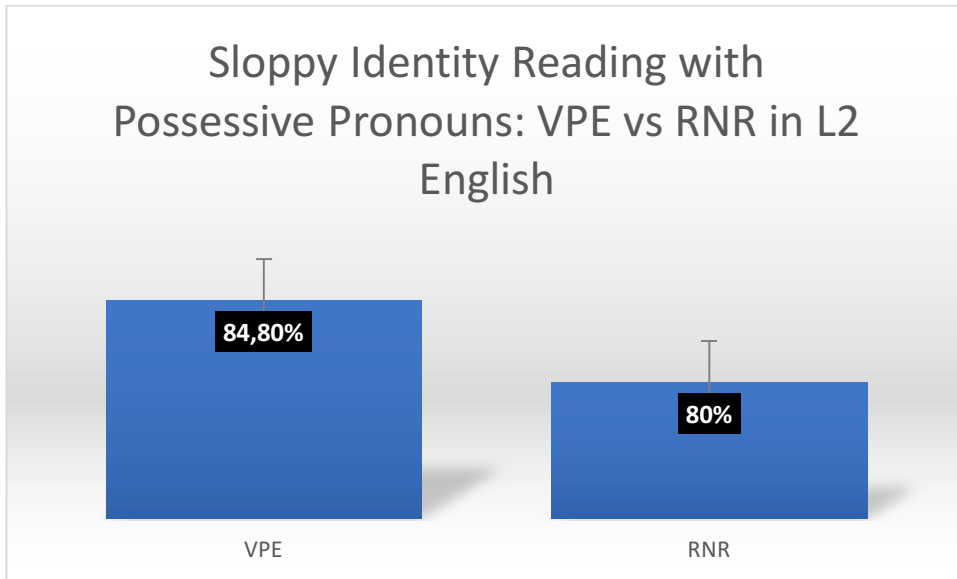


Figure 30. Sloppy Identity Reading with Possessive Pronouns: VPE vs RNR in L2 English

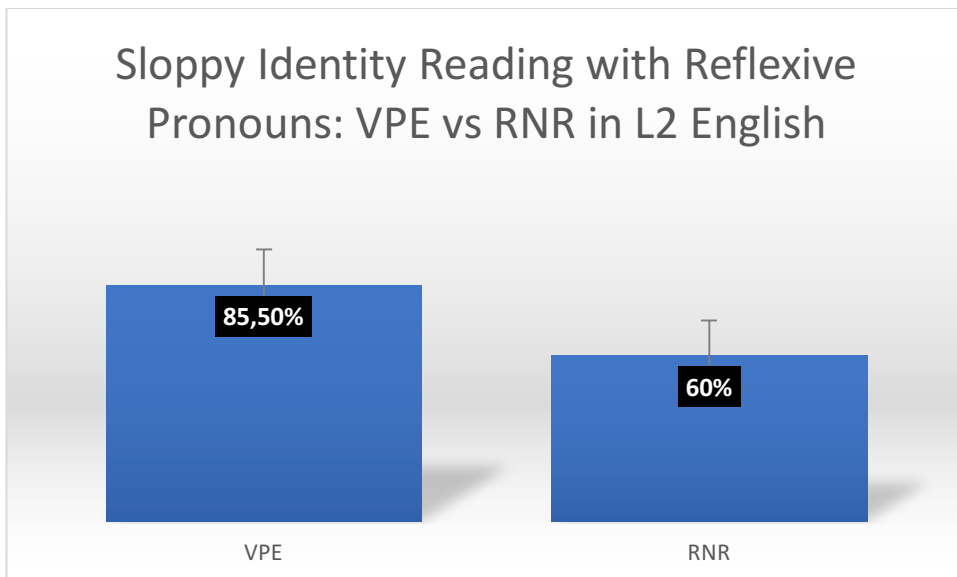


Figure 31. Sloppy Identity Reading with Reflexive Pronouns: VPE vs RNR in L2 English

Unlike the sloppy identity reading, which generates forward anaphora both in VPE and in RNR, the strict identity reading involves forward anaphora in VPE, but backward anaphora in RNR. Under the strict identity interpretation, the anaphor and its antecedent are in different clauses in both constructions, so structurally, the two involve a parallel configuration. In order to see whether the directionality of anaphora played a role in the interpretation of deleted anaphors, I examined the strict identity reading in VPE, involving forward anaphora (and forward ellipsis), and strict identity reading in RNR, containing backward anaphora (and backward ellipsis). I did this separately for reflexives and for possessives. If forward anaphora was easier than backward anaphora, I expected to see more strict identity readings in VPE than in RNR.

Surprisingly, the overall comparison of the acceptance rates of the strict identity reading showed that this reading was accepted significantly more in RNR ($M=60,37\%$) than in VPE ($M=46,87\%$) ($Z=-4.667$, $p < .001$). Unpacking the findings of L2 English speakers, I obtained higher acceptance rates for the strict identity reading in RNR sentences ($M=51,9\%$ for reflexives; $M=68,9\%$ for possessives) than in VPE sentences ($M=35,3\%$ for reflexives; $M=58,6\%$ for possessives) ($Z=-4.257$, $p < .001$ for reflexives and $Z=-3.176$, $p = .001$ for possessives) (see Table 42 and Figure 32 and Figure 33). This suggested that backward anaphora (and backward ellipsis) was easier than forward anaphora (and forward ellipsis).

After all these mixed results, I compared the overall rates given to the RNR ($M=65,25\%$) and VPE ($M=66,06\%$) sentences with keeping all the other variables constant, I did not find any significant difference ($Z=-.157$, $p = .875$).

Based on these findings, it seems that when the directionality of anaphora plays a role in the interpretation, the construction involving backward anaphora (RNR) is accepted more than the construction with forward anaphora (VPE). However, when the anaphora directionality is the same, the forward ellipsis construction might get preferred more.

Table 42. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) by L2 English Speakers

| | VPE Strict identity reading (forward anaphora forward ellipsis) | RNR Strict identity reading (backward anaphora backward ellipsis) | Result |
|-------------------------|--|--|---------|
| Reflexive construction | 35,3% | 51,9% | < 0.05* |
| Possessive construction | 58,6% | 68,9% | < 0.05* |

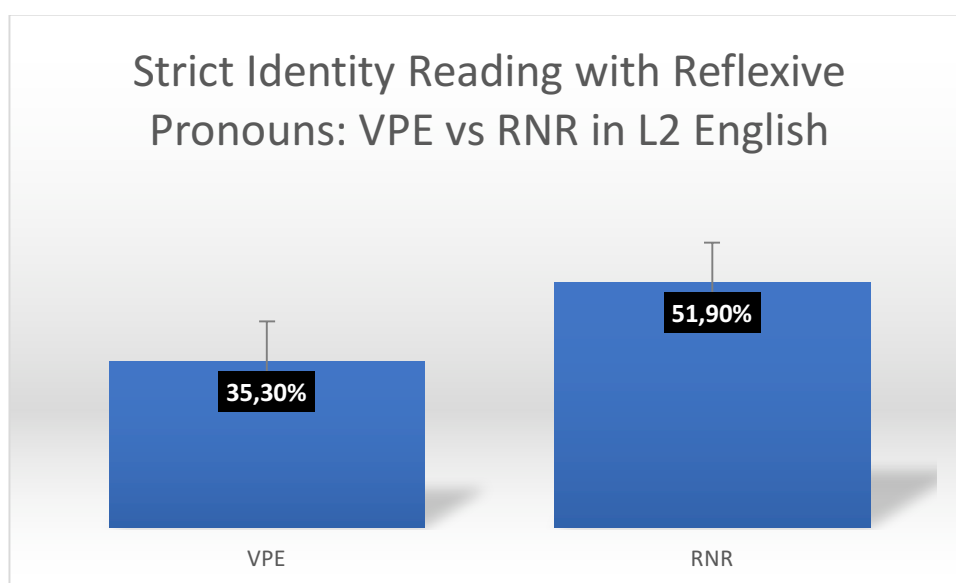


Figure 32. Strict Identity Reading with Reflexive Pronouns: VPE vs RNR in L2 English

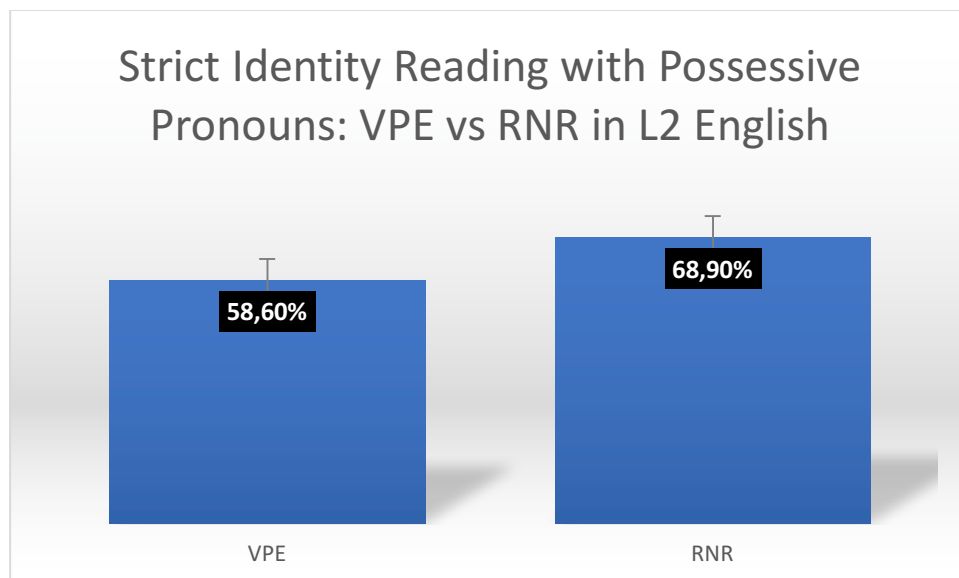


Figure 33. Strict Identity Reading with Possessive Pronouns: VPE vs RNR in L2 English

In both VPE and RNR, the acceptance rates of the strict identity readings in possessive constructions was slightly higher than in the reflexive ones. However, when I collapse all the items and compare the anaphora interpretation with possessive ($M=73,12\%$) and reflexive ($M=58,12\%$) constructions, I also found a significant difference ($Z=-6.858$, $p < .001$), suggesting that the possessive construction is overall easier than the reflexive construction.

3.2.3.5.2 Online results and discussion

In terms of reading times, L2 English participants' reaction times of the strict identity readings with VPE were shorter than RNR with reflexives (VPE: $M=800,81$ ms; RNR: $M=906$ ms; $Z=-3.481$, $p < .001$) and with possessives (VPE: $M=1089,94$ ms; RNR: $M=1241,45$ ms; $Z=-3.192$, $p = .001$) (see Table 43). In parallel, the overall comparison of the L2 English speakers' reading times allotted to the strict identity reading in RNR (1073,73 ms) and strict identity reading in VPE (945,37 ms) showed that there was a significant difference ($Z=-4.535$, $p < .001$). These all suggested that forward anaphora was costlier than backward anaphora.

Table 43. Strict Identity Reading in VPE (Forward Anaphora) and RNR (Backward Anaphora) (Reading Times) by L2 English Speakers

| | VPE Strict identity reading (forward anaphora (forward ellipsis) (millisecond) | RNR Strict identity reading (backward anaphora (backward ellipsis) (millisecond) | Result |
|-------------------------|---|---|--------|
| Reflexive construction | 800,81 | 906 | < 0.05 |
| Possessive construction | 1089,94 | 1241,45 | < 0.05 |

Parallel with the findings presented above and the implied conclusions, the reaction times revealed that there were significant differences in the sloppy identity reading with both reflexive (VPE $M=674,68$ ms; RNR $M=914,52$ ms) and possessive constructions (VPE $M=684,62$ ms; RNR $M=1615,89$ ms), i.e., RNR sentences were read in longer times ($Z=-4.718$, $p < .001$ for reflexives and $Z=-3.969$, $p < .001$ for possessives) (see Table 44). Likewise, the overall comparison of the reading times attested to the sloppy identity reading in RNR (1265,20 ms) and strict identity reading in VPE (679,65 ms) showed that there was a significant difference ($Z=-4.789$, $p < .001$). Moreover, I compared the overall rates given to the RNR ($M=1169,47$ ms) and VPE ($M=812,51$ ms) sentences with keeping all the other variables constant, I did find a significant difference ($Z=-5.526$, $p < .001$). These findings, regardless of the anaphora direction or VC, support the conclusion that RNR requires processing difficulty in L2 English.

Table 44. Sloppy Identity Reading in VPE and RNR (Forward Anaphora) (Reading Times) by L2 English Speakers

| | VPE Sloppy identity reading (forward anaphora) (forward ellipsis) (millisecond) | RNR Sloppy identity reading (forward anaphora) backward ellipsis) (millisecond) | Result |
|-------------------------|--|--|---------|
| Reflexive construction | 674,68 | 914,52 | < 0.05* |
| Possessive construction | 684,62 | 1615,89 | < 0.05* |

3.2.3.6 Conclusion

To conclude, firstly, I observed no consistent gender (mis)match effect in the L2 anaphora interpretation in RNR.

Next, I found that L2 English speakers dispreferred the VC mechanism in the offline task with no difference in the sloppy identity readings among the variables and with lower acceptance rates given to the reflexive constructions with strict identity reading compared to the possessive construction in both VPE and RNR.

Also, L2 English speakers accepted more sloppy identity readings with reflexive pronouns in VPE than in RNR while they accepted the sloppy identity reading with possessive pronouns at similar rates in these two elliptical constructions. This partially suggested that RNR as backward ellipsis was preferred less than forward anaphora. Likewise, in L1 English, I observed overpreference of the forward anaphora compared to the backward anaphora with both possessive and reflexive constructions. In Turkish, on the other hand, there was no difference between the preferences of the both forward and backward anaphora with reflexives but they preferred forward anaphora with possessive constructions. Therefore, it can be suggested that, although it was partially, the L2 group also preferred more VPE constructions as forward ellipsis than RNR

constructions as backward ellipsis, suggesting that comprehension of forward anaphora was easier than backward anaphora.

Moreover, the results of the L2 English speaker group revealed that they accepted more strict identity readings with both reflexive and possessive pronouns in RNR than in VPE, which suggested that backward anaphora was preferred more than forward anaphora. This is in line with what SSH hypothesize (Felser, 2015; Felser et al. 2009; Felser & Cunnings, 2012): L2 learners rely more on non-syntactic cues and they experience more difficulty in the structures with looking-backward dependencies- forward anaphora in our case- than the ones with looking forward dependencies- which is backward anaphora in our case. The reason for this might be that in the latter, the parser does not generally require checking whether a mandatory c-command relationship really obtains (Felser, 2015), while structures involving looking-backward dependencies such as forward anaphora result in finding syntactic relationship (Felser et al. 2009; Felser & Cunnings, 2012). Therefore, L2 speakers display non-native outcomes with forward anaphora since they might utilize syntax less than the native speakers.

Still, the time spent on reading the items containing backward anaphora was processed slower than the ones with forward anaphora. Similarly, but partially, L1 English speakers preferred RNR with strict identity reading only with the reflexive constructions while the preference rates of the possessive constructions were similar in RNR and VPE. It cannot be due to L1 transference, since it shows a different behavioral pattern from L1 because in Turkish, the participants did favor neither backward anaphora nor forward. In terms of reading times, L1 Turkish participants also processed the statements with backward anaphora either similarly with the ones involving forward anaphora or faster than the forward anaphora. Thus, these findings of L2 learners cannot be explained by the possible antecedent intervening between the anaphor and the intended referent in VPE, since I also observed an overpreference of the backward anaphora with possessive constructions, as well. Nevertheless, as the literature suggested that the order of the antecedent and the anaphors in the clauses such as linear precedence might influence the production and the process (Bresnan 1994; Bresnan 1998; Kazanina & Phillips 2010; Drummer & Felser 2018). Therefore,

L2 speakers might find forward anaphora less acceptable. However, this is still questionable, as the time spent on reading the items with backward anaphora was more than the forward anaphor. Therefore, it may suggest that lack of discourse constraints in backward anaphora and the parser looking for a syntactically acceptable antecedent and evaluating every NP as possible antecedent (see Cowart and Cairns, 1987; Kazanina, 2005) made them spend more time on the items with backward anaphora. However, the forward anaphora's search procedure of the antecedent such as selecting the possible antecedent from the working memory and retrospective search for the possible antecedent (Lewis & Vasishth, 2005; Lyu et al., 2020; Sorace & Filiaci, 2006), which was non-local with the strict identity reading in our case, which might lead the L2 speakers prefer backward anaphora more than the forward anaphora.

Surprisingly, the same trend with somewhat smaller difference was obtained with possessive pronouns: the strict identity reading was accepted more in RNR than in VPE, which again suggested that backward anaphora was easier than forward anaphora. As explicated in L1 English results, since the strict identity reading with reflexives involves VC in both constructions, the difference cannot be due to that. It is possible, however, that the reason for this result might be that in VPE, at the level where interpretation takes place, there is a possible antecedent for the anaphor (the subject of the second conjunct), which intervenes between the anaphor and the intended referent (the subject of the first conjunct) and that speakers interpret the reflexive as bound by this local binder. Once they are forced to consider the strict identity reading, it is difficult for speakers to establish a co-reference between the reflexive and a (both linearly and structurally) long-distance antecedent across a legitimate local binder.

Lastly, I looked at the sloppy identity readings. I expected to find similar acceptance rates of the sloppy identity reading both in VPE and in RNR, since this reading requires forward anaphora in both constructions. The sloppy identity reading with possessive pronouns were accepted at similar rates in VPE and RNR as expected.

However, the acceptance rates of the sloppy identity reading with reflexive anaphors was greater in VPE than in RNR. This is what I also found both in L1 English and L1

Turkish experiments consistently. This might be because of the VC effect on its counterpart interpretation which was VC. As they reject the VC, they might accept the sloppy reading more.

In both VPE and RNR, the acceptance rates of the strict identity readings in possessive constructions was higher than in the reflexive ones, suggesting VC was dis-preferred and hard to comprehend.

3.2.4 Comparison of the L2 English with L1 English and L1 Turkish: Is there a difference between the L1 and L2 English and is there an effect of L1 Turkish?²⁵

I next compared the trends obtained in the L2 English experiment with the results gathered in the L1 English and L1 Turkish. First of all, I did not observe any significant differences between L1 English and L2 English results with the reflexive constructions in both VPE and RNR in either reading type.

The sloppy reading in VPE with reflexives (no VC, forward anaphora) is accepted between about 85% and 95% of the time by both L1 Turkish, L1 English and L2 English participants. A Mann-Whitney U test results showed that L1 and L2 speakers of English accepted these construction at a similar rate ($U=1258.50$, $P=.204$), (see Figure 34).

²⁵ I could not run inferential statistical analysis to compare Turkish and English results because they were two different experiments and although parallel, the items were different in different languages. That is why I compared them in descriptive trends and speculated the findings based on the percentages. On the other hand, since L1 English and L2 English experiments contained the same items and procedures, I ran inferential analyses for them to compare these two data for both offline and online experiments by using a non-parametric test that was called Mann-Whitney U test because our data was not distributed normally,

Table 45. Effects of Construction Type VPE and RNR (Offline Acceptance Rates) in L1 and L2 English: Sloppy identity Reading with Reflexive Constructions

| | L1 English | L2 English | Result |
|---|------------|------------|--------|
| Reflexive constructions with sloppy identity reading in VPE | 90,62 | 85,12% | >0.05 |
| Reflexive constructions with sloppy identity reading in RNR | 61,5% | 70,12% | > 0.05 |

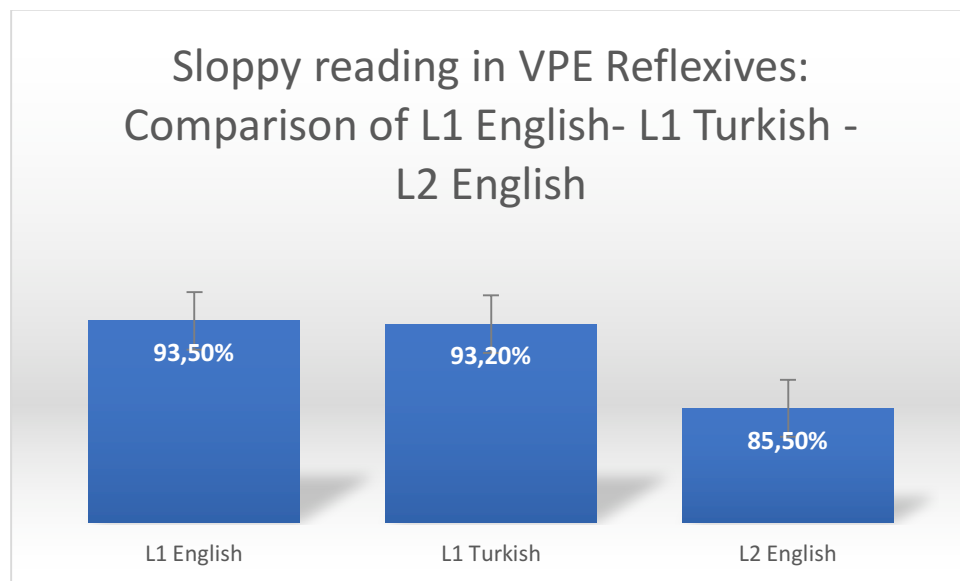


Figure 34. Sloppy Reading in VPE Reflexives: Comparison of L1 English- L1 Turkish - L2 English

However, as for the RNR with reflexives with sloppy identity reading (no VC, forward anaphora), the acceptance rates of the L1 and L2 English speakers were similar around 58% of the time (based on Mann-Whitney U test results; $U= 1352.50$, $P= .601$) while Turkish speaker accepted these structures at almost 100% of the time (see Figure 35).

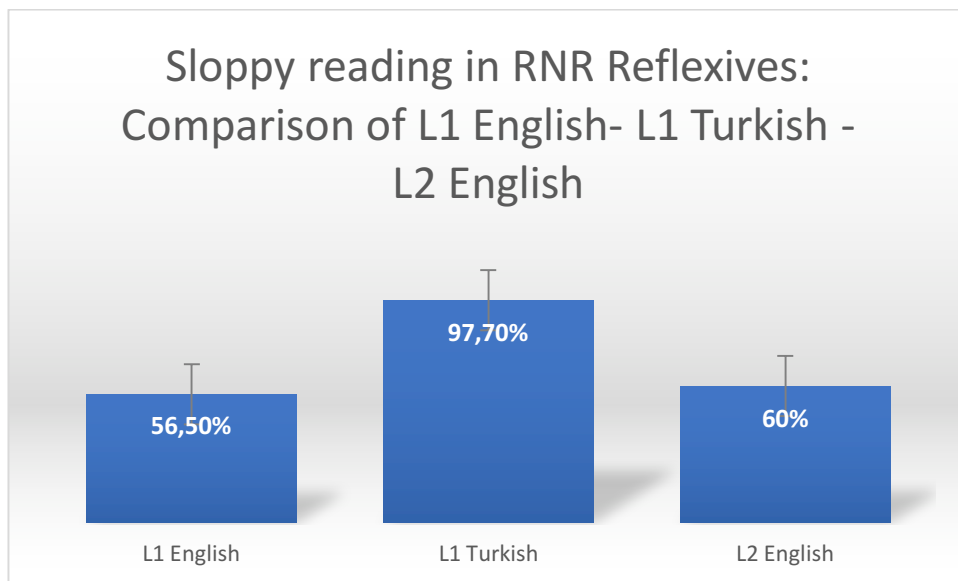


Figure 35. Sloppy Reading in RNR Reflexives: Comparison of L1 English- L1 Turkish - L2 English

As for both VPE and RNR with reflexive constructions with strict identity reading (VC, forward anaphora), these structures were accepted at low rates compared to other structures by all the participants. However, the L1 Turkish participants rejected such constructions most drastically, with almost zero acceptance. Looking at the strict identity reading with reflexives in VPE, there was no difference between the interpretation of such sentences by L1 and L2 English participants (L1 $M=36,10\%$, L2 $M=35,30\%$) (based on a Mann-Whitney U test results; $U=1422$, $P=.897$) (see Figure 36). The same is true of the RNR construction, where the strict identity reading with reflexives was accepted at the rate of $52,8\%$ in L1 English and at the rate of $51,9\%$ in L2 English (based on a Mann-Whitney U test results; $U=1440.50$, $P=.982$) (see Figure 37).

Table 46. Effects of VC in VPE and RNR (Offline Acceptance Rates) in L1 and L2 English: Strict Identity Reading

| | L1 English | L2 English | Result |
|--|------------|------------|--------|
| Reflexive construction with strict identity reading in RNR | 52,8% | 51,9% | > 0.05 |
| Reflexive construction with strict identity reading in VPE | 36,10% | 35,30% | > 0.05 |

As figures 36 and 37 show, the acceptance rates of the strict identity reading were much higher in both L1 and L2 English than they were in Turkish (even though presumably, the same mechanisms of interpretation were involved in both languages).

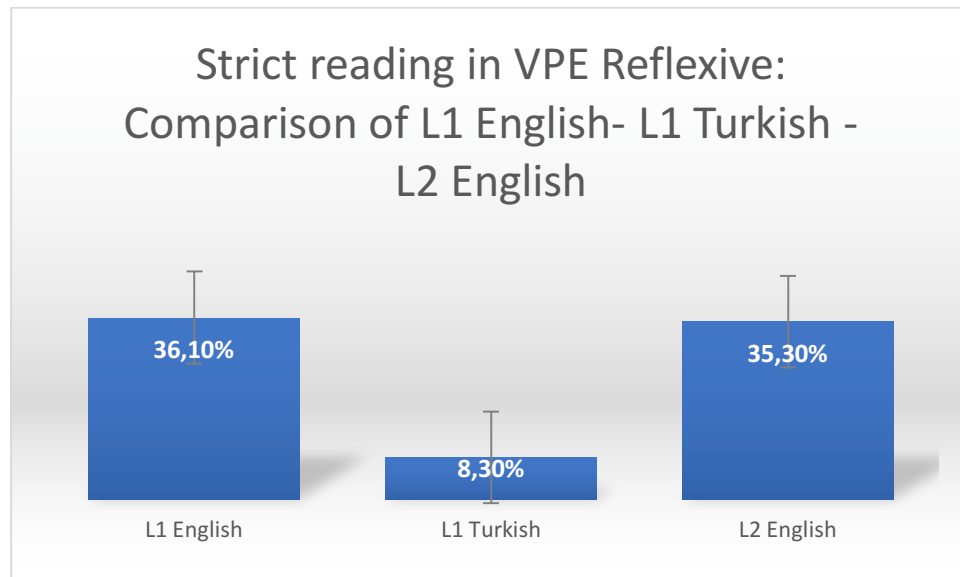


Figure 36. Strict Reading in VPE Reflexive: Comparison of L1 English- L1 Turkish - L2 English

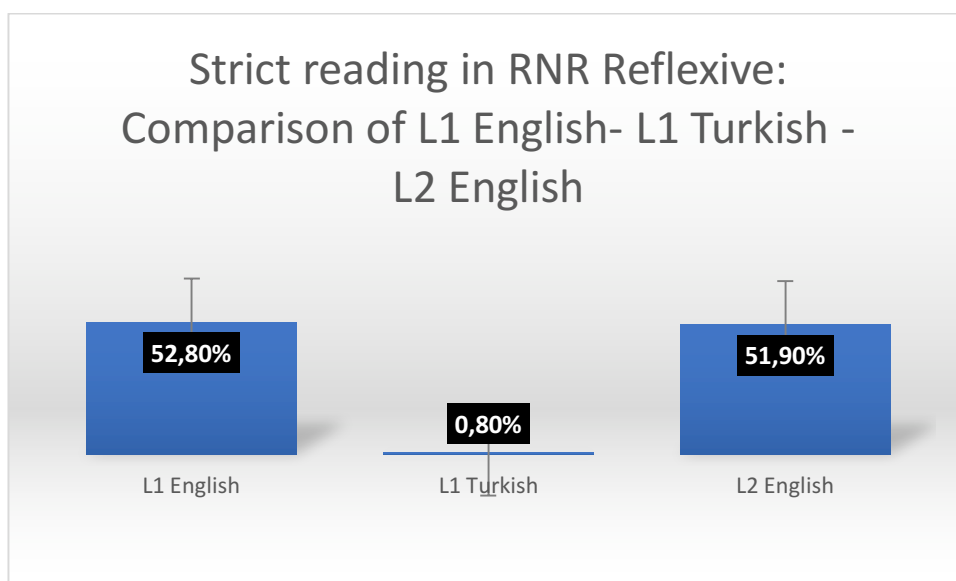


Figure 37. Strict Reading in RNR Reflexive: Comparison of L1 English- L1 Turkish - L2 English

When it comes to the possessive construction, however, the results of L1 English speakers and L2 English speakers showed a slightly different pattern. First of all, the strict identity reading was accepted to a greater extent in English possessive constructions (which does not require VC) by both L1 and L2 English speakers compared to Turkish possessive construction (which does), both in VPE, as shown in Figure 38, and RNR, as shown in Figure 39. A Mann-Whitney U test results revealed that there was no significant difference between L1 ($M=78,7\%$) and L2 English ($M=68,9\%$) in the ratings of the RNR sentences with possessive constructions with strict identity reading ($U= 1180, P = . 125$)

However, within the English L1 and L2 VPE results comparison, a Mann-Whitney U test results showed that L2 speakers ($M=58,6\%$) rated VPE with these constructions significantly lower than L1 English speakers ($M=85,20\%$) ($U= 790.500, P < . 001$). These lower acceptance rates of the possessive constructions in L2 English compared to L1 English might be explained by the effect of the L1, which is Turkish in our case, where the interpretation of a possessive anaphor (which is a reflexive in Turkish) does require VC.

The differences in the trends between English and Turkish still display that that VC seems to be confusing. The acceptance rate of the strict reading in the possessive constructions in both VPE and RNR of both L1 and L2 English increased when compared to Turkish in which VC mechanism was involved in the computation of the strict identity reading with both reflexive and possessive constructions in the elliptical structures.

Table 47. Effects of VC in VPE and RNR (Offline Acceptance Rates) in L1 and L2 English: Strict identity reading

| | Strict identity reading in L1 English | Strict identity reading in L2 English | Result |
|--|--|--|---------|
| Possessive construction with strict identity reading in RNR | 78,7% | 68,9% | > 0.05 |
| Possessive construction with strict identity reading in VPE | 85,2% | 58,60% | < 0.05* |

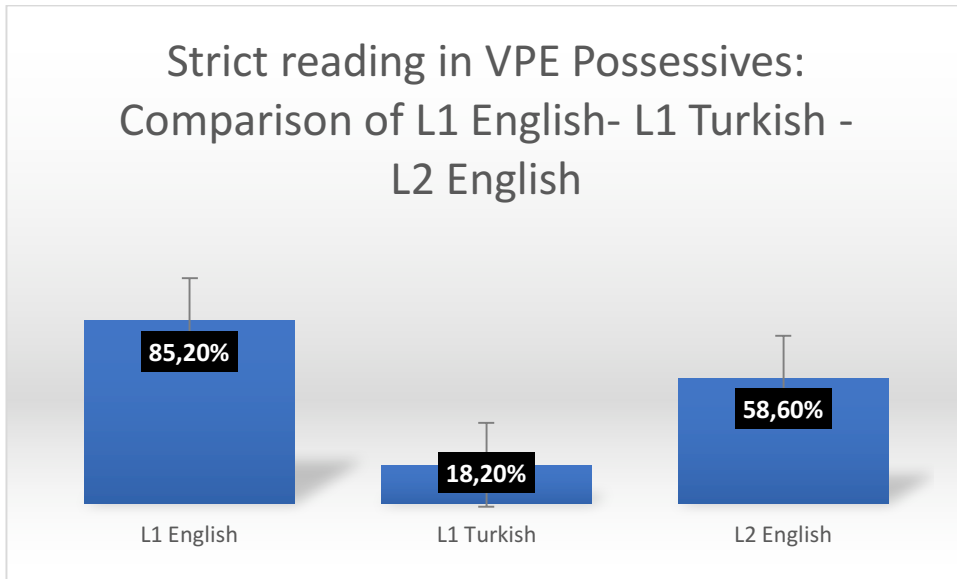


Figure 38. Strict reading in VPE Possessives: Comparison of L1 English- L1 Turkish - L2 English

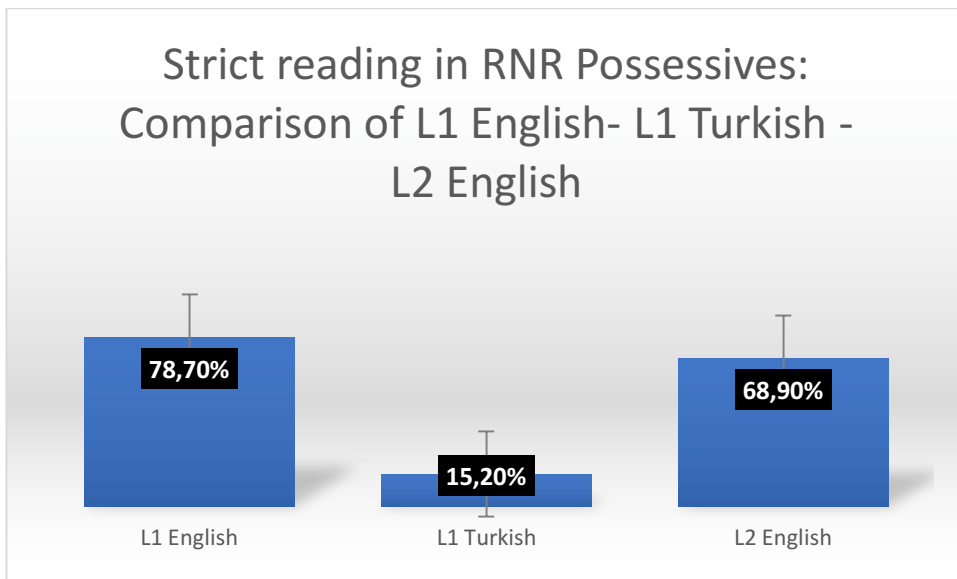


Figure 39. Strict reading in RNR Possessives: Comparison of L1 English- L1 Turkish - L2 English

However, I expected that sloppy identity reading would be accepted to similar rates in both elliptical constructions because none of the constructions involved VC mechanism. This expectation was met for VPE with very similar acceptance rates, as shown in Figure 40, (based on a Mann-Whitney U test results; $U= 1350.50, P=.525$) but met for RNR with higher acceptance rates of the L2 English speakers than the L1 English and L1 Turkish speakers, as shown in Figure 41, (based on a Mann-Whitney U test results $U = 1110, P = .045$). Still, although the difference between L1 and L2 English results were significant but it is very close to p.05 which might be negotiated as a very small difference.

Table 48. Effects of VC in VPE and RNR (Offline Acceptance Rates) in L1 and L2 English: Sloppy Identity Reading with Possessive Constructions

| | Sloppy reading in L1 English | identity reading in L2 English | Sloppy reading in L2 English | identity reading in L2 English | Result |
|--|---------------------------------|-----------------------------------|---------------------------------|-----------------------------------|---------|
| Possessive construction with sloppy identity reading in RNR | 66,7% | | 80,4% | | < 0.05* |
| Possessive construction with sloppy identity reading in VPE | 88% | | 84,8% | | > 0.05 |

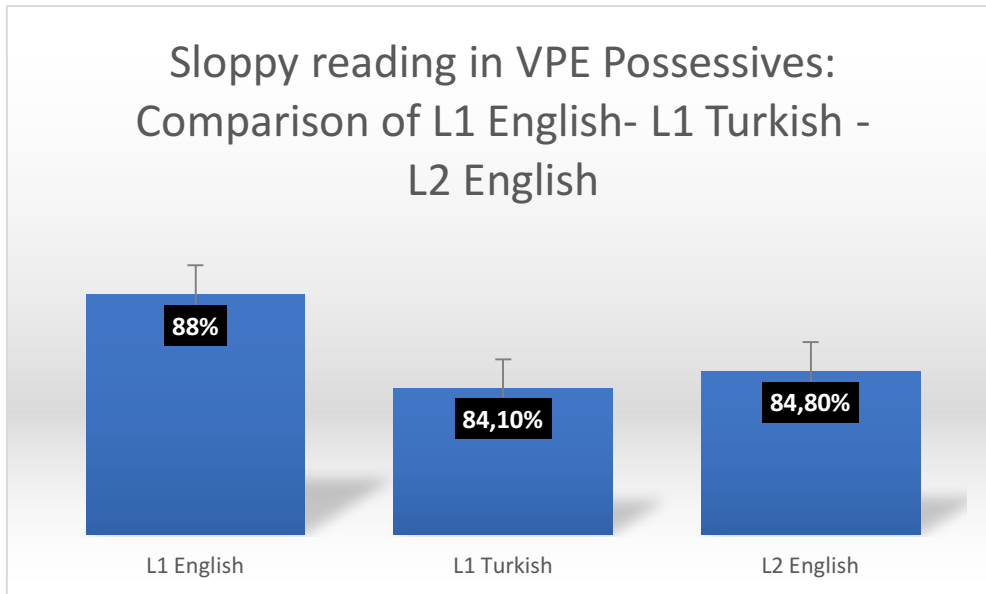


Figure 40. Sloppy Reading in VPE Possessives: Comparison of L1 English- L1 Turkish - L2 English

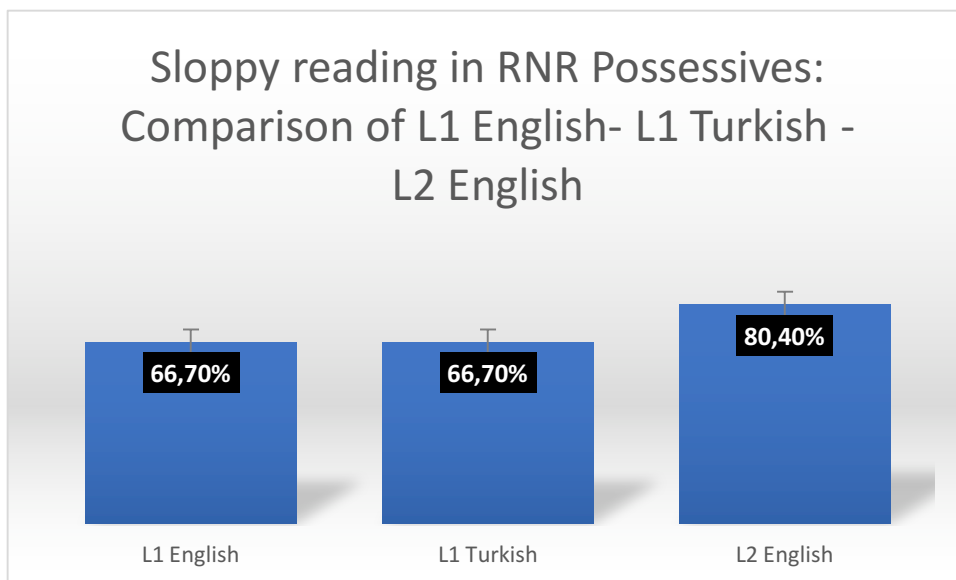


Figure 41. Sloppy reading in RNR Possessives: Comparison of L1 English- L1 Turkish - L2 English

Lastly, in terms of online processing results, L2 speakers were similar to L1 speakers only in the time spent reading items involving the strict identity reading in the reflexive construction (the only one that needs VC) both in VPE and RNR (Mann-Whitney U test results for VPE, $U = 1385.50$, $P = .743$; and for RNR, $U = 1158$, $P = .112$).

However, for the other variables, Mann-Whitney U tests displayed significant differences at $p < .05$. All of these variables made L2 learners spend significantly more time on the interpretation of experimental items than native speakers. This is also compatible with the L2 processing literature, which shows that processing is slower in the L2 language than L1. The literature suggests that L2 speakers might depend more on non-syntactic information such as lexical, discourse or frequency information in parsing (e.g., the Shallow Structure Hypothesis, Clahsen & Felser, 2006, 2017; Cunnings, 2017). Also, L2 processing capacity models²⁶ (McDonald, 2006; Hopp, 2010, 2012, 2018) and Interface Hypothesis (Sorace & Filliaici 2011) suggest that bilingual speakers cannot incorporate different information types as competently as monolinguals do in online sentence comprehension, which causes L2 speakers have slower lexical and sentential processing.

When I collapse all the items and inspect the sloppy and strict identity reading separately, a Mann-Whitney U test revealed that there were no significant differences between the acceptance rates of the sloppy identity reading ($U = 1281.50$, $P = .362$) and the strict identity reading ($U = 1112.50$, $P = .065$) by L1 and L2 English speakers, although the acceptance rates of the L2 English participants were lower for the strict identity reading ($M = 53.62\%$) than L1 English participants ($M = 63.18\%$).

²⁶ Hopp (2018) stated that the studies on word recognition and production of bilinguals displayed two main uncovered aspects where the L1 and L2 lexical processing dynamics differ:

“(a) Lexical retrieval is slower and is associated with larger frequency effects in L2 than in L1 processing;

(b) lexical access is non-language-selective in that bilinguals activate lexical representations across languages in production and comprehension.” (p.7)

Table 49. Effects of VC in VPE and RNR (Offline Acceptance Rates) in L1 and L2 English

| | L1 English | L2 English | Result |
|-------------------------|------------|------------|--------|
| Sloppy Identity Reading | 76,12% | 77,62% | >0.05 |
| Strict Identity Reading | 63,18% | 53,62% | > 0.05 |

When I collapsed all the items and divided them as VPE and RNR, the Mann-Whitney U test revealed that there were no significant differences between the acceptance rates of RNR ($U= 1407, P = .834$), but there was a significant difference in the acceptability of VPE by the L1 and L2 speakers ($U= 840, P = .001$): the acceptance rates of the L2 English participants were significantly lower for VPE ($M=66,06%$) than L1 English participants ($M=75,68%$).

Table 50. Effects of VC in VPE and RNR (Offline Acceptance Rates) in L1 and L2 English

| | L1 English | L2 English | Result |
|-----|------------|------------|--------|
| VPE | 75,68% | 66,06% | <0.05* |
| RNR | 63,62% | 65,25% | > 0.05 |

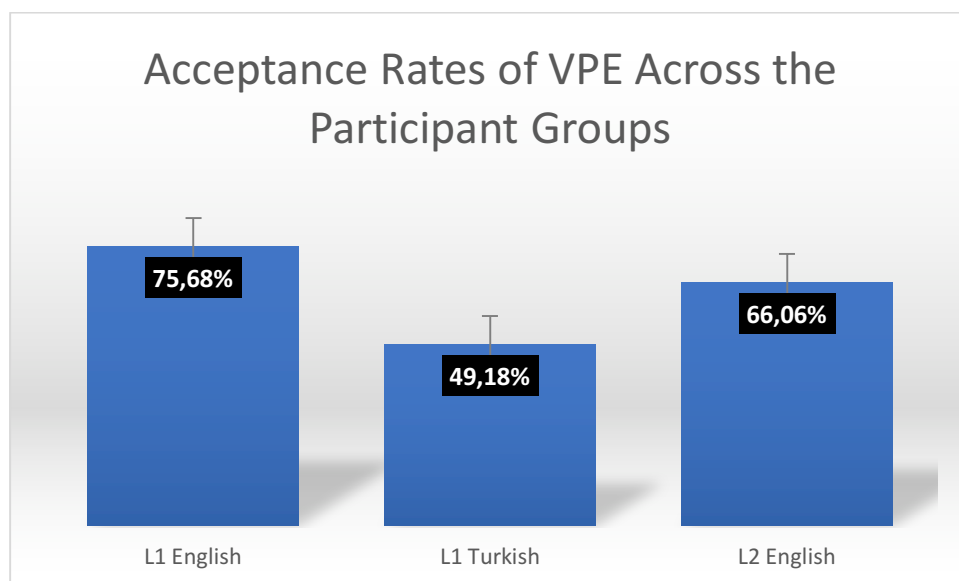


Figure 42. Acceptance Rates of VPE Across the Participant Groups

Moreover, I collapsed all the items and divided them into possessive constructions and reflexive constructions. Mann-Whitney U test revealed that there were no differences between the L1 ($M=59,72\%$) and L2 English speakers ($M=58,17\%$) regarding reflexive constructions ($U= 1372, P = .684$) while L1 English speakers ($79,63\%$) accepted possessive constructions significantly more than L2 English speakers ($M=73,18\%$) ($U= 1027.50, P = .020$). This could be explained by the negative transfer of L1. That is, in Turkish, possessive constructions were confusing and problematic for Turkish speakers. I found that the participants found it easier to comprehend sentences with reflexive construction ($M=80\%$) than with possessive constructions in L1 Turkish ($M=73,63\%$) ($Z=-2.126, p = .034$).

However, the analyses of the times spent on reading the items with reflexive ($M=607,72$ ms for L1; $M= 824$ ms for L2) ($U= 1008, P = .015$) and possessive ($M= 505,84$ ms for L1; $M=1157,97$ ms for L2) ($U= 718, P < .001$) constructions revealed that both reflexive and possessive constructions are read slower by L2 English speakers. This also supports that L2 speakers had a slower processing capacity than native speakers.

Native speakers of English and L2 speaker of English preferred both sloppy identity reading and also strict identity readings in a parallel way. L2 speakers behaved similarly to L1 speakers with regard to the interpretation of anaphora in ellipsis. It might be because of the high proficiency levels of the L2 participants. Similarly, Ying (2005) also found parallel preferences in VPE that both L2 speakers with higher proficiency level and L1 speakers exhibited similar behaviors regarding preference over-preference of sloppy identity reading in bare contexts and of preference over strict identity reading in referential contexts (although the amounts differ) while Gandón-Chapela & Gallardo del Puerto (2019) found that L1 speakers displayed higher sloppy identity reading preferences than L2 speakers.

All in all, when I compared the trends obtained in the L2 English experiment with the results obtained in the L1 English and L1 Turkish experiments, I clearly observe that the strict identity reading was accepted to a greater extent in English possessive constructions (which does not require VC) by both L1 and L2 English speakers compared to Turkish possessive construction (which requires VC), both in VPE and RNR. The lower acceptance rates of the possessive constructions in L2 English compared to L1 English might be explained by the effect of the L1, which is Turkish in our case. The higher acceptance rates of the strict reading in the possessive constructions in both VPE and RNR of both L1 and L2 English compared to L1 Turkish suggests that the VC affects the computation of the anaphors in the elliptical structures.

The Table 51 below also displays that the evidence of L1 and L2 English and L1 Turkish experiments revealed that structures whose interpretation required VC were less accepted and more difficult. By not showing the difference between possessive and reflexive construction with the strict identity reading in VPE (since both require VC) and with fairly low preference rates of the possessive constructions in RNR (both require VC), Turkish also can be suggested as supporting the difficulty of VC mechanism. As for the sloppy identity reading, where I expected to find similar ratings both in the reflexive construction and the possessive construction, as in L1 English,

(since neither requires VC), L2 English participants showed a completely different behavior than both L1 English and L1 Turkish speakers. L2 speakers preferred possessive constructions more both in strict and sloppy identity readings in particular RNR. These results of RNR also influenced the overall comparison of the items with sloppy identity reading in RNR and VPE. I observed that the non-native English speakers accepted possessive constructions with sloppy identity reading more than the reflexive constructions with sloppy identity reading. This clearly shows that they did not display this behavior due to their L1, where native speakers had problems with possessive constructions.

In terms of directionality of anaphora, only L2 speakers totally accepted backward anaphora more than the forward anaphora. On the other hand, they displayed longer processing times on the backward anaphora instances opposite to their offline preferences. However, only in offline L1 English results and online Turkish results of the reflexive constructions, I found that the strict reading in RNR was preferred more than in VPE, which suggested that, partially or totally, backward anaphora was preferred more and computed easier than the forward anaphora. Moreover, all of the three participant groups favored VPE as the forward ellipsis instance compared to RNR (backward ellipsis). Lastly, in all the participant groups, possessive constructions were accepted more than reflexive constructions. Except for the L2 English speakers, both native speaker groups favored VPE construction more than RNR construction.

Table 51. Interim Summary of the Main Results Across Languages and Participants Groups

| | Reflexives with Strict identity reading vs Possessives Strict identity reading -VC | Reflexives with Sloppy identity reading vs Possessives Sloppy identity reading-Non-VC | VPE Strict identity reading vs RNR Strict identity reading - Directionality of Anaphora | VPE Sloppy identity reading vs RNR Sloppy identity reading-Directionality of ellipsis | Possessives vs Reflexives-Construction Type | RNR vs VPE-Elliptical Construction Type |
|------------|--|---|---|---|---|---|
| L1 English | P<.001* Pos >Ref | P>.05 | P>.05 | P<.001* VPE > RNR | P<.05* Pos >Ref | P<.001* VPE > RNR |
| L2 English | P<.001* Pos >Ref | P<.001* Pos >Ref | P<.001* RNR >VPE | P<.001* VPE > RNR | P<.001* Pos >Ref | P>.05 |
| L1 Turkish | P<.05* Pos >Ref | P<.001* Ref >Pos | P>.05 | P<.05* VPE > RNR | P<.05* Ref >Pos | P<.05* VPE >RNR |

However, I expected that sloppy identity reading would be accepted at similar rates in both elliptical constructions because none of the constructions involved VC mechanism. This expectation was met for VPE with very similar acceptance rates in all groups. However, it was not met for RNR, with higher acceptance rates of the L2 English speakers than both the L1 English and L1 Turkish speakers.

These findings suggest an effect of the construction type (RNR versus VPE), which in turn suggests that, with the directionality of anaphora and the VC kept constant (forward anaphora, no VC), participants found it easier to interpret sentences that involve forward ellipsis (VPE) compared to those that involve backward ellipsis (RNR). This might be related that RNR as backward ellipsis may be syntactically and/or semantically more restricted than VPE as forward ellipsis or maybe related to the complexity of RNR sentences.

All in all, except for the L2 English speakers' higher acceptance rates of the backward anaphora, I did not find a clear effect of the language (L1 English, L2 English, L1 Turkish) on the comprehension of the VC mechanism, sloppy and strict identity

reading preferences and also directionality of anaphora and ellipsis. To some extent, I found parallel results.

CHAPTER 4

GENERAL DISCUSSION

4.1 Vehicle Change Effect

Our first research goal was to examine the effect of VC on the interpretation of anaphors under ellipsis. I expected to find that participants will have difficulties in interpreting a reflexive such as *himself* as a pronoun such as *him* in both VPE and RNR since the mechanism needed to arrive at this interpretation seems to require both derivational (interpreting a reflexive as a pronoun) and (sometimes) inflectional changes (e.g., in the gender mismatch conditions, where a reflexive *himself* has to be interpreted as a pronoun *her*). The preference results displayed that the constructions involving VC are indeed dis-preferred by the native speakers of Turkish and English and by the L2 speakers of English.

In our experimental materials, those items in which the end-of-trial question forced the participants to assign the elided conjunct a sloppy identity reading, VC was not required either in English or in Turkish, regardless of whether the anaphor in the non-elided conjunct was a reflexive or a possessive. When the end-of-trial question forced the participants to assign the elided conjunct a *strict* identity reading (i.e., to interpret the elided anaphor as referring to the subject of the other conjunct), VC was needed when the non-eliptical contained a reflexive. For English, this was the case in the reflexive construction (e.g., *John likes himself and Bill does too*), but not in the possessive construction (e.g., *John likes his friend and Bill does too*). Native English speakers indeed accepted the strict identity reading significantly more in the possessive construction than in the reflexive construction. However, in items with the sloppy identity reading, which do not require VC, the type of anaphor (possessive versus

reflexive) did not play a role. Taken together, these results give support to our hypothesis that VC plays a role in the interpretation of anaphors under ellipsis.

The same results were replicated by our L2 English participants, but only in VPE. In RNR, L2 speakers of English accepted both strict and sloppy identity reading significantly more in the possessive than in the reflexive construction, which also influenced the general comparison of preference of sloppy identity reading in possessive and reflexive constructions. Based on these findings, I could come up with a proposal that in non-native English, reflexive pronouns in RNR as a backward anaphora might be more marked than possessive pronouns. Likewise, such difficulties and/or rejections of reflexive anaphors might be also one of the reasons of the observed results in the strict identity readings in RNR; i.e. L2 English speakers accepted the structures with VC less than the ones without VC.

In Turkish, due to the fact that Turkish lexicon contains a possessive reflexive, in addition to a possessive pronoun, VC was needed for the strict identity reading both in the reflexive and in the possessive construction. This is because the non-elliptical conjunct in both the reflexive and the possessive construction contained a reflexive element *kendi* 'self/self's'. We, thus, expected the strict identity reading to be (dis)preferred equally in both constructions. This was indeed the case in VPE sentences. In RNR, however, our native Turkish participants accepted the strict identity reading significantly more in the possessive construction, while they accepted the sloppy identity reading significantly more in the reflexive construction. In fact, the strict identity reading seemed to be dis-preferred across the board in Turkish (this reading was accepted at most at 15%), but it was more attested in the possessive constructions than in reflexive constructions (both in VPE and in RNR). The overall low acceptance of the strict identity reading might be due to the fact that every single instance of the strict identity reading in Turkish requires VC. I can fairly argue that this difference might be caused by the computational load and difficulty of VC mechanism.

Literature on VPE suggests that the strict identity reading was not the first choice (compared to sloppy identity reading) that the participants had while interpreting the

ambiguous anaphora in the VPE sentences with reflexives. As Shaphiro and Hestvik (1995) discussed, despite the fact that participants found it difficult to accept the strict identity reading off-line, strong indications exist for the on-line availability of this reading at the point that the syntax licenses it. This kind of a result may suggest a particular "processing reality" to the VC phenomenon because the anaphor that was regenerated from the non-elided clause and was altered from a reflexive to a pronoun indeed referred to the distance antecedent on-line. Finally, based on their findings, the authors suggested that "once reaccessed, the strict reading remained relatively active across the temporal course of the sentence" (Shaphiro & Hestvik, 1995, p.525).

Our findings are also in line with the Communicative Principle of Relevance, which has been studied in VPE research especially with L2 learners. It predicts that in isolated situations where a biasing context does not exist, strict and sloppy interpretation are possible in both L1 and L2 speakers. As hypothesized earlier depending on the literature, there was a clear over preference for the sloppy identity reading although the strict identity preference still existed in acceptable amounts, as attested in previous studies (Gandón-Chapela & Gallardo del Puerto, 2019; Epoge 2012; Park 2016; Ying, 2005;). Still, the scholars explain this over-preference for the sloppy reading with Communicative Principle of Relevance: "processing effort becomes more important in the processing of utterances when there is little information to go by." (Rosales Sequeiros 2004, p.262). Based on this, one could argue that copying the antecedent VP into the ellipsis place was easier (e.g., *Mary_i liked herself_i and Sue_k liked herself_k*) than inserting a pronoun that co-refers with the subject of the non-elided conjunct into the ellipsis place (e.g., *Mary_i liked herself_i and Sue_k liked her_i*). On the other hand, although our experimental statements were presented without contexts, our judgment questions were biasing, i.e., that they were asking the truth value of the either the strict or sloppy reading that might be deduced from the bare but ambiguous ellipsis statement. Even though I did not add any contextual cues, I forced the participants to consider either the sloppy or the strict interpretation in our judgment questions, because I did not want them to select the most relevant reading (which would most probably be the sloppy identity reading). If I assume that the leading TRUE/FALSE questions asking for either the strict or sloppy identity reading played a role as if they were referential contextual cues, our results are also parallel with what Epoge (2012)

found with Cameron speakers of English. The participants preferred the sloppy identity reading without a (biasing) context and they accepted the strict identity reading more when there was a referential context favoring the strict identity reading.

In terms of language processing, I got mixed results by the three groups of the participants. This might be because of various construction effect across the languages (i.e., the over-dispreference of RNR in English or the computational cost of the null possessive pronouns in Turkish).

In sum, VC was found to play a role, which was not surprising if I believe in the identity of the antecedent and the elided material; these interpretations then require some semantic adjustment, i.e., VC. As Echeverría, (2021) suggested, VC mechanism is “perhaps the most challenging empirical domain for any identity condition that assumes a syntactic component” (p. 358). Apparently, it is hard for speakers to access the interpretation that requires VC, and the fact that in most of the VPE anaphora studies strict identity reading was fairly dis-preferred may be at least partially explained through the effect of VC.

4.2 Gender (Mis)match Effect

I also investigated whether or not the sloppy identity reading in the RNR construction was sensitive to phi-features of the antecedent. Research on RNR claimed that the intolerance for gender-mismatch between the antecedent and the anaphor was restricted to the sloppy identity reading in RNR, but not in VPE (Ha, 2008; Chaves 2014), suggesting that when there is a mismatch in terms of the genders of the anaphor and its antecedent, the only *strict identity reading* should be accepted. We, thus, expected the strict identity reading to be easier in RNR compared to the strict identity reading in VPE. The results of the three experiments showed that gender-match condition was not required for the sloppy reading to obtain (i.e., even in the gender-mismatch condition, the sloppy identity reading was accepted at fairly high rates, sometimes even more than in the gender-match condition). Our results, thus, do not support the claims made in the RNR literature: I found no evidence that would support the claim that gender match between the anaphor and the antecedent is

required for the sloppy reading to arise. This made us continue the analysis by disregarding the gender-(mis)match condition.

Although I could not do inferential statistics with the gender (mis)match conditions, according to the trends that I gathered, I can suggest that even though accessing the sloppy identity reading under gender mismatch requires a form of vehicle change (e.g., a female anaphor: *her/herself* must be interpreted as a male anaphor: *his/himself*), this change does not seem to be as important as the VC proper, in which a non-pronoun (e.g., *himself*) must be interpreted as a pronoun (e.g., *him*). VC requires a change of the word category, such as reflexive pronoun and possessive pronoun, which might be a derivational change (see Murphy & Müller, 2022). This seems to be more difficult (and computationally hard) than turning the gender of the pronoun such as turning “*herself*” into “*himself*” or “*his*” into “*her*”, which is apparently an inflectional change.

4.3 Sloppy Identity Reading vs Strict Identity Reading

The research on VPE has extensively displayed that in judgment tasks by adult speakers the sloppy identity reading has overall been preferred to the strict identity reading (Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Koornef et al., 2012; Ying, 2005; see Frazier & Clifton 2000 for an overview). The strict identity reading was also detected (e.g., Ong & Brasoveanu, 2014; Shaphiro & Hestvik, 1995; Shaphiro et al., 2003), but it has been found that it was more difficult to detect the strict identity reading than the sloppy identity reading in VPE sentences with reflexives (e.g. Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Koornef et al., 2012; Ying, 2005; see Frazier and Clifton 2000 for an overview). In parallel with the literature, the overall sloppy identity reading was preferred more than the strict identity reading by all of our participants: L1 English, L2 English and L1 Turkish speakers: the sloppy identity reading was accepted with significantly higher rates than strict identity reading. However, the acceptance rates of the strict identity reading even in L1 English was higher than 60% and the acceptance difference between the sloppy and strict identity reading was not that great (i.e., it was under 18%). Although the overall preference for the sloppy identity reading was in line with the literature, the acceptance rates of the strict identity reading was still higher than the literature

suggested. This suggests that both the strict and the sloppy identity readings are inherently available for anaphor interpretation. Our results are, thus, parallel with literature on the online processing of VPE constructions with reflexives, which revealed that the strict identity reading was present at least at the syntax level (e.g. Shaphiro & Hestvik, 1995; Shaphiro et al., 2003). Likewise, there are studies showing that the strict identity reading is produced with possessive pronouns under certain discourse status even in offline tasks (e.g., Storbeck & Kaiser, 2018). Since most of the studies on anaphora resolution in ellipsis were conducted on VPE and mostly with reflexive constructions, the pronounced preference for the sloppy identity reading might be the effect of these two factors: reflexive anaphors and VPE. In our study, I used two elliptical structures differing in the directionality of deletion, directionality of anaphora (in some conditions) and I used two different anaphora types to eliminate a possible biasing context for the interpretation of the anaphora. This might be the reason why, even with the offline judgment tasks, I gathered a relatively high amount of strict identity preferences (at least in English, because VC is involved in Turkish strict identity readings).

4.4 Effect of Directionality of Anaphora

Many factors influence pronoun interpretation. Syntax has been proposed as one of the key variables influencing pronoun resolution. The Binding Principles (Chomsky, 1981) govern the real-time processing of forward anaphors (Badecker & Straub 2002; Felser & Cunnings, 2012) and backward anaphors (Kazanina et al. 2007; Kazanina & Phillips, 2010; Drummer & Felser, 2018). In addition to syntax, the order of where anaphors occur relevant to their binder (i.e., linear precedence) may influence the outcome and/or interpretation process (Bresnan, 1994, 1998; Kazanina & Phillips 2010; Drummer & Felser, 2018). The reason for this might be that in forward anaphora, both referents are faced before the pronoun by the processor and its resolution requires the language parser to locate and extract the optimum antecedent from working memory, while in backward anaphora, the processor meets the pronoun before the referents' mention (Sorace & Filiaci, 2006) and its resolution requires a prospective search. Because resolution occurs just once in the forward anaphora, parsing is more inclined to mistakes (Lyu et al., 2020). As a result, the intervening

nominal parts may all interact with and compete with the licit referent (Lewis & Vasishth, 2005). In the matter of backward anaphora interpretation, every possible candidate binder is evaluated individually and might be removed if judged as not appropriate. Sorace and Filiaci (2006) suggested that the backward anaphora resolution requires specific demands on the processor since, linearly, the pronoun precedes the possible referents in the subordinate-main order of the clauses. Therefore, there are no discourse constraints on the assignment of the antecedent. The studies on backward anaphora processing in English has displayed that the parser actively tries to finish the pronoun-antecedent relation as soon as possible, even when the bottom-up information is absent (Sorace & Filiaci, 2006). Particularly, the parser first begins searching for an antecedent immediately and limits the search space to antecedents which are syntactically acceptable (i.e., that do not violate Principle C; see Cowart and Cairns, 1987; Kazanina, 2005); then assesses each following NP as a possible antecedent in the sequence in which they are encountered (Kazanina et al., 2005); and, lastly, expects to solve the anaphoric relation in the subject position of the matrix clause when the subordinate clause is given first with the pronoun (van Gompel & Liversedge, 2003) in sentences such as *When he was fed up, the boy visited the girl very often* (p. 130).

To the best of my knowledge, the effect of anaphora directionality on anaphora interpretation under ellipsis has not been tested before. However, Kroll (2020) investigated comprehension of ellipsis (which involved NP sluicing) by comparing the anaphoric NP ellipsis as in *Clarinets would sound good with flutes during the reception, if I can find any [] by this evening* and cataphoric NP ellipsis as in *If I can find any [] by this evening, clarinets would sound good with flutes during the reception* (p. 95). Kroll conducted several experiments and found that regardless of whether ellipsis is anaphoric or cataphoric, i.e., whether the anaphor precedes or follows the antecedent, the interpretation of ellipsis was dependent on a ‘proximity bias’, at which point the interpreters prefer to resolve an ellipsis location to the possible antecedent in greatest closeness to it. In other words, in the cataphoric example *If I can find any [] by this evening, clarinets would sound good with flutes during the reception*, the most preferred antecedent for the ellipsis site was the NP *clarinets*, not the NP *flutes* (pp. 126-127). However, if the same reasoning is valid for the

interpretation of anaphors (as opposed to elided NPs), I would expect to find both strict and sloppy readings equally because at the point when the parser figures out that something is missing (probably at the moment when it hits the word *but*), the dependency may be interpreted as being anaphoric, in which case, the closest antecedent is John, or cataphoric, in which case it is Bill (e.g., *John likes [e]_i but Bill_i hates himself*). Nevertheless, this would still be an overgeneralization of Kroll (2020)'s study on the anaphora resolution in different elliptical constructions, which she did not investigate.

In our native English and Turkish experiments, I could not confirm a complete effect of anaphora directionality on the interpretation. In the strict identity reading (both in the possessive and in the reflexive construction) VPE and RNR differ in the directionality of anaphora. Our results showed that Turkish native speakers found no difference between the two (while the online processing results of the RNR with strict identity reading with reflexive constructions showed that the L1 Turkish speakers found forward anaphora costlier than backward anaphora), whereas native English speakers found no difference in the possessive construction, but preferred backward anaphora with the reflexive construction.

Our L2 English speakers, however, displayed behavior suggesting that backwards anaphora was consistently preferred to forward anaphora. This was parallel with the results of Lyu et al. (2020)'s study in which they investigated the processing of forward and backward anaphora in weak crossover in English to compare L1 and L2 English participants. They found that native speakers of English displayed a delayed weak crossover effect in anaphoric dependencies by arguing that there might a role of “linear precedence relationship between the operator and the pronoun” in accepting or rejecting binding in weak crossover (p. 304). On the other hand, they found that L2 speakers exhibited insensitivity to the constraints of weak crossover in anaphoric dependencies while in cataphoric relations they avoided binding. The findings of L2 speakers were also parallel with SSH (Felser, 2015; Felser et al. 2009; Felser & Cummings, 2012) suggesting that non-native speakers depend on non-syntactic cues more than native speakers, therefore they exhibit erroneous behavior with looking-forward dependencies which also requires obligatory c-command relationship

between. After all, they display non-native outcomes. However, the L2 speakers read the items with forward anaphora in shorter times than backward anaphora. This might imply that, although they do prefer backward anaphora, comprehension of it must be harder than forward anaphora.

When it comes to the sloppy identity reading, which involved forward anaphora both in VPE and in RNR, both our L1 Turkish and L1 English native speakers accepted VPE sentences significantly more than RNR sentences. The results of acceptance of the sloppy identity reading in the comparison of VPE and RNR may show that backward ellipsis might be harder than forward ellipsis. On the other hand, this result might be the reflection of whatever makes RNR more difficult (overall it was less preferred in both Turkish and English than VPE). Although partially, a similar trend was detected in L2 English speakers, who found forward ellipsis (VPE) significantly more acceptable than backward ellipsis (RNR), at least in the reflexive construction (the results of the possessive construction showed the same trend, but did not reach significance).

The overall effect of the construction (VPE being overall more acceptable than RNR, all else being equal) suggests that RNR might be difficult to process. That is possibly because the ellipsis in RNR is backward ellipsis. It might also be due to the effect of discourse connectives used in VPE and RNR (*and* – showing *parallelism*) in VPE and *but* – showing *contrast*) in RNR in English. In Turkish materials, however, the connectives were *de* ‘also’ (showing parallelism) in VPE and *hem ... hem* ‘both’ (showing parallelism) in RNR. Nevertheless, to some extent, I found similar results regarding acceptability judgments of VPE and RNR in both English and Turkish. Since the structures in the two languages contained different types of discourse connectives, the possible effect of such cohesive devices weakens. Another possibility might be the fact that English RNR displays a garden-path effect, which might make RNR more difficult to process and to judge. However, Turkish RNR does not have such an effect, but I obtained a similar preference trend from our Turkish participants.

4.5 Effect of Reflexive and Possessive Constructions

I also found that Turkish native speakers rejected possessive constructions more and processed them in a longer time, unlike L1 and L2 English participants. Recall that I tested (separately) what interpretation speakers assign to this anaphor (reflexive or pronominal) in order to determine whether the interpretation of the anaphor in the elliptical conjunct involved VC. Our results showed that most of the time speakers interpret this anaphor as the possessive reflexive *kendi* ‘self’s’. There was, however, a certain acceptance of the unpronounced pronoun in the overt conjunct to be something other than the reflexive *kendi* ‘self’s’ (see Chapter 3, for detailed information and discussion). But, the results also revealed that it was marginally possible that the null possessive pronoun could be a possessive pronoun *onun* ‘his/her/its’ co-referential with another sentence-internal antecedent or a third party antecedent. Although the general tendency for the interpretation of this null pronoun was the possessive reflexive *kendi* ‘self’s’, other possible antecedent preferences were observed in RNR significantly more than in VPE. This might be the reason why possessive pronouns were costlier and accepted less, particularly in RNR constructions in Turkish, which might have influence the overall preference and processing of other variables.

4.6 Effect of Head-Directionality Parameter

Lastly, based on the descriptive comparisons between the results obtained from the English and Turkish participants, I did not get a consistent effect of language. In other words, one of our interests in using these two languages was to see if there was an effect of head directionality on the interpretation of anaphora with and without VC and with different anaphora and ellipsis directions. The results indicated the computational load of VC and interpretive difficulty and dis-reference of RNR (maybe) as backward ellipsis compared to VPE as forward ellipsis. I found that speakers of the two languages, English and Turkish, behaved by and large the same and showed by and large similar trends in interpretation preferences (both groups dispreferred VC, both groups moderately dispreferred backwards ellipsis and neither showed a clear preference for a certain directionality of anaphora). This suggests that head

directionality of the language does not play a role in how speakers interpret anaphors under ellipsis.

4.7 Comparison of L1 English and L2 English with possible L1 Turkish Interference

Many studies suggested that the typological/synactic similarity and dissimilarity of L1 and L2 languages also has an essential role in the L2 processing (Kotz, 2008; Zawiszewskiet al., 2011). The literature revealed that when the syntactic traits are unique in non-native language or are different in native and non-native languages, the non-native language users could not process the grammatical rules as native speaker do, yet they can process those traits native-like when they are similar in L1 and L2 languages (Díaz et al., 2016; Erdocia et al.,2014; Foucart & Frenck-Mestre, 2011; Ojima et al., 2005; Tokowicz & MacWhinney, 2005; Zawiszewski et al., 2011). Likewise, Hopp (2010)'s fundamental identity model asserted a similar idea that L1 and L2 speakers' grammatical processings are alike; and possible differences between them must be because of L1 interference. All in all, behaviors of the L2 speakers like the other participant groups, rejected the items requiring VC, which might be also related to the similarity of the two languages in terms of VC. On the other hand. The L2 sepakers also accepted the items with possessive constructions lower than the native speakers of English, which might be the negative transfer of L1 as many L2 research studies suggested (Díaz et al., 2016; Erdocia et al.,2014; Foucartand Frenck-Mestre, 2011; Hopp, 2010; Ojima et al., 2005; Tokowicz & MacWhinney, 2005; Zawiszewski et al., 2011): both possessive and reflexive constructions with strict identity reading involves VC in Turkish, most of the speakers of Turkish rejected such possessive constructions with strict identity reading.

However, the full transfer/ full access hypothesis (Schwartz & Sprouse, 1996; White, 2003) suggested that non-native acquisition first starts by the transfer of the components existing in the native language, and as the L2 speakers get more profienct in their second language, they gradually access the second language's new features whatever their age of acquisition is. In our case, even though our participants had high proficiency levels, I did not separately examine those L2 comprehenders at different proficiency level groups. Maybe, in the case of having aseperate group with very

advanced L2 speaker group- such as native-like L2 English speakers- would have displayed very similar results in all the variables tested in this dissertation with the native speakers.

Overall, L2 speakers displayed mixed results in terms of anaphora interpretation. For example, the interpretation of sloppy and strict identity reading in addition to VC interpretation was more like L1 English behaviors than to Turkish, which was their native language, except for the interpretation and processing of the possessive constructions which probably caused by the L1 transfer. However, I observed some differences in the findings such as the overall acceptance rates of the elliptical construction type (overall only the L2 speakers accepted both forward and backward ellipsis similarly, while both L1 Turkish and L1 English speakers overpreferred forward ellipsis) and the effect of the directionality of anaphora (only the L2 speakers overpreferred backward anaphora compared to forward anaphora, while the overall results of the native speakers of English and Turkish did not favor any of the anaphora directions). On the other hand, although the offline acceptability judgment results of the comprehension of overall VPE and RNR constructions of L2 English speakers differed from L1 speakers, their online processing was similar and it was different from Turkish. In general, if any, I can imply that the similarity between Turkish and English in terms of VC, there might be positive transfer of the native language, Turkish, into L2 English. I found a possible negative interference of L1 Turkish on possessive constructions, which caused L2 speakers behave different from L1 English speakers. L1 English speakers accepted items with possessive constructions more than L2 speakers. Also, as for the processing of those items, although the differences were not mostly significant, the L2 speakers spent more time reading the items with possessive constructions than the items with reflexive constructions as the Turkish speakers did. But, the rest of the findings can be explained by the effect of various factors such as age of acquisition, proficiency level, syntactic and semantic differences of the elliptical constructions and so on.

Results that were different from those of L1 English, and also L1 Turkish, speakers may be better explained by the SSH (Clahsen & Felser, 2006) or it can be explained with the Interface Hypothesis (Sorace, 2011) proposing that even high proficient L2

speakers had “residual indeterminacy in the interface processing strategies”, which they employed in the interpretation of anaphora in ellipsis. For example, the L2 speakers accepted possessive constructions with sloppy identity reading more than L1 Turkish and L1 English speakers. Moreover, L2 speakers accepted items with both possessive and reflexive constructions with strict identity reading in RNR more than in VPE which is different from L1 Turkish speakers. The L1 English speakers, on the other hand, showed a partial preference for the backward anaphora; by accepting only reflexive constructions with strict identity reading in RNR more than VPE. Therefore, the overpreference of backward anaphora might be explained with residual indeterminacy of L2 grammar. I could also discuss these findings with full transfer/full access hypothesis but I did not compare different L2 language proficiency level groups.

In addition, the overall lower acceptance rates of both VPE and RNR constructions must not be due to L1 influence because in Turkish as in L1 English, VPE constructions were accepted with high percentages. Furthermore, the overall high times spent reading the items with possessive constructions than the reflexive constructions might also be a result of negative transfer of L1, as L1 Turkish speakers overall spent more times reading such constructions. However, the L2 speakers’ slower processing might be more related to L2 processing capacity hypotheses (McDonald, 2006; Hopp, 2010, 2012, 2018).

CHAPTER 5

CONCLUSION

Interpretation of anaphors has been investigated with numerous studies in the literature in VPE (see Chapter 2 above), but there have been no such studies of RNR, to the best of my knowledge. Also, there are no studies looking for which reading (strict identity or sloppy identity) is preferred in RNR. In this dissertation, I wanted to fill the gap in the research field on ellipsis interpretation, which has studies examining preferences for strict vs sloppy reading in VPE, but involves much fewer studies investigating RNR from the same perspective. Moreover, no studies have investigated specifically VC in these contexts except some, such as in Shapiro et al. (2003), in which the impact of the VC mechanism was touched upon briefly in their discussion of the findings, but no works examined its influence particularly. Thus, I experimentally tested speakers' acceptance (or (dis)preference) rates of elliptical anaphors requiring or not requiring VC for interpretation. I was specifically interested in the strict identity reading in sentences containing reflexives (with which strict identity interpretation necessarily requires VC) as compared to sentences containing possessive constructions (with which no reading requires VC in English, but which requires VC in Turkish). Additionally, I investigated anaphora interpretation depending on the directionality of anaphora and head-directionality of the language; i.e., whether the preference for the VC differs in the environments of VPE as an instance of forward ellipsis and RNR as an instance of backward ellipsis in English, as a head-initial language, and Turkish, as a head-final language. Lastly, I investigated whether there were interpretation differences in these constructions across L1 and L2 speakers in English, and if so, whether the L1 interference had an impact on the interpretation behaviors of L2 speakers. In short, the basic aim of this study was to investigate anaphora interpretation in complex elliptical environments.

Firstly, I focused on the claim in the RNR research that gender mismatch between the two antecedents in the first and second conjunct blocks the sloppy identity reading with reflexive constructions in English. This is why, I wanted to test if there were any effects of such gender differences on the anaphora interpretation. The evidence in this dissertation did not support this claim: I found no evidence that speakers require gender match between the antecedents in order to access the sloppy identity reading in any of the experiments with different participant groups: native speakers of English, native speakers of Turkish (which inherently does not have grammatical or natural gender), and second language learners of English. Consequently, I analyzed the remaining variables by disregarding gender match and gender mismatch condition.

As the main purpose of this thesis, I examined the VC mechanism and its effect on interpretation by looking at strict identity readings in reflexive constructions in English and both reflexive and possessive constructions in Turkish. The results obtained from the native and L2 speakers of English clearly suggested that VC was difficult; the items requiring VC for the intended interpretation were consistently rejected than those which did not require VC. In other words, I obtained less strict identity reading acceptances in the reflexive construction than the possessive constructions. The results of native Turkish speakers, however, revealed less clear results for the comparisons examining VC. Yet, especially when compared to L1 English results, the effect of VC was detectable in this experiment, too. For example, the acceptability differences of strict identity readings between reflexives and possessives were much smaller in L1 Turkish speakers group (where both constructions require VC), while they were obviously greater in L1 English group (where the reflexive construction does, but the possessive construction does not require VC). In Turkish, I also found an overall preference for the sloppy identity reading, compared to the strict identity reading, which is consistent with the claim that VC has a detrimental effect on the interpretation of elided anaphors given that the strict identity reading in Turkish always requires VC. In English, on the other hand, L1 and L2 speakers also preferred the sloppy identity reading significantly more than the strict identity reading, however, the difference was not huge, especially in the L1 English speaker group. This may be a consequence of the overall over-preference for the sloppy identity reading, often mentioned in the

literature (e.g. Fiengo & May, 1994; Foley et al., 1997; Guo et al., 1996; Koornef et al., 2012; Ying, 2005;).

In terms of the effect of anaphora directionality, I did not observe any constant impacts of it on the anaphora interpretation in ellipsis by both L1 English and L1 Turkish participant groups. However, I observed an effect of the directionality of ellipsis (or effect of the construction type) in both Turkish and English: VPE sentences (involving forward ellipsis was preferred more than RNR sentences, involving backward ellipsis). Unlike the native speakers of both investigated languages, the results of the L2 English speaker group displayed an impact of anaphora directionality. However, the findings were contrary to our expectations: L2 speakers found backward anaphora easier than forward anaphora. Moreover, opposite to the preferences of the native speaker participants in both English and Turkish, L2 English speakers did not favor any elliptical constructions in general. Overall, they accepted both VPE and RNR to the same extent.

Moreover, in Turkish, a distracting effect of the possessive construction was found on the anaphora interpretation in ellipsis, which can be explained by the fact that the Turkish possessive construction contains a null possessive anaphor in the non-elliptical conjunct, which is inherently ambiguous and in need of resolution.

All in all, behaviors of the L2 speakers showed possible positive L1 transference with the VC comprehension. Similar to the other participant groups, the L2 speakers rejected the items requiring VC. On the other hand, the L2 speakers also accepted the items with possessive constructions lower than the native speakers of English, which might be due to the negative transfer of L1, since both possessive and reflexive constructions with strict identity reading involves VC in Turkish, most of the speakers of Turkish rejected such constructions. On the other hand, when variables were analyzed specifically, the L2 speakers also showed unique behaviors such as accepting possessive constructions with sloppy identity reading more than L1 Turkish and L1 English speakers. In addition, L2 speakers accepted both possessive and reflexive constructions with strict identity reading in RNR more than in VPE while L1 Turkish speakers did not have such a preference at all. The L1 English speakers, on the other

hand, showed a partial preference for the backward anaphora; by accepting only reflexive constructions with strict identity reading in RNR. In addition, the overall lower acceptance rates of both VPE and RNR constructions must not be due to L1 influence because in Turkish as in L1 English, VPE constructions were accepted with high percentages. Lastly, L1 might influence L2 outcome of the longer processing times of L2 speakers on the possessive constructions; i.e. that L1 Turkish speakers spent more times reading possessive constructions in general. However, the general higher processing times of L2 English speakers compared to L1 English speaker, in that L2 speaker spent more time reading the all the items in general than L1 speakers, might be related to the L2 speakers' shallow or limited processing capacity.

5.1 Limitations and Further Research

Although I believe that, overall, our research frame tested what I intended to test, a number limitations also exist in this study.

Firstly, the number of the participants were small especially in the native speaker groups. Both native speaker groups included less than fifty participants. The main reason of this was that I collected our data during the Covid 19 pandemic break and there was partial or complete lockdown locally and globally at that time. Thus, it was difficult to reach out participants. Another reason was the difficulty of the sentences in the elliptical constructions with different anaphora types which may have deterred the participants from fulfilling the experiments. The last but not least important reason was that the experiment had to be done on a computer or a device that contains keys with numbers and arrows, so people could not do it on their smartphones or tablets because they could not proceed to the next questions/statement due the absence of arrows on the screen to click on. They needed a computer or a device with a keyboard. I did not foresee such a need even in our pilot studies; and this probably made us lose a considerable number of possible participants.

I have assumed that by the time the sentence is read, garden path effect that arises in RNR sentences in English has already been resolved by the time the participants see the TRUE/FALSE questions, but in fact, I have not *ascertained* that it has been resolved.

Therefore, it is possible that the garden path effect persists after the participant has read the sentence and even past the moment when he/she makes a decision about the interpretation of the sentence. As such, this effect might have affected the reading times in my experiments, which is why the online results in this study should be taken only as supplementary to the offline results.

The constructions that I used in Turkish and English, particularly the RNR construction, were not completely parallel: although in both languages the strings that I tested were compatible with an RNR analysis and both involved an elided anaphor in the first conjunct, they differ in that in Turkish the elided chunk in the first conjunct also included the verb, whereas in English it did not. This difference between the RNR experimental items in the two languages was necessary in order to preserve the naturalness of the sentences (dictated, among other things, by the different values of the head-directionality parameter) and at the same time include the necessary features that I wanted to test. Related to this difference was the fact that the RNR sentences in English induced a garden-path effect, while it was not the case in Turkish (or in any other elliptical structures did not in either language). Using more parallel constructions (to the extent that such parallel constructions exist in the two languages) might produce different results.

Also, for future studies that want to test RNR in Turkish, we might use sentences, as in (145). Such sentences are definitely biclausal because the strings *Mehmet dün* ‘Mehmet yesterday’ and *Ahmet bugün* ‘Ahmet today’ are not constituents and as such cannot be coordinated.

- (145) Mehmet dün Ahmet bugün (kendi) arkadaş-ı -nı
Mehmet yesterday Ahmet today (self) friend -POSS.3SG-ACC
gör-ecek.
see-FUTURE.3SG
Yesterday, Mehmet; today, Ahmet will see his (own) friend.

Perhaps the greatest drawback in the study was the fact that the number of items in each condition was very small; i.e., there were only two items in each subcategory

(e.g., VPE construction with the strict identity reading with reflexive anaphora under gender match condition). That is why I could only run descriptive analysis when analyzing the effect of gender (mis)match condition in each construction (which I tested because of the claims made in the RNR literature that the sloppy identity reading is impossible under gender mismatch). However, even the descriptive results gave us a clear result that there is no effect of gender (mis)match condition on the interpretation of the anaphora in the ellipsis sentences: I found no evidence that gender match facilitates the sloppy identity reading (or any other reading). I could, thus, collapse the items into categories which contained four items and this allowed us to run inferential statistics procedure. Of course, I am aware of the fact that the most ideal way of doing inferential statistics is to have more items in each subcategory. However, as explicated before, in that way, due to the complexity of the structures used in the study and due to the high number of variables, I would have to have even more items and it was already difficult for the participants to do the experiment as it is. If I had added more items in the experiment, I would possibly have many participants who start the experiment but do not complete it and also, the results of those who do complete it would be confounded by the effects of item fatigue.

Finally, the methodology of the experiments could be improved, especially concerning our online results. Recall that I measured the time that passed between the moment when the participants saw the TRUE/FALSE statement on the screen and the moment when they pressed true or false button, indicating that they thought that the sentence on the screen had the interpretation suggested in the TRUE/FALSE statement. I then divided the time measured by the number of words on the screen (excluding the words TRUE and false). A more direct method of measuring the reading/decision time would undoubtedly provide more realistic results of anaphora processing under ellipsis.

Considering our limitations, to be able to reach better conclusions by comparing and analyzing such constructions which are at the interface of syntax, semantics and discourse, further research is necessary. One can conduct similar experiments with different structures such as other types of ellipsis, for example sluicing or gapping, which sound more natural and which also do not include a garden path effect.

In addition, I compared Turkish and English whose linguistic typology was different, but languages with similar head-directionality parameter could also be compared (so that the items may be more similar) and the underlying reasons of the different results obtained from the two languages might be compared in a clear way.

Also, L2 speakers' language proficiency levels might be assessed with reliable placement tests. Moreover, L2 speakers with different proficiency levels might also be compared. Lastly, the multilingual students and/or bilingual students may also be studied separately homogenously or they could also be compared.

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APPENDICES

A. ENGLISH EXPERIMENTAL ITEMS/ DENEYSSEL İNGİLİZCE

MADDELER

| Gender | VP ellipses reflexives | TRUE/FALSE Question | VP ellipses Possessives | TRUE/FALSE Question | ST/SL |
|--------|---|----------------------------|--|-----------------------------------|-------|
| FF | Iris dreaded herself, and Zoe did too. | Zoe dreaded Iris. | Iris dreaded her husband, and Zoe did too. | Zoe dreaded Iris's husband. | ST |
| FF | Susan painted herself, and Charlotte did too. | Charlotte painted herself. | Susan painted her student, and Charlotte did too. | Charlotte painted her student. | SL |
| FF | Sally embarrassed herself, and Ella did too. | Ella embarrassed herself. | Sally embarrassed her friend, and Ella did too. | Ella embarrassed her friend. | SL |
| FF | Helen detested herself, and Bella did too. | Bella detested Helen. | Helen detested her headmaster, and Bella did too. | Bella detested Luna's headmaster. | ST |
| MM | William praised himself, and Carlos did too. | Carlos praised William. | William praised his guest, and Carlos did too. | Carlos praised William's guest. | ST |
| MM | Simon introduced himself, and Andrew did too. | Andrew introduced himself. | Simon introduced his employer, and Andrew did too. | Andrew introduced his employer. | SL |
| MM | Joseph amazed himself, and Danny did too. | Danny amazed himself. | Joseph amazed his coach, and Danny did too. | Danny amazed his coach. | SL |

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|----|--|-------------------------|--|-----------------------------------|----|
| MM | Henry soothed himself, and Charley did too. | Charley soothed Henry. | Henry soothed his son, and Charley did too. | Charley soothed Henry's son. | ST |
| FM | Lucy calmed herself, and Michael did too. | Michael calmed Lucy. | Lucy calmed her peer, and Michael did too. | Michael calmed Lucy's peer. | ST |
| FM | Maya examined herself, and Liam did too. | Liam examined himself. | Maya examined her patient, and Liam did too. | Noah examined his patient. | SL |
| FM | Julie corrected herself, and Noah did too. | Noah corrected himself. | Julie corrected her peer, and Noah did too. | Liam corrected his peer. | SL |
| FM | Alice ridiculed herself, and Kevin did too. | Kevin ridiculed Alice. | Alice ridiculed her employee, and Kevin did too. | Kevin ridiculed Alice's employee. | ST |
| MF | Vincent financed himself, and Betty did too. | Betty financed Vincent. | Vincent financed his family, and Betty did too. | Betty financed Vincent's family. | ST |
| MF | Joey wiped himself, and Cora did too. | Cora wiped herself. | Joey wiped his kid, and Cora did too. | Cora wiped her kid. | SL |
| MF | Jackson respected himself, and Anna did too. | Anna respected herself. | Jackson respected his boss, and Anna did too. | Anna respected her boss. | SL |
| MF | Simon disappointed himself, and Mia did too. | Mia disappointed Simon. | Simon disappointed his nephew, and Mia did too. | Mia disappointed Simon's nephew. | ST |

| Gender | RNR Reflexives | TRUE/FALSE Question | RNR Possessives | TRUE/FALSE Question | ST/SL |
|---------------|--|----------------------------|--|---------------------------------------|--------------|
| FF | Zoe blamed, but Alice defended herself. | Zoe blamed Alice. | Zoe blamed, but Alice defended her client. | Zoe blamed Alice's client. | ST |
| FF | Emma admired, but Mary disliked herself. | Emma admired herself. | Emma admired, but Mary disliked her sister. | Emma admired her sister. | SL |
| FF | Stella worried, but Emily soothed herself. | Stella worried herself. | Stella worried, but Emily soothed her colleagues. | Stella worried her colleagues. | SL |
| FF | Lily entertained, but Zoe exhausted herself. | Lily entertained Zoe. | Lily entertained, but Zoe exhausted her baby-sitter. | Lily entertained Zoe's baby-sitter. | ST |
| MM | Owen liked, but Alan hated himself. | Owen liked Alan. | Owen liked, but Alan hated his roommate. | Owen liked Alan's roommate. | ST |
| MM | Billy glorified, but Leo condemned himself. | Billy glorified himself. | Billy glorified, but Leo condemned his associate. | Billy glorified his associate. | SL |
| MM | Brian trusted, but Andrew doubted himself. | Brian trusted himself. | Brian trusted, but Andrew doubted his teammate. | Brian trusted his teammate. | SL |
| MM | Joseph humiliated, but Johnny flattered himself. | Joseph humiliated Johnny. | Joseph humiliated, but Johnny flattered his co-worker. | Joseph humiliated Johnny's co-worker. | ST |
| FM | Kaylee adored, but Mason detested herself. | Kaylee adored Mason. | Kaylee adored, but Mason detested his friend. | Kaylee adored Mason's friend. | ST |

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|----|---|----------------------------|--|------------------------------------|----|
| FM | Molly disgraced, but Oscar promoted himself. | Molly disgraced herself. | Molly disgraced, but Oscar promoted his goal-keeper. | Molly disgraced her goal-keeper. | SL |
| FM | Ellie discouraged, but Vincent motivated himself. | Ellie discouraged herself. | Ellie discouraged, but Vincent motivated his friend. | Ellie discouraged her friend. | SL |
| FM | Ella encouraged, but Liam criticized himself. | Ella encouraged Liam. | Ella encouraged, but Liam criticized his student. | Ella encouraged Liam's student. | ST |
| MF | Matthew stressed, but Kathy comforted herself. | Matthew stressed Kathy. | Matthew stressed, but Kathy comforted her neighbor. | Matthew stressed Kathy's neighbor. | ST |
| MF | Jason betrayed, but Luna supported herself. | Jason betrayed himself. | Jason betrayed, but Luna supported her classmate. | Jason betrayed his classmate. | SL |
| MF | Carter energized, but Megan calmed herself. | Carter energized himself. | Carter energized, but Megan calmed her students. | Carter energized his students. | SL |
| MF | Steven defended, but Mia punished herself. | Steven defended Mia. | Steven defended, but Mia punished her assistant. | Steven defended Mia's assistant. | ST |

**B. ENGLISH EXPERIMENTS- FILLER ITEMS/ İNGİLİZCE
DENEYLER- DOLGU MADDELERİ**

| English Fillers | Non-ambiguous RNR Sentences | TRUE/FALSE QUESTION | TRUE/ FALSE Answer |
|------------------------|---|----------------------------------|-----------------------------------|
| RNR-Filler | Owen missed, but Bella watched the play. | Owen didn't miss the play. | F |
| RNR-Filler | Steven told, but Karen reported the story. | Steven told the story. | T |
| RNR-Filler | Kaylee kissed, but Lucy slapped the man. | Lucy slapped the man. | T |
| RNR-Filler | Olivia passed, but Nicole failed the test. | Nicole didn't fail the test. | F |
| RNR-Filler | Lucas opposed, but Julia supported the plan. | Lucas didn't oppose the plan. | F |
| RNR-Filler | Eric uploaded, but Susan downloaded the file. | Eric uploaded the file. | T |
| RNR-Filler | William forgot, but Ella took the keys. | William didn't forget the keys. | F |
| RNR-Filler | Joseph saved, but Harper spent the money. | Harper spent the money. | T |
| RNR-Filler | Doris fed, but Maya walked the dog. | Maya fed the dog. | F |
| RNR-Filler | Brooklyn emptied, but Donna filled the cup. | Donna filled the cup. | T |
| English Fillers | Non-ambiguous VP Ellipses | TRUE/FALSE QUESTION | TRUE/ FALSE Answer |
| VP-Filler | Maya reported the incident, and Margaret did too. | Maya didn't report the incident. | F |
| VP-Filler | Jason teased the girl, and Carol did too. | Jason didn't tease the girl. | F |
| VP-Filler | Thomas called the woman, and Linda did too. | Thomas didn't call the woman. | F |
| VP-Filler | Joey bought a present, but Janet didn't. | Joey bought a present. | T |

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|-----------|---|----------------------------------|---|
| VP-Filler | Matthew tricked the customer, but Katie didn't. | Matthew tricked the customer. | T |
| VP-Filler | Betty ate the hotdog, but Martha didn't. | Martha didn't ate the hotdog. | T |
| VP-Filler | Lily interviewed the candidate, and Denise did too. | Denise interviewed the candiate. | T |
| VP-Filler | Larry signed the contract, and Sharon did too. | Sharon didn't sign the contract. | F |
| VP-Filler | Ronald played the piano, and Nancy did too. | Nancy played the piano. | T |
| VP-Filler | Janice arrested the thief, but Laura didn't. | Laura arrested the thief. | F |

| English Fillers | Passives | TRUE/FALSE QUESTION | TRUE/ FALSE Answer |
|------------------------|--|---|-----------------------------------|
| P-Filler | The department head was fired by Peter. | The department head wasn't fired. | F |
| P-Filler | The soldier was given the directions by Patrick. | The directions were given to the soldier. | |
| P-Filler | The tourist was drawn a map by Alice. | A map wasn't drawn to the tourist. | F |
| P-Filler | Chocolates were bought for the boss by Skylar. | The boss was bought chococalates. | |
| P-Filler | The girl was teased by Sarah. | The girl wasn't teased. | F |
| P-Filler | The man was passed a note by Jerry. | A note was passed to the man. | T |
| P-Filler | The money was provided by Leo. | Leo provided the money. | T |
| P-Filler | The model was photographed by Iris. | Iris photographed the model. | T |
| P-Filler | The newly-wed couples were sent flowers by Justin. | Justin sent flowers. | T |
| P-Filler | The children were shown the medals by Mason. | Mason didn't show the medals. | F |
| P-Filler | The students were assigned the homework by Alex. | Alex didn't assign the homework. | F |
| P-Filler | The kids were promised a holiday by Jacob. | Jacob didn't promise a holiday. | F |

**C. TURKISH EXPERIMENTAL ITEMS/ DENEYSSEL TÜRKÇE
MADDELER**

| Gender-Matching | VP ellipses reflexives | Sentence Translation | TRUE/FALSE QUESTION | TRUE/FALSE QUESTION Translation | ST/SL |
|------------------------|--|---|------------------------------|--|--------------|
| FF | Serpil kendini ferahlattı, Özlem de. | Serpil refreshed herself, and Özlem did too. | Özlem kendini ferahlattı. | Özlem refreshed herself. | SL |
| FF | Sena kendini yatıştırdı, İrem de. | Sena soothed herself, and İrem did too. | İrem Sena'yı yatıştırdı. | İrem soothed Sena. | ST |
| FF | Tuğba kendini sınadı, Nesrin de. | Tuğba checked herself through, and Nesrin did too./ Tuğba tested herself, and Nesrin did too. | Nesrin kendini sınadı. | Nesrin checked herself through, / Nesrin tested herself. | SL |
| FF | Pelin kendini değerlendirdi, Melis de. | Pelin evaluated herself, and Melis did too. | Pelin Melis'i değerlendirdi. | Pelin evaluated Melis. | ST |
| MM | Kemal kendini düzeltti, Eren de. | Kemal corrected himself, and Eren did too. | Eren kendini düzeltti. | Eren corrected himself. | SL |
| MM | Caner kendini yerdi, Orçun da. | Caner criticized himself, and Orçun did too. | Orçun Caner'i yerdi. | Orçun criticized Caner. | ST |
| MM | Enes kendini şımarttı, İlker de. | Enes spoiled himself, and İlker did too. | İlker kendini şımarttı. | İlker spoiled himself. | SL |

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|----|--|--|------------------------------|-------------------------------|----|
| MM | Berke kendini kandırdı, Eray da. | Berke deceived himself, and Eray did too. | Eray Berke'yi kandırdı. | Eray deceived Berke. | ST |
| FM | İlgin kendini küçümsedi, Koray da. | İlgin underestimated herself, and Koray did too. | Koray kendini küçümsedi. | Koray underestimated himself. | SL |
| FM | Sevgi kendini gerdi, Ali de. | Sevgi stressed herself out , and Ali did too. | Ali Sevgi'yi gerdi. | Ali stressed Sevgi out . | ST |
| FM | Selin kendini tanıttı, Emre de. | Selin introduced herself, and Emre did too. | Emre kendini tanıttı. | Emre introduced himself. | SL |
| FM | Aysel kendini ötekileştirdi, Selim de. | Aysel marginalized herself, and Selim did too. | Selim Aysel'i ötekileştirdi. | Selim marginalized Aysel. | ST |
| MF | Çağlar kendini yordu, Leyla da. | Çağlar tired himself, and Leyla did too. | Leyla kendini yordu. | Leyla tired herself. | SL |
| MF | Cemal kendini gizledi, Cansu da. | Cemal disguised himself, and Cansu did too. | Cansu Cemal'i gizledi. | Cansu disguised Cemal. | ST |
| MF | Akın kendini alkışladı, Hilal de. | Akın applauded himself, and Hilal did too. | Hilal kendini alkışladı. | Hilal applauded herself. | SL |
| MF | Kaya kendini yargıladı, Ceylin de. | Kaya judged himself, and Ceylin did too. | Ceylin Kaya'yı yargıladı. | Ceylin judged Kaya. | ST |

| Gender-Matching | RNR reflexives | Sentence Translation | TRUE/FALSE Question | Sentence Translation | ST/SL |
|------------------------|---|---|--------------------------------|-----------------------------|--------------|
| FF | Hem Fatma hem Beyza kendini övdü. | Both Fatma and Beyza praised herself. | Fatma kendini övdü. | Fatma praised herself. | SL |
| FF | Hem Ecem hem İdil kendini aşağıladı. | Both Ecem and İdil humiliated herself. | Ecem İdil'i aşağıladı. | Ecem insulted İdil. | ST |
| FF | Hem Derin hem Yağmur kendini cesaretlendirdi. | Both Derin and Yağmur encouraged herself. | Derin kendini cesaretlendirdi. | Derin encouraged herself. | SL |
| FF | Hem Aylin hem Simge kendini utandırdı. | Both Aylin and Simge embarrassed herself. | Aylin Simge'yi utandırdı. | Aylin embarrassed Simge. | ST |
| MM | Hem Çınar hem Efe kendini eleştirdi. | Both Çınar and Efe criticized himself. | Çınar kendini eleştirdi. | Çınar criticized himself. | SL |
| MM | Hem Ahmet hem Mehmet kendini üzdü. | Both Ahmet and Mehmet upset himself. | Ahmet Mehmet'i üzdü. | Ahmet upset Mehmet. | ST |
| MM | Hem Serhan hem Bora kendini pohpohladı. | Both Serhan and Bora flattered himself. | Serhan kendini pohpohladı. | Serhan flattered himself. | SL |
| MM | Hem Kemal hem Eren kendini beğendi. | Both Kemal and Eren liked himself. | Kemal Eren'i beğendi. | Kemal liked Eren. | ST |
| FM | Hem Elif hem Mehmet kendini neşelendirdi. | Both Elif and Mehmet cheered himself up. | Elif kendini neşelendirdi. | Elif cheered herself up. | SL |

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|----|---|---|----------------------------|--------------------------------|----|
| FM | Hem Şeyma hem Berkay kendini savundu. | Both Şeyma and Berkay defended himself. | Şeyma Berkay'ı savundu. | Şeyma defended Berkay. | ST |
| FM | Hem Nazlı hem Osman kendini yüceltti. | Both Nazlı and Osman glorified himself themselves. | Nazlı kendini yüceltti. | Nazlı glorified herself. | SL |
| FM | Hem Merve hem Alper kendini kayırdı. | Both Merve and Alper favored himself themselves. | Merve Alper'i kayırdı. | Merve favored Alper out. | ST |
| MF | Hem Emir hem Duru kendini cezalandırdı. | Both Emir and Duru punished himself themselves. | Emir kendini cezalandırdı. | Emir punished himself. | SL |
| MF | Hem Ege hem Şeyda kendini affetti. | Both Ege and Şeyda forgave himself themselves. | Ege Şeyda'yı affetti. | Ege forgave Şeyda. | ST |
| MF | Hem Barış hem Arzu kendini zorladı. | Both Barış and Arzu forced/strained herself themselves. | Barış kendini zorladı. | Barış forced/strained himself. | SL |
| MF | Hem Oğuz hem Güneş kendini korudu. | Both Oğuz and Güneş protected herself themselves. | Oğuz Güneş'i korudu. | Oğuz protected Güneş . | ST |

| Gender-Matching | VP ellipses Possessives | Sentence Translation | TRUE/FALSE Question | TRUE/FALSE QUESTION Translation | ST/SL |
|------------------------|---|---|--|---|--------------|
| FF | Serpil arkadaşını ferahlattı, Özlem de. | Serpil refreshed her friend, and Özlem did too. | Özlem kendi arkadaşını ferahlattı. | Serpil refreshed her friend. | SL |
| FF | Sena öğrencisini yatıştırdı, İrem de. | Sena soothed her student, and İrem did too. | İrem Sena'nın öğrencisini yatıştırdı. | İrem soothed Sena's student, and İrem did too. | ST |
| FF | Tuğba çalışanını sınadı, Nesrin de. | Tuğba checked her employee through, and Nesrin did too./ Tuğba tested her employee, and Nesrin did too. | Nesrin kendi çalışanını sınadı. | Nesrin checked her employee through./ Nesrin tested her employee. | SL |
| FF | Pelin işçisini değerlendirdi, Melis de. | Pelin evaluated her worker, and Melis did too. | Melis Pelin'in işçisini değerlendirdi. | Melis evaluated Pelin's worker. | ST |
| MM | Kemal öğrencisini düzeltti, Eren de. | Kemal corrected his students, and Eren did too. | Eren kendi öğrencisini düzeltti. | Eren corrected his students. | SL |
| MM | Caner müşterisini yerdi, Orçun da. | Caner criticized his customer, and Orçun did too. | Orçun Caner'in müşterisini yerdi. | Orçun criticized Caner's customer. | ST |
| MM | Enes torununu şımarttı, İlker de. | Enes spoiled his grandchild and İlker did too. | İlker kendi torununu şımarttı. | İlker spoiled his grandchild. | SL |
| MM | Berke arkadaşını kandırdı, Eray da. | Berke deceived his friend, and Eray did too. | Eray Berke'nin arkadaşını kandırdı. | Eray deceived Berke's friend. | ST |

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|----|---|--|--|--|----|
| FM | İlgin müdürünü küçümsedi, Koray da. | İlgin underestimated her manager, and Koray did too. | İlgin kendi müdürünü küçümsedi. | İlgin underestimated her manager. | SL |
| FM | Sevgi hastasını gerdi, Ali de. | Sevgi stressed her patient out, and Ali did too. | Ali Sevgi'nin hastasını gerdi. | Ali stressed Sevgi's patient out. | ST |
| FM | Selin ürününü tanıttı, Emre de. | Selin introduced her product, and Emre did too. | Emre kendi ürününü tanıttı. | Emre introduced his product. | SL |
| FM | Aysel arkadaşını ötekileştirdi, Selim de. | Aysel marginalized her friend, and Selim did too. | Selim Aysel'in arkadaşını ötekileştirdi. | Selim marginalized Aysel's friend. | ST |
| MF | Çağlar sporcusunu yordu, Leyla da. | Çağlar tired his sportsman/sportswo man (gender neutral), and Leyla did too. | Leyla kendi sporcusunu yordu. | Leyla tired her sportsman/sportswo man (gender neutral). | SL |
| MF | Cemal işini gizledi, Cansu da. | Cemal disguised his work, and Cansu did too. | Cansu Cemal'in işini gizledi. | Cansu disguised Cemal's work. | ST |
| MF | Akın avukatını alkışladı, Hilal de. | Akın applauded his lawyer, and Hilal did too. | Hilal kendi avukatını alkışladı. | Hilal applauded her lawyer. | SL |
| MF | Kaya öğretmenini yargıladı, Ceylin de. | Kaya judged his teacher, and Ceylin did too. | Ceylin Kaya'nın öğretmenini yargıladı. | Ceylin judged Kaya's teacher. | ST |

| Gender-Matching | RNR Possessives | Sentence Translation | TRUE/FALSE Question | Sentence Translation | ST/SL |
|------------------------|--|---|---|--|--------------|
| FF | Hem Fatma hem Beyza arkadaşını övdü. | Both Fatma and Beyza praised their friend. | Fatma kendi arkadaşını övdü. | Fatma praised her friend. | SL |
| FF | Hem Ecem hem İdil abisini aşağıladı. | Both Ecem and İdil insulted their brother. | Ecem İdil'in abisini aşağıladı. | Ecem insulted İdil's brother. | ST |
| FF | Hem Derin hem Yağmur asistanını cesaretlendirdi. | Both Derin and Yağmur encouraged their assistant. | Derin kendi asistanını cesaretlendirdi. | Derin encouraged her assistant. | SL |
| FF | Hem Aylin hem Simge müşterisini utandırdı. | Both Aylin and Simge embarrassed their client. | Aylin Simge'nin müşterisini utandırdı. | Aylin embarrassed Simge 's client. | ST |
| MM | Hem Çınar hem Efe kardeşini eleştirdi. | Both Çınar and Efe criticized their (brother/sister) sibling. | Çınar kendi kardeşini eleştirdi. | Çınar criticized his (brother/sister) sibling. | SL |
| MM | Hem Ahmet hem Mehmet kızını üzdü. | Both Ahmet and Mehmet upset their daughter. | Ahmet Mehmet'in kızını üzdü. | Ahmet upset Mehmet 's daughter. | ST |
| MM | Hem Serhan hem Bora rakibini pohpohladı. | Both Serhan and Bora flattered their rival. | Serhan kendi rakibini pohpohladı. | Serhan flattered his rival. | SL |
| MM | Hem Kemal hem Eren mahallesini beğendi. | Both Kemal and Eren liked their neighborhood. | Kemal Eren'in mahallesini beğendi. | Kemal liked Eren's neighborhood. | ST |
| FM | Hem Elif hem Mehmet patronunu neşelendirdi. | Both Elif and Mehmet cheered their boss up. | Elif kendi patronunu neşelendirdi. | Elif cheered her boss up. | SL |

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|----|---|--|--------------------------------------|--|----|
| FM | Hem Şeyma hem Berkay müvekkilini savundu. | Both Şeyma and Berkay defended their client. | Şeyma Berkay'ın müvekkilini savundu. | Şeyma defended Berkay's client. | ST |
| FM | Hem Nazlı hem Osman komşusunu yüceltti. | Both Nazlı and Osman glorified their neighbor. | Nazlı kendi komşusunu yüceltti. | Nazlı glorified her neighbor. | SL |
| FM | Hem Merve hem Alper sporcusunu kayırdı. | Both Merve and Alper favored their sportsman/sportswo man out. | Merve Alper'in sporcusunu kayırdı. | Merve favored Alper's sportsman/sportswo man out. | ST |
| MF | Hem Emir hem Duru sevgilisini cezalandırdı. | Both Emir and Duru punished their boyfriend(/girlfriend) (gender neutral). | Emir kendi sevgilisini cezalandırdı. | Emir punished his boyfriend(/girlfriend) (gender neutral). | SL |
| MF | Hem Ege hem Şeyda kuzenini affetti. | Both Ege and Şeyda forgave their cousin. | Ege Şeyda'ın kuzenini affetti. | Ege forgave Şeyda's cousin. | ST |
| MF | Hem Barış hem Arzu dansçısını zorladı. | Both Barış and Arzu forced/strained their dancer. | Barış kendi dansçısını zorladı. | Barış forced/strained his dancer. | SL |
| MF | Hem Oğuz hem Güneş partnerini korudu. | Both Oğuz and Güneş protected their partner. | Oğuz Güneş'in partnerini korudu. | Oğuz protected Güneş 's partner. | ST |

**D. TURKISH EXPERIMENT- FILLER ITEMS/ TÜRKÇE DENEYLER-
DOLGU MADDELERİ**

| Gender-Matching | Non-ambiguous RNR Sentences | Sentence Translation | TRUE/FALSE QUESTION 1 | TRUE/FALSE QUESTION Translation | TRUE /FALSE |
|------------------------|---------------------------------------|--|------------------------------|--|--------------------|
| FF | Hem Seda hem Cansu filmi izledi. | Both Seda and Cansu watched the movie. | Seda filmi izlemedi. | Seda didn't watch the movie. | F |
| MM | Hem Ahmet hem Ali hikayeyi anlattı. | Both Ahmet and Ali told the story. | Ahmet hikayeyi anlattı. | Ahmet told the story. | T |
| FF | Hem Cemre hem Derin çocuğu öptü. | Both Cemre and Derin kissed the child. | Cemre çocuğu öpmemi. | Cemre didn't kiss the child. | F |
| FF | Hem Ayşe hem Fatma sınavı geçti. | Both Ayşe and Fatma passed the test. | Ayşe sınavı geçti. | Ayşe passed the test. | T |
| MM | Hem Kerem hem Caner planı destekledi. | Both Kerem and Caner supported the plan. | Caner planı desteklemedi. | Caner didn't support the plan. | F |
| MM | Hem Orçun hem Uraz dosyayı indirdi. | Both Orçun and Uraz downloaded the file. | Uraz dosyayı indirdi. | Uraz downloaded the file. | T |
| MF | Hem Oktay hem Özlem anahtarı unuttu. | Both Oktay and Özlem forgot the keys. | Özlem anahtarı unutmadı. | Özlem didn't forget the keys. | F |
| MF | Hem Cihan hem Elif parayı harcadı. | Both Cihan and Elif spent the money. | Cihan parayı harcadı. | Cihan spent the money. | T |
| FM | Hem Sultan hem Ayşe köpeği gezdirdi. | Both Sultan and Ayşe walked the dog. | Sultan köpeği gezdirmemi. | Sultan didn't walk the dog. | F |
| FM | Hem Emre hem Nevin masayı topladı. | Both Emre and Nevin cleared the table. | Nevin masayı topladı. | Nevin cleared the table. | T |

| Gender-Matching | Non-ambiguous VP Ellipses | Sentence Translation | TRUE/FALSE QUESTION 1 | TRUE/FALSE QUESTION Translation | TRUE /FALSE |
|------------------------|-------------------------------------|--|------------------------------|--|--------------------|
| MM | Çağlar kazayı bildirdi, Kerim de. | Çağlar reported the incident, and Kerim did too. | Kerim kazayı bildirmemi. | Kerim didn't report the incident. | F |
| MF | Cemil kızını güldürdü, Reyhan da. | Cemil made the girl laugh, and Reyhan did too. | Reyhan kızını güldürdü. | Reyhan made the girl laugh. | T |
| MF | Osman kadını aradı, Selen de. | Osman called the woman, and Selen did too. | Osman kadını aramadı. | Osman didn't call the woman. | F |
| FF | Öykü hediye verdi, Zeynep de. | Öykü gave the present, and Janet did too. | Öykü hediye verdi. | Öykü gave the present. | T |
| FM | Seher teklifi reddetti, Necmi de. | Seher refused the customer, and Necmi did too. | Seher teklifi reddetmedi. | Seher didn't refuse the customer. | F |
| MM | Ege böreğini yedi, Ayhan da. | Ege ate the pancake, and Ayhan did too. | Ege böreğini yedi. | Ege ate the pancake. | T |
| FF | Lale adayını çağırdı, Derya da. | Lale invited the candidate, and Derya did too. | Derya adayını çağırmadı. | Lale didn't invite the candidate. | F |
| FM | Leyla anlaşmayı imzaladı, Şükrü de. | Leyla signed the contract, and Şükrü did too. | Şükrü anlaşmayı imzaladı. | Şükrü signed the contract. | T |
| FF | Reyhan piyanoyu çaldı, Narin de. | Reyhan played the piano, and Narin did too. | Narin piyanoyu çalmadı. | Narin didn't play the piano. | F |
| MM | Ertan hırsızını yakaladı, Cihan da. | Ertan arrested the thieves, and Cihan did too. | Cihan hırsızını yakaladı. | Cihan arrested the thieves. | T |

| Gender-Matching | Passives | Sentence Translation | TRUE/FALSE QUESTION 1 | TRUE/FALSE QUESTION Translation | TRUE /FALSE |
|-----------------|---|--|-------------------------------|--|-------------|
| Non-applicable | Başkana Fatma tarafından uyarı verildi. | The department head was given a warning by Fatma. | Başkana uyarı verilmedi. | The department head wasn't given a warning. | F |
| | Askere Müslüm tarafından yönerge verildi. | The soldier was given the directions by Müslüm. | Askere yönerge verildi. | The soldier was given the directions. | T |
| | Turiste Beril tarafından harita çizdirildi. | The tourist was drawn a map by Beril. | Turiste harita çizilmedi. | The tourist wasn't drawn a map. | F |
| | Patrona Sadi tarafından çikolata gönderildi. | Chocolates were sent for the boss by Sadi. | Patrona çikolata gönderildi. | Chocolates were sent for the boss. | T |
| | Kıza Kayra tarafından hediye alındı. | The girl was bought a present by Kayra. | Kıza hediye alınmadı. | The girl wasn't bought a present. | F |
| | Adama Cemal tarafından not gönderildi. | The man was passed a note by Cemal. | Adama not gönderildi. | The man was passed a note. | T |
| | Çocuklara Aliye tarafından burs sağlandı. | The children were provided a scholarship by Aliye. | Çocuklara burs sağlanmadı. | The children weren't provided a scholarship. | F |
| | Oyuncuya İsmet tarafından rol verildi | The actress was casted by İsmet. | Oyuncuya rol verildi. | The actress was casted. | T |
| | Çiftlere Halil tarafından çiçek gönderildi. | The couples were sent a flower by Halil. | Çiftlere çiçek gönderilmedi. | The couples weren't sent a flower. | F |
| | Çocuklara Ömer tarafından madalya gösterildi. | The children were shown the medal by Ömer. | Çocuklara madalya gösterildi. | The children were shown the medal. | T |
| | Öğrencilere Merve tarafından ödev verildi. | The students were assigned the homework by Merve. | Öğrencilere ödev verilmedi. | The students weren't assigned the homework. | F |

| | | | | |
|--|---|-----------------------------|---|---|
| Çocuklara Dilan tarafından imkan verildi. | The kids were provided a facility/chance by Dilan. | Çocuklara imkan verildi. | The kids were provided a facility/chance. | T |
|--|---|-----------------------------|---|---|

**E. TURKISH POSSESSIVE CONSTRUCTION EXPERIMENTAL
ITEMS/ TÜRKÇE İYELİK YAPILARI DENEYSEL MADDELER**

| Item | Turkish VP ellipses Possessives | TRUE/FALSE | Questions | Options | TRUE/FALSE QUESTION Translation | ST/SL |
|-------------|---|---------------------------------------|------------------|-------------------------|---|--|
| 1 | Serpil arkadaşını ferahlattı, Özlem de. | Özlem kendi arkadaşını ferahlattı | is e | Serpil kimi ferahlattı? | A)kendi arkadaşını B)Özlem'in arkadaşını C)başka birinin arkadaşını | If Özlem refreshed her friend, whom Serpil did refresh? SL |
| | | Özlem Serpil'in arkadaşını ferahlattı | is e | Serpil kimi ferahlattı? | A)kendi arkadaşını B)Özlem'in arkadaşını C)başka birinin arkadaşını | If Özlem refreshed Serpil's friend, whom Serpil did refresh? ST |
| 2 | Sena öğrencisini yatıştırdı, İrem de. | İrem Sena'nın öğrencisini yatıştırdı | is e | Sena kimi yatıştırdı? | A)kendi öğrencisini B)İrem'in öğrencisini C)başka birinin öğrencisini | If İrem soothed Sena's student, whom did Sena sooth? ST |
| | | İrem kendi öğrencisini yatıştırdı | is e | Sena kimi yatıştırdı? | A)kendi öğrencisini B)İrem'in öğrencisini C)başka birinin öğrencisini | If İrem soothed her student, whom did Sena sooth? SL |

| | | | | | | | |
|---|---|---------------------------------------|------|---------------------------|---|--|----|
| 3 | Tuğba çalışanını sınadı, Nesrin de. | Nesrin kendi çalışanını sınadı | is e | Tuğba kimi sınadı? | A)kendi çalışanını B)Nesrin'in çalışanını C)başka birinin çalışanını | If Nesrin checked her employee through, whom did Tuğba check through?/ If Nesrin tested her employee, whom did Tuğba test? | SL |
| | | Nesrin Tuğba'nın çalışanını sınadı | is e | Tuğba kimi sınadı? | A)kendi çalışanını B) Nesrin'in çalışanını C)başka birinin çalışanını | If Nesrin checked Tuğba's employee through, whom did Tuğba check through?/ If Nesrin tested Tuğba's employee, whom did Tuğba test? | ST |
| 4 | Pelin işçisini değerlendirdi, Melis de. | Melis Pelin'in işçisini değerlendirdi | is e | Pelin kimi değerlendirdi? | A)kendi işçisini B)Melis'in işçisini C)başka birinin işçisini | If Melis evaluated Pelin's employee, whom did Melis evaluate? | ST |
| | | Melis kendi işçisini değerlendirdi | is e | Pelin kimi değerlendirdi? | A)kendi işçisini B) Melis'in işçisini C)başka birinin işçisini | If Melis evaluated her employee, whom did Melis evaluate? | SL |
| 5 | Kemal öğrencilerin i düzeltti, Eren de. | Eren kendi öğrencisini düzeltti | is e | Kemal kimi düzeltti? | A)kendi öğrencisini B)Eren'in öğrencisini C)başka birinin öğrencisini | If Eren corrected his student, whom did Kemal correct? | SL |

| | | | | | | |
|---|---|---------|---------------------------|---|--|----|
| | Eren Kemal'in öğrencisini düzeltilti | is e | Kemal kimi düzeltilti? | A)kendi öğrencisini B)Eren'in öğrencisini C)başka birinin öğrencisini | If Eren corrected Kemal's student, whom did Kemal correct? | ST |
| 6 | Caner müşterisini yerdı, Orçun da. | is e | Caner kimi yerdı? | A)kendi müşterisini B) Orçun'un müşterisini C)başka birinin müşterisini | If Orçun criticized Caner's customer, whom did Caner critize? | ST |
| | Orçun kendi müşterisini yerdı | is e | Caner kimi yerdı? | A)kendi müşterisini B) Orçun'un müşterisini C)başka birinin müşterisini | If Orçun criticized his customer, whom did Caner critize? | SL |
| 7 | Enes torununu şımarttı, İlker de. | is e | Enes kimi şımarttı? | A)kendi torununu B)İlker'in torununu C)başka birinin torununu | If İlker spoiled his grandchild, whom did Enes spoil? | SL |
| | İlker Enes'in torununu şımarttı | is e | Enes kimi şımarttı? | A)kendi torununu B)İlker'in torununu C)başka birinin torununu | If İlker spoiled Enes' grandchild, whom did Enes spoil? | ST |
| 8 | Berke arkadaşını kandırdı, Eray da. | is e | Berke kimi kandırdı? | A)kendi arkadaşını B)Eray'ın arkadaşını C)başka birinin arkadaşını | If Eray deceived Berke's friend, whom did Berke deceive? | ST |

| | | | | | | |
|----|-------------------------------------|------|-----------------------|--|--|----|
| | Eray kendi arkadaşını kandırdı | is e | Berke kimi kandırdı? | A)kendi arkadaşını B)Eray'ın arkadaşını C)başka birinin arkadaşını | If Eray deceived his friend, whom did Berke deceive? | SL |
| 9 | Ilgın müdürünü küçümsedi, Koray da. | is e | Koray kimi küçümsedi? | A)kendi müdürünü B)Ilgın'ın müdürünü C)başka birinin müdürünü | If Ilgın underestimated her manager, whom did Koray underestimate? | SL |
| | Ilgın Koray'ın müdürünü küçümsedi | is e | Koray kimi küçümsedi? | A)kendi müdürünü B)Ilgın'ın müdürünü C)başka birinin müdürünü | If Ilgın underestimated Koray's manager, whom did Koray underestimate? | ST |
| 10 | Sevgi hastasını gerdi, Ali de. | is e | Sevgi kimi gerdi? | A)kendi hastasını B) Ali'nin hastasını C)başka birinin hastasını | If Ali stressed Sevgi's patient out, whom did Sevgi stress out? | ST |
| | Ali kendi hastasını gerdi | is e | Sevgi kimi gerdi? | A)kendi hastasını B) Ali'nin hastasını C)başka birinin hastasını | If Ali stressed his patient out, whom did Sevgi stress out? | SL |

| | | | | | | | |
|----|--|---|------|----------------------------|---|---|----|
| 11 | Akın avukatını alkışladı, Hilal de. | Hilal kendi avukatını alkışladı. | is e | Akın kimi alkışladı? | A)kendi avukatını B) Hilal'in avukatınıC)başka birinin avukatını | If Hilal applauded her lawyer, whom did Akın applaud? | SL |
| | | Hilal Akın'ın avukatını alkışladı. | is e | Akın kimi alkışladı? | A)kendi avukatını B) Hilal'in avukatınıC)başka birinin avukatını | If Hilal applauded Akın's lawyer, whom did Akın applaud? | ST |
| 12 | Aysel arkadaşını ötekileştirdi , Selim de. | Selim Aysel'in arkadaşını ötekileştirdi | is e | Aysel kimi ötekileştirdi ? | A)kendi arkadaşını B)Selim'in arkadaşını C)başka birinin arkadaşını | If Selim marginalized Aysel's friend, whom did Aysel marginalize? | ST |
| | | Selim kendi arkadaşını ötekileştirdi | is e | Aysel kimi ötekileştirdi ? | A)kendi arkadaşını B)Selim'in arkadaşını C)başka birinin arkadaşını | If Selim marginalized Aysel's friend, whom did Aysel marginalize? | SL |
| 13 | Çağlar sporcusunu yordu, Leyla da. | Leyla kendi sporcusunu yordu | is e | Çağlar kimi yordu? | A)kendi sporcusunu B) Leyla'nın sporcusunu C)başka birinin sporcusunu | If Leyla tired her sportsman/sportswoman, whom did Çağlar tire?. | SL |

| | | | | | | | |
|-------------|--|---|---------|-------------------------|--|--|----|
| | | Leyla Çağlar'ın sporcusunu yordu | is e | Çağlar kimi yordu? | A)kendi sporcusunu B) Leyla'nın sporcusunu C)başka birinin sporcusunu | If Leyla tired Çağlar's sportsman/sportsw oman, whom did Çağlar tire?. | ST |
| | | Kaya öğretmenini yargıladı, Ceylin de. | is e | Kaya kimi yargıladı? | A)kendi öğretmenini B) Ceylin'in öğretmenini C)başka birinin öğretmenini | If Ceylin judged Kaya's teacher, whom did Kaya judge? | ST |
| 14 | | | | | | | |
| | | Ceylin kendi öğretmenin i yargıladı | is e | Kaya kimi yargıladı? | A)kendi öğretmenini B) Ceylin'in öğretmenini C)başka birinin öğretmenini | If Ceylin judged her teacher, whom did Kaya judge? | SL |
| Item | Turkish RNR Possessives | TRUE/FALSE Questions | | Options | Sentence Translation | ST/S L | |
| | | Hem Fatma hem Beyza arkadaşını övdü. | is e | Beyza kimi övdü? | A)kendi arkadaşını B)Özlem'in arkadaşını C)başka birinin arkadaşını | If Fatma praised her friend, whom did Beyza praise? | SL |
| 1 | | | | | | | |
| | | Fatma Beyza'nın arkadaşını övdü | is e | Beyza kimi övdü? | A)kendi arkadaşını B)Özlem'in arkadaşını C)başka birinin arkadaşını | If Fatma praised Beyza's friend, whom did Beyza praise? | ST |

| | | | | | | | |
|---|--|--|------|------------------------------|---|--|----|
| 2 | Hem Ecem hem İdil abisini aşağıladı. | Ecem İdil'in abisini aşağıladı | is e | İdil kimi aşağıladı? | A)kendi abisini B) Ecem'in abisini C)başka birinin abisini | If Ecem insulted İdil's brother, whom did İdil insult? | ST |
| | | Ecem kendi abisini aşağıladı | is e | Beyza kimi övdü? | A)kendi abisini B) Ecem'in abisini C)başka birinin abisini | If Ecem insulted her brother, whom did İdil insult? | SL |
| 3 | Hem Derin hem Yağmur asistanını cesaretlendirdi. | Derin kendi asistanını cesaretlendirdi | is e | Yağmur kimi cesaretlendirdi? | A)kendi asistanını B) Derin'in asistanını C)başka birinin asistanını | If Derin encouraged her assistant, whom did Yağmur encourage? | SL |
| | | Derin Yağmur'un asistanını cesaretlendirdi | is e | Beyza kimi övdü? | A)kendi asistanını B) Derin'in asistanını C)başka birinin asistanını | If Derin encouraged Yağmur's assistant, whom did Yağmur encourage? | ST |
| 4 | Hem Aylin hem Simge müşterisini utandırdı. | Aylin Simge'nin müşterisini utandırdı | is e | Simge kimi utandırdı? | A)kendi müşterisini B) Aylin'in müşterisini C)başka birinin müşterisini | If Aylin embarrassed Simge's client, whom did Simge embarrass? | ST |
| | | Aylin kendi müşterisini utandırdı | is e | Beyza kimi övdü? | A)kendi müşterisini B) Aylin'in müşterisini C)başka birinin müşterisini | If Aylin embarrassed her client, whom did Simge embarrass? | SL |

| | | | | | | | |
|---|--|-------------------------------------|---------|-----------------------|--|--|----|
| 5 | Hem Çınar hem Efe kardeşini eleştirdi. | Çınar kardeşini eleştirdi | is e | Efe kimi eleştirdi? | A)kendi kardeşini B)Çınar'ın kardeşini C)başka birinin kardeşini | If Çınar criticized his (brother/sister) sibling, whom did Efe ciritize? | SL |
| | | Çınar Efe'nin kardeşini eleştirdi | is e | Beyza kimi övdü? | A)kendi kardeşini B)Çınar'ın kardeşini C)başka birinin kardeşini | If Çınar criticized Efe's (brother/sister) sibling, whom did Efe ciritize? | ST |
| 6 | Hem Ahmet hem Mehmet kızını üzdü. | Ahmet Mehmet'in kızını üzdü | is e | Mehmet kimi üzdü? | A)kendi kızını B) Ahmet'in kızını C)başka birinin kızını | If Ahmet upset Mehmet 's daughter, whom did Mehmet upset? | ST |
| | | Ahmet kendi kızını üzdü | is e | Beyza kimi övdü? | A)kendi kızını B) Ahmet'in kızını C)başka birinin kızını | If Ahmet upset his daughter, whom did Mehmet upset? | SL |
| 7 | Hem Serhan hem Bora rakibini pohpohladı. | Serhan kendi rakibini pohpohladı | is e | Bora kimi pohpohladı? | A)kendi rakibini B) rakibini C)başka birinin rakibini | If Serhan flattered his rival, whom did Bora flatter? | SL |
| | | Serhan Bora'nın rakibini pohpohladı | is e | Beyza kimi övdü? | A)kendi rakibini B) rakibini C)başka birinin rakibini | If Serhan flattered Bora's rival, whom did Bora flatter? | ST |

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|----|---|---------------------------------------|------|----------------------------|---|--|----|
| 8 | Hem Barış hem Arzu dansçısını zorladı. | Barış Arzu'nun dansçısını zorladı | is e | Arzu kimi zorladı? | A)kendi dansçısını B)Barış'ın dansçısını C)başka birinin dansçısını | If Barış forced/strained Arzu's dancer, whom did Arzu force/ strain? | ST |
| | | Barış kendi dansçısını zorladı | is e | Arzu kimi zorladı? | A)kendi dansçısını B)Barış'ın dansçısını C)başka birinin dansçısını | If Barış forced/strained his dancer, whom did Arzu force/ strain? | SL |
| 9 | Hem Elif hem Mehmet patronunu neşelendirdi. | Elif kendi patronunu neşelendirdi | is e | Mehmet kimi neşelendirdi ? | A)kendi patronunu B) patronunu C)başka birinin patronunu | If Elif cheered her boss up, whom did Mehmet cheer up? | SL |
| | | Elif Mehmet'in patronunu neşelendirdi | is e | Mehmet kimi neşelendirdi ? | A)kendi patronunu B) patronunu C)başka birinin patronunu | If Elif cheered Mehmet's boss up, whom did Mehmet cheer up? | ST |
| 10 | Hem Şeyma hem Berkay müvekkilini savundu. | Şeyma Berkay'ın müvekkilini savundu | is e | Berkay savundu? | A)kendi müvekkilini B) müvekkilini C)başka birinin müvekkilini | If Şeyma defended Berkay's client, whom did Berkay defend? | ST |
| | | Şeyma kendi müvekkilini savundu | is e | Berkay savundu? | A)kendi müvekkilini B) müvekkilini C)başka birinin müvekkilini | If Şeyma defended her client, whom did Berkay defend? | SL |

11

| | | | | | | |
|---|--------------------------------|------|----------------------|--|--|----|
| Hem Nazlı hem Osman komşusunu yüceltti. | Nazlı kendi komşusunu yüceltti | is e | Osman kimi yüceltti? | A)kendi komşusunu B) komşusunu C)başka birinin komşusunu | If Nazlı glorified her neighbor, whom did Osman glorify? | SL |
|---|--------------------------------|------|----------------------|--|--|----|

| | | | | | | |
|--|-----------------------------------|------|----------------------|--|--|----|
| | Nazlı Osman'ın komşusunu yüceltti | is e | Osman kimi yüceltti? | A)kendi komşusunu B) komşusunu C)başka birinin komşusunu | If Nazlı glorified Osman's neighbor, whom did Osman glorify? | ST |
|--|-----------------------------------|------|----------------------|--|--|----|

12

| | | | | | | |
|---|-----------------------------------|------|---------------------|---|---|----|
| Hem Merve hem Alper sporcusunu kayırdı. | Merve Alper'in sporcusunu kayırdı | is e | Alper kimi kayırdı? | A)kendi sporcusunu B) sporcusunu C)başka birinin sporcusunu | If Merve favored Alper's sportsman/sportswoman out, whom did Alper favor? | ST |
|---|-----------------------------------|------|---------------------|---|---|----|

| | | | | | | |
|--|--------------------------------|------|---------------------|---|---|----|
| | Merve kendi sporcusunu kayırdı | is e | Alper kimi kayırdı? | A)kendi sporcusunu B) sporcusunu C)başka birinin sporcusunu | If Merve favored her sportsman/sportswoman out, whom did Alper favor? | SL |
|--|--------------------------------|------|---------------------|---|---|----|

13

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|---|-------------------------------------|------|-------------------------|--|--|----|
| Hem Emir hem Duru sevgilisini cezalandırdı. | Emir kendi sevgilisini cezalandırdı | is e | Duru kimi cezalandırdı? | A)kendi sevgilisini B) sevgilisini C)başka birinin sevgilisini | If Emir punished his boyfriend(/girlfriend), whom did Duru punish? | SL |
|---|-------------------------------------|------|-------------------------|--|--|----|

Emir
Duru'nun
sevgilisini
cezalandırdı
1

is
e

Duru kimi
cezalandırdı
?

A)kendi
sevgilisini
B) sevgilisini
C)başka
birinin
sevgilisini

If Emir punished
Duru's
boyfriend(/girlfrien
d), whom did Duru
punish?

ST

Hem Ege
hem Şeyda
kuzenini
affetti.

Ege
Şeyda'ın
kuzenini
affetti

is
e

Şeyda kimi
affetti?

A)kendi
kuzenini B)
kuzenini
C)başka
birinin
kuzenini

If Ege forgave
Şeyda's cousin,
whom did Şeyda
forgive?

ST

14

Ege kendi
kuzenini
affetti

is
e

Şeyda kimi
affetti?

A)kendi
kuzenini B)
Ege'nin
kuzenini
C)başka
birinin
kuzenini

If Ege forgave his
cousin, whom did
Şeyda forgive?

SL

**F. INFORMED CONSENT FORM FOR ENGLISH PARTICIPANTS/
İNGİLİZ KATILIMCILAR İÇİN ARAŞTIRMAYA GÖNÜLLÜ KATILIM
FORMU**

This study investigates the acquisition of English as a second language, and it collects data from native speakers of English as control group. It has been prepared by Emine EREN GEZEN under the supervision of Prof. Dr. Martina Gračanin Yüksek as part of a PhD thesis at the Department of English Language Education, Institute of Social Sciences, Middle East Technical University. The aim of the study is to investigate the acquisition and processing of anaphors. Participation in the study is voluntary. Your identity will not be revealed in the thesis or in any further publication(s) that might stem from it. Your answers will be kept confidential and will be evaluated only by the researchers. The results will be used only in scientific publications.

For each item in this experiment, you will be required to read an English sentence and right below it, you will be asked a True/False question. You can choose True or False by pressing the number buttons “1” for True and “2” for False. Before you start the experiment, there will be seven practice items for you to get accustomed to the task.

The experiment does not contain any disturbing items. However, if you feel disturbed because of the sentences you read or any other reason during the study, you are free to leave the experiment undone.

After completing the experiment, if you have any questions, please, contact me by e-mail. My information is: _____, E-mail:
or _____@gmail.com, Phone: _____.

Before we begin, please accept the following statement by clicking on the consent button.

“By clicking the consent button on this form, I agree to participate in the experiment. I understand that I can withdraw at any time without giving reasons and

that I will not be penalized for withdrawing nor will I be questioned on why I have withdrawn. I understand that the information I gave might be used in scientific publications and I agree to that.”

I consent

**G. DEMOGRAPHIC DATA FORM FOR ENGLISH PARTICIPANTS/
İNGİLİZ KATILIMCILAR İÇİN DEMOGRAFİK VERİ FORMU**

Before we begin to the experiment, we would like to collect a few pieces of information from you. This information is only for our data analysis. It cannot be used to identify you. Please answer truthfully.

What is your age?

What is your biological sex? Male (tick) Female (tick)

Where did you grow up?

What is your native language?

Which foreign languages do you speak?

H. INFORMED CONSENT FORM FOR TURKISH PARTICIPANTS/ TÜRK KATILIMCILAR İÇİN ARAŞTIRMAYAGÖNÜLLÜ KATILIM FORMU

Bu çalışmada Türkçe’deki bazı çok-anlamlı yapıların değerlendirilmesi incelenmektedir. Doktora tezi kapsamında Prof. Dr. Martina Gračanin Yüksek danışmanlığında Emine Eren Gezen tarafından yürütülmektedir. Bu çalışmanın amacı Türkçe’de bulunan çok-anlamlı yapılardaki yinelemelerin işlenmesini incelemektir.

Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Çalışmada sizden kimlik veya kurum belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır.

Bu ankette toplamda altmış dört cümle okuyacaksınız. Bu çalışmadaki her bir madde için, önce tek bir düz Türkçe cümle okuyacaksınız ve boşluk tuşuna basıp ilerleyerek yine üstte aynı cümlenin olduğu altta da ilgili cümlenin Doğru /Yanlış sorusunu okuyacaksınız. Numara tuşlarına basarak (1) Doğru/ (2) Yanlış seçiminizi yaparak ilerleyebilirsiniz. Asıl çalışmaya başlamadan önce, çalışmaya alışmak için önce yedi tane alıştırma cümlesi okuyacaksınız.

Anket, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini yarıda bırakıp çıkmakta serbestsiniz. Bu durumda linki kapatmanız yeterli olacaktır.

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında sorularınız varsa veya daha fazla bilgi almak isterseniz Emine Eren Gezen ile iletişim kurabilirsiniz. İletişim bilgilerim: Emine EREN GEZEN, E-mail
veya

Çalışmaya başlamadan önce, lütfen katılmayı kabul ediyorum tuşunu tıklayarak aşağıdaki maddeyi kabul edin.

“Bu formdaki “Kabul Ediyorum” tuşuna tıklayarak, bu çalışmaya gönüllü olarak katılmayı kabul ediyorum. Herhangi bir sebep göstermeden, çalışmadan istediğim her an çekilebileceğimi biliyorum ve çekildiğim için cezalandırılmayacağımı veya neden çekildiğime dair herhangi bir şekilde soru sorulmayacağını biliyorum. Bu çalışmadan elde edilen bilgilerin yalnızca bilimsel yayınlarda kullanılabileceğini biliyorum ve buna gönüllü olarak katılmayı kabul ediyorum.”

Katılmayı kabul ediyorum

**I. DEMOGRAPHIC DATA FORM FOR TURKISH PARTICIPANTS/
TÜRK KATILIMCILAR İÇİN DEMOGRAFİK VERİ FORMU**

Çalışmaya başlamadan önce, sizden bazı bilgiler toplamak istiyoruz. Bu bilgiler sadece very analizi amaçlıdır. Sizin kimliğinizi ortaya çıkarmak amaçlı değildir. Lütfen doğru bir şekilde yanıtlayınız.

Yaşınız?

Biyolojik cinsiyetiniz? Erkek (tick) Kadın (tick)

Nerede büyüdünüz?

Eğitim Seviyeniz nedir?

Anadiliniz nedir?

Hangi yabancı dilleri konuşuyorsunuz? (İngilizce, Almanca, Japonca vs.)

J. CURRICULUM VITAE/ ÖZGEÇMİŞ

PERSONAL INFORMATION

Surname, Name: EREN GEZEN, Emine

Nationality:

Marital Status:

email:

EDUCATION

| Degree | Institution | Year of Graduation |
|-------------|--|--------------------|
| MA | METU English Language Teaching | 2015 2014 |
| MS | METU Cognitive Science | |
| BA | METU Foreign Language Education | 2011 |
| High School | Muğla Anatolian Teacher Training High School, Muğla | 2007 |

WORK EXPERIENCE

| Year | Place | Enrollment |
|-----------------------------------|--|---------------------|
| 2018 October- present | Eskişehir Osmangazi University- Foreign Language Education Department | Research Assisstant |
| 2013- December-2018 October | METU- Foreign Language Education Department | Research Assisstant |
| 2013-February- 2013 December | Eskişehir Osmangazi University - Foreign Language Education Department | Research Assisstant |
| 2011- 2013 | METU Cognitive Science | Student Assisstant |

FOREIGN LANGUAGES

Advanced English, Pre-Intermediate German

PUBLICATIONS

Eren-Gezen, Emine., Şenel-Zor, Tuba, Bahçalı, Turgut (2021) Digital Literacy Skills, Technology Habits And Backgrounds Of Educational Faculty Students in E-Learning Environments. *Journal of International Scientific Publications: Educational Alternatives* 19, 262-276

PROJECTS

Project Member (researcher)- Flipped Impact (Flipped Learning), Erasmus +
Program- No: 2018-1- TR01- KA201- 059386

CONFERENCE PRESENTATIONS

KARAKUŞ, Esra., Eren-Gezen, Emine., AYSAN ŞAHİNTAŞ, Zeynep (2019). “*Investigating Turkish Pre-service EFL Teachers’ Professional Identity Through the Use of Metaphors as a Representation of Their Teaching Selves*” paper presented at The 5thÇukurova International ELT Teachers Conference: “Glocalization Issues and Trends in EFL/ESL”, Adana, Turkey APRIL 18-20, 2019,

EREN GEZEN, Emine., AYSAN ŞAHİNTAŞ, Zeynep., KARAKUŞ, Esra (2019). “*The Relationship among Writing Critical Reflective Journals, Critical Thinking Skills and Writing Skills*” paper presented at the ILTERG Conference, Antalya, Turkey, April 8-10, 2019.

AYSAN ŞAHİNTAŞ, Zeynep., KARAKUŞ, Esra., EREN GEZEN, Emine (2019). “*Linguistically and Culturally Responsive Teaching: Pre-service ELT Teachers in the Turkish Context*” paper presented at the ILTERG Conference, Antalya, Turkey, April 8-10, 2019.

Eren-Gezen, Emine., Hopa, Merve., Çelikkol Berk, Nurten (2018). “*Exploration of the Benefits of Feedback on Drafting Process to Students’ Writing at Paragraph Level*”paper presented at the 1st International Conference on Language (DU-ICOL), Düzce, Turkey, 18-20 October, 2018

Eren-Gezen, Emine.(2018). *Intercultural Competence of ELT Students: Intercultural Sensitivity, Intelligence and Awareness.* paper presented at the 1st International Conference On Language, Education And Culture Conference (ICLEC), Girne/Cyprus, 02-06 September 2018

Eren-Gezen, Emine., (2018). *L2 Acquisition of Prefix re- on the Verb Particle*. paper presented at the 1st International Conference On Language, Education And Culture Conference (ICLEC), Girne/Cyprus, 02-06 September 2018

Eren-Gezen, Emine., (2018). *Syntax- Pragmatics Interface in Second Language English: It-Cleft Sentences*. paper presented at the 1st International Conference On Language, Education And Culture Conference (ICLEC), Girne/Cyprus, 02-06 September 2018

Eren-Gezen Emine., Özbek-Gürbüz Nurdan. (2017). *Experience, Self- Efficacy and Self-Regulated Learning Strategy Use in EFL Setting*, paper presented at ELTRIA (ELT Research in Action) Conference, Barcelona, Spain April 21-22, 2017.

Eren-Gezen Emine., Cedden-Ediboğlu, Gülay. (2017). *Lexical Access in bilinguals and trilinguals* paper presented at International Conference On Multilingualism And Multilingual Education – ICMME17, Braga, Portugal, May 11-13, 2017.

Beken, Figen., Eren Emine., Acartürk Cengiz. (2014). *The Investigation of Cognitive Processes in Reading: Development of a Corpus of Turkish Reading Patterns for Eye Movement Control Modeling*. Poster presented at the METU Informatics Institute Cognitive Science Seminars V: CogSci in Germany, CogSci in Turkey May 23, 2014.

Eren Emine, Eröz-Tuğa Betil. (2014). *Cognitive Studies in Second Language Learning/Acquisition Context in Turkey*. Poster presented at the 1st International Symposium on Brain and Cognitive Science (ISBCS) 20 April 2014, Boğaziçi University, Istanbul/TURKEY,

Eren Emine. (2013). *Acquisition of the Turkish Syntax*. Paper presented at the 1st International Conference on Foreign Language Teaching and Applied Linguistics, International Burch University in Sarajevo, Bosnia and Herzegovina, May 3-4, 2013.

Erdemir, Ayşenur., Eren Emine. (2010). *Effects of Content Schema Activation on ESL Reading Comprehension*. Paper presented at GELTUS- CON, The First National Conference for Undergraduate ELT Students `Trends and Issues in Language Studies`

Scholarships and Awards

2015-2022 TÜBİTAK 2211/E /2 Yurt İçi Doğrudan Doktora Burs Programı Bursiyeri (a scholar holder of the National PhD Scholarship Program)

2013-2015, TÜBİTAK Yurt İçi Yüksek Lisans Burs Programı, 2010A /2 bursiyeri. (a scholar holder of the National Masters Scholarship Program)

**K. APPROVAL OF METU HUMAN SUBJECTS ETHICS COMMITTEE/
ODTÜ İNSAN ARAŞTIRMALARI ETİK KURUL ONAYI**

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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04 AĞUSTOS 2022

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Martina GRACANİN YÜKSEK

Danışmanlığınızı yürüttüğünüz Emine Eren GEZEN'in "VEHICLE CHANGE IN RIGHT-NODE RAISING AND VERB PHRASE ELLIPSIS IN ENGLISH AND TURKISH" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay protokol numarası ile onaylanmıştır.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Mine MISIRLISOY
Başkan

Doç. Dr. Y. Semih AKÇOMAK
Üye

Dr. Öğretim Üyesi Müge GÜNDÜZ
Üye

Dr. Öğretim Üyesi Şerife SEVİNÇ
Üye

Dr. Öğretim Üyesi Murat Perit ÇAKIR
Üye

Dr. Öğretim Üyesi Süreyya ÖZCAN KABASAKAL
Üye

Dr. Öğretim Üyesi A. Emre TURGUT
Üye

L. TURKISH SUMMARY / TÜRKCİ ÖZET

TÜRKCİ VE İNGİLİZCE'DE EYLEM ÖBEĐİ EKİİLTME VE SAĐ BUDAK YÜKSELTME YAPILARINDA TAŞIYICI DEĐİŞİMİ

GİRİŞ

Bu tezde, İngilizce ve Türkçede (dönüşlü/iyelik yapıları içeren) ileri ve geri doğru eksiltme tümcelerindeki silinen göndergelerin, konuşmacılar tarafından nasıl yorumlandığını araştırdık. İleri doğru eksiltme için Eylem ÖbeĐi Eksiltme (bundan böyle EÖE) ve geriye doğru eksiltme için SaĐ Budak Yükseltme (bundan böyle SBY)'yi inceledik. Ayrıca, bir dilin tamlayan yönü farklılığının, farklı yöndeki eksiltmelerde (ileri ve geri doğru) belirsiz göndergelerin (dönüşlü/iyelik yapıları) yorumlanması üzerindeki etkisini inceledik. Yani, bu yapıları bu deĐişkenler altında baştan eklemeli bir dil olan İngilizce ve sondan eklemeli bir dil olan Türkçe dillerinde inceledik.

Bu çalışmadaki odak noktamız, İngilizce ve Türkçede hem EÖE hem de SBY yapılarındaki eksiltmiş göndergelerin yorumlanmasıdır. Araştırdığımız göndergeler, nesne konumlarındaki dönüşlü ve iyelik yapılarıdır. (146) ila (149) arasındaki örnekler, EÖE ve SBY'de dönüşlülük yapısındaki göndergeleri göstermektedir.

(146) *İngilizcede EÖE: Dönüşlülük Yapısı*

- a. Sue praised herself, and Mary did too.
'Sue kendini övdü ve Mary de öyle yaptı.'
- b. Sue praised herself, and Mary did praise herself too.
'Sue kendini övdü ve Mary de kendini övdü.'

(147) *İngilizcede SBY: Dönüşlülük Yapısı*

- a. Sue praised, but Mary blamed herself.
'Sue övdü ama Mary kendini suçladı.'
- b. Sue praised herself, but Mary blamed herself.
'Sue kendini övdü ama Mary kendini suçladı.'

(148) *Türkçede EÖE: Dönüşlülük Yapısı*

- a. Pelin kendini değerlendirdi, Melis de.
- b. Pelin kendini değerlendirdi, Melis de kendini değerlendirdi.

(149) *Türkçede SBY: Dönüşlülük Yapısı*

- a. Hem Ecem hem İdil kendini aşağıladı.
- b. Hem Ecem kendini aşağıladı hem İdil kendini aşağıladı.

(150) ve (151) arasındaki örnekler, EÖE ve SBY'de iyelik yapısındaki göndermeleri göstermektedir.

(150) *İngilizcede EÖE: İyelik Yapısı*

- a. Sue praised her friend, and Mary did too.
'Sue arkadaşımı övdü ve Mary de öyle yaptı.'
- b. Sue praised her friend, and Mary did praise her friend too.
'Sue arkadaşımı övdü ve Mary de arkadaşımı övdü.'

(151) *İngilizcede SBY: İyelik Yapısı*

- a. Sue praised, but Mary blamed her friend.
'Sue övdü ama Mary arkadaşımı suçladı.'
- b. Sue praised her friend, but Mary blamed her friend.
'Sue arkadaşımı övdü ama Mary arkadaşımı suçladı.'

Türkçede iyeliği ifade etmenin en doğal yolu iyelik göndermesini çıkarmak olduğundan, (152) ve (153)'te gösterildiği gibi deney öğelerimizde de bu şekilde iyelik göndermesini çıkarmaya karar verdik.

(152) *Türkçede EÖE: İyelik Yapısı*

- c. Pelin işçisini değerlendirdi, Melis de.
- d. Pelin işçisini değerlendirdi, Melis de işçisini değerlendirdi.

(153) *Türkçede SBY: İyelik Yapısı*

- c. Hem Ecem hem İdil abisini aşağıladı.
- d. Hem Ecem abisini aşağıladı hem İdil abisini aşağıladı.

1. EÖE ve SBY'de gönderge yorumlamadaki belirsizlikler

EÖE ve SBY yapıları en az iki sıralanmış yan tümce içerdiğinden, dolaysız nesne (DN) olarak veya eksiltmeli bağlaç tümcelerinde DN'nin bir parçası olarak kullanılan çıkartılmış göndergeler, iki tümcede bulunan öznelere herhangi birinden referans alabilir. Referansı yerel öznenen alırsa değişken okuma (sloppy identity reading, *ing*), yerel olmayan öznenen alırsa değişmez okuma (strict identity reading, *ing*) ortaya çıkar (Ha, 2006; 2007; 2008a; 2008b). Örneğin, aşağıda (154)'te, eksiltmeli cümlenin yorumlarından biri, (154)b'de verilen değişken okuma, elenen EÖ'deki göndergenin (dönüslü/iyelik) yerel özne tarafından bağlı olduğunu öne sürer. Yani, ikinci tümcede, DN'ler yerel tümcedeki Bill ile indexlenmiştir. Bununla birlikte, (154)c'de verilen değişmez okumanın varlığı, elenen göndergenin aynı zamanda ilk tümcedeki John öznesine atıfta bulunarak yorumlanabileceğini de düşündürmektedir.

(154) *EÖE'de Belirsizlik*

- a. John praised himself/his friend and Bill did too.
'John kendini/arkadaşını övdü ve Bill de öyle yaptı.'

- b. John_i praised himself_i/his_i friend and Bill_k did praise himself_k/his_k friend too.
'John_i kendini_i/arkadaşını_i övdü ve Bill_k de kendini_k/arkadaşını_k övdü.'

Değişken okuma

- c. John_i praised himself_i/his_i friend and Bill_k did praise him_i/his_i friend too.
'John_i kendisini_i/arkadaşını_i övdü ve Bill_k de onu_i/arkadaşını_i övdü'

Değişmez okuma

Aynı belirsizlik, (155)'te de gösterildiği gibi, Türkçedeki EÖE'de de ortaya çıkmaktadır.

(155) *Türkçede EÖE'de Belirsizlik*

- a. Selma kendini/arkadaşını aldat-tı, Aylin de.
- b. Selma_i kendini_i/arkadaşını_i aldattı, Aylin_k de kendi-ni_k/arkadaşını_k aldat-tı.

Değişken okuma

- c. Selma_i kendini_i/arkadaşını_i aldattı, Aylin_k de o(n)u_i/arkadaşını_i aldattı.

Değişmez okuma

Eksenleri bir gönderge içeren SBY örnekleri de hem İngilizce hem de Türkçede değişken ve değişmez okumalar içerdiği durumlarda anlamsal olarak belirsizdir (Ha, 2006; 2007; 2008a; 2008b). Bunun örnekleri (156)- (157)'de gösterilmektedir.

(156) *SBY'de Belirsizlik*

- d. Sue praised, but Mary blamed herself/her friend.

‘Sue övdü ama Mary kendini/arkadaşını suçladı.’

- e. Sue_i praised herself_i/her_i friend, but Mary_k blamed herself_k/her_k friend.

‘Sue_i kendini_i/arkadaşını_i övdü ama Mary_k kendini_k/arkadaşını_k suçladı.’

Değişken okuma

- f. Sue_i praised her_k/her_k friend, but Mary_k blamed herself_k/her_k friend.

‘Sue_i onu_k/arkadaşını_k övdü ama Mary_k kendini_k/arkadaşını_k suçladı.’

Değişmez okuma

(157) *Türkçede SBY'de Belirsizlik*

- d. Hem Ecem hem İdil kendini /arkadaşını aşağıla-dı.

- e. Hem Ecem_i kendi-ni_i/arkadaşını_i hem İdil_k kendi-ni_k /arkadaşını_k aşağıladı.

Değişken okuma

- f. Hem Ecem_i on-u_k/arkadaşını_k hem İdil_k kendini_k/arkadaşını_k aşağıladı.

Değişmez okuma

2. Taşıyıcı Değişimi

(158)'teki değişmez okumada, elenen EÖ'deki dönüşlü ifadenin, ikinci bağlaçtaki Bill'in öznesinden ziyade ilk bağlacın öznesi olan John'u öncülü olarak aldığını gözlemliyoruz. Başka bir deyişle, gönderge, aynı zamanda *c-command* etmeyen çok uzak bir öncülü seçer. Bu nedenle, düşürülen eylem öbeği, düşürülmemiş olanla tamamen aynıysa ve bu, bu tümcenin dönüşlü zamir *kendini* (*himself ing*) içerdiği anlamına geliyorsa, bu okumanın elde edilmesi karmaşık bir süreç demektir, çünkü bir dönüşlü zamir olarak *kendi* (*himself ing*) yerel olarak bağlı olmalıdır ve John onu yerel olarak bağlayamaz. Bu nedenle, gerek EÖE'de gerekse SBY'de dönüşlü göndergelerle değişmez okumanın elde edilebilmesi için, silinen göndergenin dönüşlü zamir olarak değil, kişi zamiri olarak yorumlanması gerekir. Bunun nedeni, bir dönüşlü zamirin kendi bağlama alanının dışında bir öncül tarafından bağlanamayacağına dair Bağlanma Teorisi'nin (*Binding Theory ing*) (Chomsky 1981) Prensipten A'sından kaynaklanmaktadır; bu, aşağı yukarı dönüşlü içeren minimum tümceye karşılık gelir. Bu nedenle, silinmiş olan dönüşlü zamirin, yerel olmayan özne ile ortak gönderimli olması için, (158)a-b'de gösterildiği gibi, dönüşlü bir zamir olarak değil, bir kişi zamiri olarak yorumlanmalıdır (Radford 2009, s. 89). Bu, EÖE için, (158)a'da ve SBY için, (158)b'de gösterilmektedir.

(158)

a. John_i praised himself_i and Bill_k did praise him_i/*himself_i too.

‘John_i kendini_i övdü ve Bill_k de onu_i/*kendini_i övdü.’

EÖE

b. John_i praised him_k/*himself_k but Bill_k criticized himself_k.

‘John_i onu_k/*kendini_k övdü, ama Bill_k kendini_k eleştirdi.’

SBY

Bu süreç, Fiengo ve May (1994) tarafından önerilen ve silinmiş bir zamir olmayan ifadenin yorumlama amacıyla kişi zamiri olarak yorumlanabileceği *Taşıyıcı Değişimi* (TD) adlı bir mekanizma ile açıklanmaktadır. Eksiltme bağlamlarında, çıkarılmış bir ad (örneğin, özel ad), özel adla aynı dizine sahip bir zamire dönüşebilir (hem özel ad hem de bunların zamir karşılıkları aynı referansı taşımalıdır). Sonuç olarak, EÖE ve

SBY bağlamlarında, Prensiip C, Prensiip B ve Prensiip A ihlalleri önlenelir. Örneđin, (159)' da, ikinci bađlaçtaki dönüşlölüđün öncölü, onun bađlama alanında olmadıđı için bir Prensiip A ihlali beklerdik, ancak cümle dilbilgisel olduđundan, Prensiip A'dan kaçınmak için zamir dönüşlü bir zamire dönüştürölümüř olmalıdır. Benzer şekilde, (160) ve (161)'de, eđer düşürölümüř kısım ve onun öncölü fonolojik olarak aynıysa, Prensiip C ihlali beklenir çünkü her iki durumda da ayıklanmış R-ifadesi bađlı olacaktır, ancak bu ihlal uygun olan adın bir zamir haline getirilmesiyle önlenir. Son olarak, (162) numaralı örnekte görölüdüđü gibi, ikinci bađlaçtaki zamir birinci bađlaçtaki eksiltelmeliş kısım ile aynı olsaydı, bir Prensiip B ihlali olurdu çünkü bir zamir yerel etki alanı içinde öncölünden önce gelemez.

(159) Josh_i didn't vote for himself_i, but Mary did.

'Josh_i kendine_i oy vermedi ama Mary verdi.'

(Fiengo and May 1994: 220)

(160) Mary loves John_i, and he_i thinks Sally does, too.

'Mary, John_i'u seviyor ve o_i, Sally'nin de sevdiđini düşünüyor.'

(Fiengo and May 1994: 220)

(161) Mary heard that John_i SUBMITTED, but Sue said that Bill actually WROTE the article about John_i for the magazine.

'Mary, John_i'un GÖNDERDİĐİNİ duydu, ancak Sue, dergi için John_i hakkındaki makaleyi aslında Bill'in YAZDIĐİNİ söyledi.'

(Ha, 2007)

(162) John_i COULDN'T, so I nominated him_i.

'John_i YAPAMAZ, bu yüzden ben de onu_i aday gösterdim.'

(Ha, 2007)

İşlemeleme açısından bakıldığında, TD muhtemelen daha zordur. Bunun olası nedenlerinden biri, TD fenomeninin, deđişken okumadan daha fazla işlemeleme yükü taşıdıđı iddia edilen deđişmez okuma sürecinde meydana gelmesi olabilir (diđerlerinin yanı sıra Guo vd., 1996; Reuland, 2001; Foley vd., 2003; Ying 2005; Epoge 2012;

Park, 2016; Gandón-Chapela & Gallardo del Puerto, 2019). Ayrıca, TD, sözcük kategorisinin değişmesinin ortaya çıktığı bir işlemi gerektirir.

Mevcut Çalışma

1. Temel Araştırma Sorusu

Bahsedilen bu gerçekler, TD'yi içeren veya içermeyen yorumlamalar için konuşmacıların tercihlerini veya ayrımlarını deneysel olarak test etmemize olanak tanır. Bizim için özellikle ilgi çekici olan, iyelik yapıları içeren örneklerle (hiçbir iyelik yapısı İngilizcede TD gerektirmiyorken, Türkçede TD gerektirmektedir) örneklerle karşılaştırıldığında, dönüşlü içeren örneklerdeki (değişmez yorumlamasının zorunlu olarak TD'yi gerektirdiği yapılar) değişmez okumadır. Başka bir deyişle, İngilizce D1 ve D2 konuşmacılarının ve Türkçe D1 konuşmacılarının çevrim içi dilsel işlemlerini de dönüşlü veya iyelik zamirleriyle belirsiz EÖ eksiltme ve SBY cümlelerinin çevrimdışı yorumlanmasını araştırıyoruz. Bunu yaparken, çevrimdışı anlamsal yorumlama testlerini ve çevrimiçi kendi hızınızda okuma deneylerini kullandık.

Aşağıda, SBY ve EÖE'de göndergelerin yorumlanmasında aşağıdaki faktörlerin etkisini sunuyoruz:

- Cinsiyet eşleş(me)mesi,
- Taşıyıcı değişimi,
- Gönderge yönlülüğü.

2. Hipotezler

Bu varsayımlara dayanarak, TD'nin daha zor olduğu veya daha fazla işlem yükü içerdiği doğruysa, TD gerektiren dönüşlü zamirlerle değişmez okumanın, TD gerektirmeyen iyelik zamirlerine oranla daha az tercih edilmemesini bekleriz. Örneğin, (163) ve (164)'te dönüşlü zamir içeren örneklerden, (c) örneklerindeki değişmez okumaya kıyasla (b) örneklerindeki, değişken okumanın tercih edilmesini yani daha çok kabul edilmesini bekliyoruz, çünkü değişmez okuma, sözdizimsel bir öğeyi (dönüşlü zamir olan *kendini*), daha fazla işlem yükü gerektirmesi beklenen başka bir ifadeye (kişi zamiri olan *onu* 'ya) dönüştürmeyi gerektirir.

(163) *EÖE: Dönüştürülük Yapısı*

- a. John praised himself and Bill did too.
'John kendini övdü ve Bill de yaptı.'
- b. John_i praised himself_i and Bill_k praised himself_k too.
'John_i kendini_i övdü ve Bill_k de kendini_k övdü.'

Değişken okuma: TD yok

- c. John_i praised himself_i and Bill_k praised him_i too.
'John_i kendini_i övdü ve Bill_k de onu_i övdü.'

Değişmez okuma: TD

(164) *SBY: Dönüştürülük Yapısı*

- a. John praised but Bill blamed himself.
'John övdü ama Bill kendini suçladı.'
- b. John_i praised himself_i but Bill_k blamed himself_k.
'John_i kendini_i övdü ama Bill_k kendini_k suçladı.'

Değişken okuma: TD yok

- c. John_i praised him_k but Bill_k blamed himself_k.
'John_i onu_k övdü ama Bill_k kendini_k suçladı.'

Değişmez okuma: TD

Ancak, (165) ve (166)'daki gibi, eksiltmeli kısımda iyelik zamiri içeren ve yorumu TD gerektirmeyen, değişken veya değişmez okuma ile böyle bir tercih beklemiyoruz.

(165) *EÖE: İyelik Yapısı*

- d. John praised his friend and Bill did too.
'John arkadaşını övdü ve Bill de yaptı.'
- e. John_i praised his_i friend and Bill_k praised his_k friend too.
'John_i arkadaşını_i övdü ve Bill_k de arkadaşını_k övdü.'

Değişken okuma: TD yok

- f. John_i praised his_i friend and Bill_k praised his_i friend too.
'John_i arkadaşını_i övdü ve Bill_k de onun arkadaşını_i övdü.'

Değişmez okuma: TD yok

(166) *SBY: İyelik Yapısı*

a. John praised but Bill blamed his friend.

‘John övdü ama Bill arkadaşını suçladı.’

b. John_i praised his_i friend but Bill_k blamed his_k friend.

‘John_i arkadaşını_i övdü ama Bill_k arkadaşını_k suçladı.’

Değişken okuma: TD yok

c. John_i praised his_k friend but Bill_k blamed his_k friend.

‘John_i onun arkadaşını_k övdü ama Bill_k arkadaşını_k suçladı.’

Değişmez okuma: TD yok

Benzer şekilde, (167)b ve (168)b 'de verilen, dönüşlü ve iyelik zamir içeren Türkçe örneklerdeki değişken okumanın, (167)c ve (168)c'de verilen değişmez okumaya kıyasla tercih edilmesini bekliyoruz çünkü bu örneklerdeki değişmez okuma TD gerektirmektedir: *kendi* ögesi *onu* haline gelmektedir.

(167) *EÖE: Dönüştülük Yapısı in Turkish*

a. Selma kendini aldattı, Aylin de.

b. Selma_i kendini_i aldattı, Aylin_k de kendini_k aldattı.’

Değişken okuma: TD yok

c. Selma_i kendini_i aldattı, Aylin_k de onu_i aldattı.’

Değişmez okuma: TD

(168) *SBY: Dönüştülük Yapısı*

a. Hem Selma hem Aylin kendini aldattı.

b. Hem Selma_i kendini_i aldattı hem Aylin_k kendini_k aldattı.’

Değişken okuma: TD yok

c. ‘Hem Selma_i onu_k aldattı hem Aylin_k kendini_k aldattı.’

Değişmez okuma: TD

İngilizcenin aksine, Türkçede iyelik yapısı eksiltmeli olmayan bağlaçta da düşürülmüş bir iyelik göndergesi olan *kendi* zamirini içermektedir ve dolayısıyla muhtemelen iyelik yapısının eksiltme biçiminde de aynı düşürülmüş dönüşlü zamir

bulunmaktadır.²⁷ Dolayısıyla İngilizcede beklediğimizin aksine, Türkçede (169) ve (170) gibi cümlelerde, ikinci tümcenin TD gerektirmesi ve birincisinin gerektirmemesi nedeniyle değişken okumanın değişmez okumaya tercih edilmesini bekliyorduk. Yani (c) örneklerindeki değişmez okumaya göre (b) örneklerindeki değişken okuma tercih edilecektir.

(169) *EÖE: İyelik Yapısı in Turkish*

- a. Selma arkadaşını_i aldattı, Aylin de.
- b. Selma_i arkadaşını_i aldattı, Aylin_k de arkadaşını_k aldattı.

Değişken okuma: TD yok

- c. Selma_i arkadaşını_i aldattı, Aylin_k de arkadaşını_i aldattı.

Değişmez okuma: TD

(170) *SBY: İyelik Yapısı in Turkish*

- a. Hem Selma hem Aylin arkadaşını aldattı.
- b. Hem Selma_i arkadaşını_i aldattı, hem Aylin_k arkadaşını_k aldattı.

Değişken okuma: TD yok

²⁷ İlave bir deney daha yaparak, aşağıdaki maddelerde de görüldüğü gibi, (i) cümlesindeki ilk bağlaçtaki zamirin, dönüşlü iyelik zamiri olan *kendi* veya bir iyelik zamiri olan *onun* olarak yorumlanıp yorumlanmadığını test ettik. Bunu, katılımcılara deneysel öğeleri göstererek (örneğin *Selma arkadaşının aldattı, Aylin de*) göstererek ve a ve b'de görüldüğü gibi iki sorudan birini yanıtlamalarını isteyerek yaptık:

- (i) Selma arkadaşını aldattı, Aylin de.
 - a. Aylin kendi arkadaşını aldattıysa Selma kimi aldattı?
 - b. Aylin Selma'nın arkadaşını aldattıysa Selma kimi aldattı?

Katılımcılara üç seçenek sunduk:

- a) kendi (Selma'nın) arkadaşı,
- b) Aylin'in arkadaşı,
- c) başka birinin arkadaşı.

Hiçbir katılımcı (i)'deki iki soruyu da görmedi: bir grup sadece (i)a'daki soruyu gördü ve diğer grup sadece (i)b'deki soruyu gördü. Her iki gruptaki katılımcılar da, deneysel çalışmanın belirsizliğini nasıl çözdüklerine bakılmaksızın, yani, onu değişmez bir okuma olarak mı yoksa değişken bir okuma olarak mı yorumladıklarına bakılmaksızın, eksiltmeli olmayan (birinci) bağlaçtaki iyelik yapısını, dönüşlü iyelik zamiri olan *kendi*'yi içerdiği şeklinde yorumladıklarını göstererek, a) *kendi arkadaşı* cevabını tutarlı bir şekilde seçmişlerdir.). Bu sonuçlar, Türkçe iyelik yapılarındaki eksiltmeli olmayan bağlaçtaki telaffuz edilmeyen iyelik göndergesinin, eksiltmeli bağlacın (değişmez/değişken) yorumundan bağımsız olarak dönüşlü iyelik zamir olan bir *kendi* olduğunu ortaya koymaktadır. Bu da, Türkçedeki eksiltmeli iyelik yapılarında gönderge çözümlenmesinde, İngilizcenin aksine, TD mekanizmasının yer aldığı anlamına gelmektedir. Dolayısıyla, TD, Türkçe EÖE ve SBY'deki düşürülen göndergelerin yorumlanmasını etkiliyorsa, bu sadece dönüşlülük yapılarında (İngilizcede olduğu gibi) değil, aynı zamanda iyelik yapılarında da görülmektedir.

d. Hem Selma_i arkadaşını_k aldattı, hem Aylin_k arkadaşını_k aldattı.

Değişmez okuma: TD

Literatür (Ha, 2008; Chaves 2014), EÖE'de değil, SBY'de değişken okumanın ortaya çıkması için öncül ve gönderge arasındaki cinsiyet eşleşmesinin gerekli olduğunu ileri sürmektedir. Başka bir deyişle, SBY göndergenin ve öncülün phi-özelliklerine duyarlıdır ve cinsiyet uyumsuzluğu koşullarında değişken okumaya izin vermez (Ha, 2008, s.78). Bu, İngilizcedeki öncül ve gönderge arasındaki cinsiyet uyumsuzluğu koşullarında, iki bağlaçtaki göndergeler cinsiyet açısından farklılık gösterdiğinde, konuşmacıların SBY'de değişmez okumayı (değişken okumanın aksine) tercih etmesi gerektiğini, EÖE'de ise böyle bir tercih farkı elde edilmemesi gerektiğini öngörür. Başka bir deyişle, (171)a'daki SBY örneğinde, söylenmeyen göndergenin *kendi* (=John) yerine *onun* (=Sue) olarak yorumlanması beklenir. Öte yandan, (172)'deki EÖE cinsiyet uyumsuzluğu koşulunda, (172)c'de verilen değişmez okumanın (172)b'de verilen değişken okumaya tercih edilmesini beklemiyoruz. Ayrıca İngilizcede, cinsiyet eşleşmesi koşuluna kıyasla (hem EÖE hem de SBY'de) cinsiyet uyumsuzluğu koşullarında, konuşmacıların değişmez okumaya erişmesinin daha kolay olacağını umuyoruz.

(171) *SBY: Cinsiyet Eşleş(me)mesi*

a. John praised, but Sue blamed herself.

‘John övdü ama Sue kendini suçladı.’

b. John_i praised himself_i but Sue_k praised herself_k.

‘ John_i kendini_i övdü ama Sue_k kendini_k övdü.’

Değişken okuma

c. John_i praised her_k but Sue_k praised herself_k.

‘John_i onu_k övdü ama Sue_k kendini_k övdü.’

Değişmez okuma

(172) *EÖE: Cinsiyet Eşleş(me)mesi*

a. John praised himself and Sue did too.

‘John kendini övdü ve Sue da öyle yaptı.’

b. John_i praised himself_i and Sue_k praised herself_k.

‘John_i kendini_i övdü ve Sue_k kendini_k övdü.’

Değişken okuma

c. John_i praised himself_i and Sue_k praised him_k.

‘John_i kendini_i övdü ve Sue_k onu_i övdü.’

Değişmez okuma

Ancak, Türkçenin dilbilgisel cinsiyet ayrımı olmadığı göz önüne alındığında, SBY'de cinsiyet uyumsuzluğu koşulunda değişmez okuma için bir tercih beklenmemektedir. Türkçede dönüşlü *kendi*'nin şekli, öncülün cinsiyetine göre değişmez. Benzer şekilde, iyelik zamiri, öncülün cinsiyetinden bağımsız olarak *onun*'dur. Bu nedenle, Türkçenin dilbilgisi açısından cinsiyetten bağımsız doğası nedeniyle, cinsiyet uyumsuzluğu koşulunda değişmez/değişken okuma tercihinde (173)'te gösterilen SBY'de veya (174)'te gösterilen EÖE'de herhangi bir farklılık görmeyi beklemiyoruz.

(173) *SBY: Cinsiyet Eşleş(me)mesi in Turkish*

d. Hem Selma hem Ahmet kendini aldattı.

e. Hem Selma_i kendini_i aldattı, hem Ahmet_k kendini_k aldattı.

Değişken okuma: TD yok

f. ‘Hem Selma_i onu_k aldattı, hem Ahmet_k kendini_k aldattı.’

Değişmez okuma: TD

(174) *EÖE: Cinsiyet Eşleş(me)mesi in Turkish*

d. Selma kendini aldattı, Ahmet de.

e. Selma_i kendini_i aldattı, Ahmet_k de kendini_k aldattı.

Değişken okuma: TD yok

Selma_i kendi-ni_i aldattı, Ahmet_k de onu_i aldattı.

Değişmez okuma: TD

Aşağıdaki Tablo 1 ve Tablo 2, İngilizce eksiltmeli cümlelerdeki göndergelerin olası yorumlarını özetlemektedir.

Tablo 1. İngilizce EÖE'deki düşürülmüş göndergelerin yorumlanmasını içeren mekanizmalar

| | DÖNÜŞLÜLÜK YAPISI | | İYELİK YAPISI | |
|----------------|---|---|------------------------|------------------------|
| | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ |
| EÖE | | | | |
| DEĞİŞKEN OKUMA | İleriye doğru gönderge | İleriye doğru gönderge | İleriye doğru gönderge | İleriye doğru gönderge |
| DEĞİŞMEZ OKUMA | Taşıyıcı Değişimi İleriye doğru gönderge | Taşıyıcı Değişimi İleriye doğru gönderge | İleriye doğru gönderge | İleriye doğru gönderge |

Tablo 2. İngilizce SBY'deki düşürülmüş göndergelerin yorumlanmasını içeren mekanizmalar

| | DÖNÜŞLÜLÜK YAPISI | | İYELİK YAPISI | |
|----------------|--|---|------------------------|---|
| | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ |
| SBY | | | | |
| DEĞİŞKEN OKUMA | İleriye doğru gönderge | İngilizcede imkânsız* İleriye doğru gönderge | İleriye doğru gönderge | İngilizcede imkânsız* İleriye doğru gönderge |
| DEĞİŞMEZ OKUMA | Taşıyıcı Değişimi Geriye doğru gönderge | Taşıyıcı Değişimi Geriye doğru gönderge | Geriye doğru gönderge | Geriye doğru gönderge |

Türkçe, bu dilde sahiplenmenin dönüşlü iyelik veya iyelik zamiri ile ifade edilebilmesi nedeniyle farklılık gösterir. Bu nedenle, TD'nin hem EÖE'de hem de SBY'de yalnızca dönüşlü zamirleri içeren cümlelerin değişmez okumalarında yer aldığı İngilizceden farklı olarak, Türkçede TD, hem dönüşlü zamirlerin hem de iyelik yapılarının değişmez okumalarında yer alır. Bu, Tablo 3 ve Tablo 4'te gösterilmektedir.

Tablo 3. Türkçe EÖE'deki düşürülmüş göndergelerin yorumlanmasını içeren Mekanizmalar

| | DÖNÜŞLÜLÜK YAPISI | | İYELİK YAPISI | |
|----------------|--|--|--|--|
| | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞ(ME)MESİ |
| EÖE | | | | |
| DEĞİŞKEN OKUMA | İleriye doğru gönderge | İleriye doğru gönderge | İleriye doğru gönderge | İleriye doğru gönderge |
| DEĞİŞMEZ OKUMA | Taşıyıcı Değişimi İleriye doğru gönderge | Taşıyıcı Değişimi İleriye doğru gönderge | Taşıyıcı Değişimi İleriye doğru gönderge | Taşıyıcı Değişimi İleriye doğru gönderge |

Tablo 4. Türkçe SBY'deki düşürülmüş göndergelerin yorumlanmasını içeren Mekanizmalar

| | DÖNÜŞLÜLÜK YAPISI | | İYELİK YAPISI | |
|----------------|---|--|---|--|
| | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ | CİNSİYET EŞLEŞMESİ | CİNSİYET EŞLEŞMEMESİ |
| SBY | | | | |
| DEĞİŞKEN OKUMA | İleriye doğru gönderge | Impossible in English İleriye doğru gönderge | İleriye doğru gönderge | Impossible in English İleriye doğru gönderge |
| DEĞİŞMEZ OKUMA | Taşıyıcı Değişimi Geriye doğru gönderge | Taşıyıcı Değişimi Geriye doğru gönderge | Taşıyıcı Değişimi Geriye doğru gönderge | Taşıyıcı Değişimi Geriye doğru gönderge |

3. Katılımcılar

Bu çalışmaya 27 anadili İngilizce, 33 anadili Türkçe ve 107 yabancı dili İngilizce olan konuşucular katılmıştır.

4. Araçlar

4.1. İngilizce Deneyi

Latin Kare tasarımı kullanılarak iki listeye ayrılan İngilizce için toplam 64 deneysel maddemiz vardı. Bu nedenle, her bir katılımcı, ekseninde gönderge bulunan 32 deneysel cümle okumuştur

Her listedeki 32 cümlenin 16'sı SBY cümleleri ve 16'sı EÖE cümleleridir. 16 maddelik bu setlerin her birinde, 8 cümle dönüşlülük yapısı ve 8'i de iyelik yapıları içermektedir. Son olarak, zamirler/dönüştü kümeler içinde, dört cümlede her iki bağlaçta da olası bir öncül olarak bir kadın özne vardır (K-K cinsiyet eşleşmesi); dört cümlede her iki bağlaçta da bir erkek özne içermektedir (E-E cinsiyet eşleşmesi); deneklerin K-E cinsiyet uyumsuzluğunu gösteren birinci bağlaçta kadın özne, ikinci bağlaçta erkek özne ile dört cümle oluşturulmuş ve son dört cümle E-K cinsiyet uyumsuzluğunu gösteren birinci bağlaçta erkek özne, ikinci bağlaçta kadın özne kullanılarak oluşturulmuştur.

Her deneysel cümleyi, katılımcılardan ifadenin doğru mu yanlış mı olduğuna karar vermelerini isteyen bir ifade takip etmiştir. Doğru/yanlış ifadeleri, bir listedeki dört cinsiyet eşleş(me)me koşulunun her birinde (K-E, E-E, E-K, K-K), göndergenin değişken okuma yorumu altında iki ifade doğru olacak şekilde dağıtılmış ve ikisi de göndergenin değişmez okuma yorumu altında doğru olacak şekilde dağıtılmıştır.

Her yapı içinde (EÖE ve SBY), dönüşlü ve iyelik zamirlerinin yorumlanması üzerindeki madde etkisini ortadan kaldırmak için dönüşlü ve iyelik yapıları için aynı maddeler kullanıldı. Bununla birlikte, her listede bu iki öğeden yalnızca biri (yani, dönüşlülük zamiri veya iyelik zamiri olan) sunulmuştur.

Deneysel öğelere ek olarak, her liste, anlamsal olarak belirsizlik içermeyen açık SBY, açık EÖE cümleleri ve edilgen cümleler içeren 32 deneysel olmayan maddeler içermektedir.

Böylece, her listede katılımcılara, deneysel ve dolgu cümleleri içeren 64 madde sunulmuştur. Ibex Farm kodları tarafından sağlanan Latin Kare tasarımı kullanılarak iki rastgele sunum listesi oluşturulmuştur.

4.2. Türkçe Deneyi

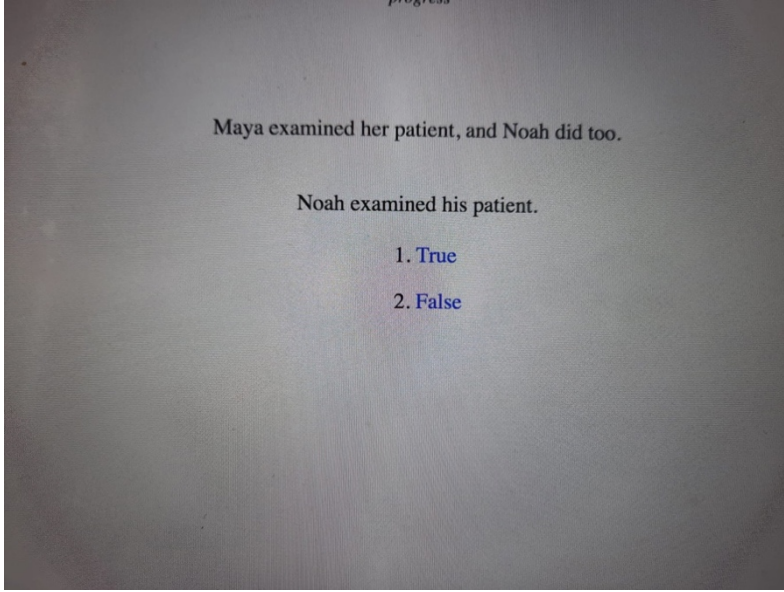
Türkçe deneyde de aynı tür araçlar aynı kriterlerle, sadece Türkçe olarak kullanılmıştır. Türkçe SBY'de *hem...hem* yapısı EÖE'de ise *de* yapısı kullanılmıştır. Türkçe maddelerdeki fiillerin çoğu, Türkçede hemen hemen aynı koşulları sağlayabilmek için İngilizce cümlelerin çevirileridir. Ayrıca, İngilizcede olduğu gibi Türkçede de anlamsal olarak belirsiz olmayan, açık SBY, açık EÖE ve edilgen cümleleri örnekleyen 32 deneysel olmayan dolgu maddesi eklenmiştir. Araçların kontrol edilen özelliklerinin geri kalanı ve testler hem İngilizce hem de Türkçe deneyi için aynı tutulmuştur.

5. Prosedür (Hem İngilizce hem de Türkçe Deneyler)

Hem Türkçe hem de İngilizce deneylerde deneyin prosedürü aynıydı. Katılımcılar, kendi hızında çevrimiçi bir okuma anketi aracı olan Ibex Farm (Drummond, 2020) kullanılarak bireysel olarak test edildi.

Deney, katılımcılara bireysel olarak hem İngilizce hem de Türkçe olarak birikimli hareketli pencere, kendi hızına dayalı bir okuma ortamında uygulanmıştır. Başka bir deyişle, boşluk çubuğuna her basıldığında, daha önce ortaya çıkan kelimelerin hiçbiri maskelenmeden ekranda ek bir kelime belirmedi. Bu nedenle, katılımcılardan herhangi bir maskeleyme/hazırlama koşulu olmaksızın tek başına cümleleri tamamlamaya tepki vermeleri istenmiştir.

Her izole ifadenin ardından, katılımcılardan verilen ifadenin (1'e basarak) doğru veya (2'ye basarak) yanlış olduğuna karar vermeleri istendi; Şekil 1'de örneği verilmiştir.



Şekil 1. Doğru-Yanlış Değer Yargılama Soruları ile Deneysel Öğeleri Uygulama

5. Sonuçlar

Bu çalışmada ilk olarak göndergelerin anlamsal olarak yorumlanması açısından EÖE ve SBY'nin birbirinden nasıl farklılaştığını araştırdık; cinsiyet eşleşmesi ve uyumsuzluk koşullarının, iki yapıdaki silinen göndergelerin yorumlarını etkileyip etkilemediği ve ayrıca TD'nin art gönderimin farklı yönlülüğü ile nasıl etkileşime girdiği; yani, örneğin TD'nin her iki yapıda da tercih edilmedi mi yoksa birinde tercih edilip diğerinde mi tercih edilmediği araştırılmıştır. Bu iki eksiltme yapısını, özellikle TD'nin önden eklemeli dil olarak İngilizcede ve sondan eklemeli dil olarak Türkçede düşürülmüş göndergelerin yorumlanması üzerindeki etkisini görmek için inceledik. İngilizce yargılarımızı İngilizce'yi ana dil olarak konuşanlardan ve İngilizce'yi yabancı dil olarak konuşanlardan topladık. İngilizceye ek olarak, Türkçe'yi ana dil olarak konuşanlar ile Türkçe olarak iki yapıyı da inceledik. Türkçede aynı yapıların incelenmesinin temel nedeni, Türkçenin baş-yönlülük parametresi, İngilizcenin tersi olarak, bir sondan eklemeli dil olması nedeniyle, art gönderim çözümleme söz konusu olduğunda Türkçe anadili konuşanların davranışlarını eksiltmeli yapılarda görmektir. Bu nedenle, gönderenin tamlayan yönüne bağlı olarak yorumlanması açısından bu yapılarda farklı eğilimlerin olup olmadığını araştırdık; yani, TD tercihinin bu dillerde

ileri ve geri doğru eksiltme ortamlarında farklılık gösterip göstermediğini araştırdık. Kısacası, bu çalışmanın temel amacı, çevrim dışı deneyler ve çevrim içi deney sonuçları ile eksiltmeli ortamlardaki gönderge yorumunu araştırmaktır. Ek olarak, daha fazla ayrıntılı sonuçlara varmak için daha fazla karşılaştırma araştırdık.

Kısacası, bu tezle, daha ziyade EÖ eksiltmeli yapılardaki değişmez ve değişken okuma tercihlerini araştıran çalışmaları içeren ancak SBY'yi aynı perspektiften araştıran çok daha az çalışmayı içeren literatürdeki boşluğu doldurmayı amaçladık. Ayrıca, literatür, bu bağlamlarda özel olarak TD'yi araştıran çalışmalardan tamamen yoksundur (doğal dönüşlülere ve devredilemez iyelik fiillerini içeren EÖE cümlelerindeki göndergelerin yorumunu araştıran Shapiro ve diğerleri (2003) hariç; kendileri, TD mekanizmasından kısaca bulguların tartışılmasında bahsetmişlerdir). Ancak, bildiğim kadarıyla, TD etkisini özel olarak araştıran hiçbir çalışma yoktur.

5.1. Analiz

Her bir çevrimdışı deney için (örneğin, D1 İngilizce deneyi, D1 Türkçe deneyi ve D2 İngilizce deneyi), bir ön analiz yapılmış ve Kolmogorov-Smirnov testlerinin sonuçları, her bir test için, örneklemin normal dağılmadığını göstermiştir ($p < 0.05$). Sonuç olarak, sonuçları analiz etmek için parametrik olmayan testler kullandık. İlk olarak, her deney için bir Friedman testi yapıldı. Daha sonra, her değişken için ayrı ayrı karşılaştırmalar yaptık: Eksiltme yapısı (EÖE / SBY) içindeki ikili karşılaştırmalar için ve TD'nin ve gönderge yönlülüğünü etkisini görmek için bir belirsizlik çözünürlüğü (değişmez / değişken) ve dönüşlü/iyelik yapısı kullandık ve sekiz Wilcoxon testi uyguladık. Örneğin, katılımcının EÖE yapısında, değişmez okuma belirsizliği çözümlemesinde verilen dönüşlülük yapısındaki cümleleri kabul etme sıklığı ile EÖE yapısındaki değişmez okuma belirsizliği çözümlemesinde iyelik yapısındaki cümleleri kabul etmesiyle karşılaştırdık. Aynı karşılaştırmayı değişken okuma çözünürlüğüne sahip EÖE için ve ayrıca her bir belirsizlik çözümleme koşulunda ve dönüşlü ve iyelik yapılarında SBY için yaptık. Ayrıca, EÖE ve SBY'yi aynı koşullarla karşılaştırdık, örneğin dönüşlü yapılarda değişken okuma çözünürlüğü SBY ve EÖE için karşılaştırıldı. Aynı karşılaştırmaları değişmez okuma çözünürlüğü ve iyelik yapıları ile de yaptık.

Her deney için ayrı ayrı Friedman testi yapıldı. Tüm deneylerde farklı yapılar ve okumalar içeren sekiz farklı değişkenin tercih edilme oranları karşılaştırıldığında, bu değişkenler arasında bir etkileşim olduğu bulundu (p.05).

5.2. Bulgular

Öncelikle, Literatüre göre, değişken okumanın mümkün olması için SBY'nin iki olası öncül (biri eksiltmelide ve diğeri eksiltmeli olmayan cümlede) arasında bir phi-özellik eşleşmesi gerektirdiğini hatırlayın (bkz. Ha, 2008; Chaves 2014). Bu nedenle, burada (171)'den tekrarlanan (175)'te olduğu gibi, elenen gönderge için iki olası öncül cinsiyette eşleşmediğinde, sadece (175)c'deki değişmez okuma mümkün olmalı ve içindeki değişken okuma mümkün olmalıdır. (175)b ise imkânsız olmalıdır.

(175) *SBY: Cinsiyet uyumsuzluğu*

- a. John praised, but Sue blamed herself.
John övdü ama Sue kendini suçladı.
- b. John_i praised himself_i but Sue_k praised herself_k.
John_i kendini_i övdü ama Sue_k kendini_k övdü.

Değişken okuma

- c. John_i praised her_k but Sue_k praised herself_k.
John_i onu_k övdü ama Sue_k kendini_k övdü.

Değişmez okuma

Ancak, tüm deneylerde, değişken okuma koşullarında cinsiyet eşleşmemesinin dönüşlü veya iyelik zamirlerinde bir etkisini gözlemlemedik. (176) ve (177) gibi cümlelerin kabulü ile (178) ve (179) arasındaki cümlelerin kabulü arasında hemen hemen hiçbir fark yoktu. En azından, bu koşullardaki cinsiyet uyumsuzluğu olan durumların kabulü yüzde 50'nin üzerinde bir seyir göstermiştir.

(176) John_i praised <himself_i>but Bill_k criticized himself_k.

John_i <kendini_i> övdü ama Bill_k kendini_k eleştirdi.

SBY-DönüŖlü- Cinsiyet EŖleŖme

(177) John_i praised <himself_i>but Mary_k criticized herself_k.

John_i <kendini_i> övdü ama Mary_k kendini_k eleŖtirdi.

SBY-DönüŖlü-Cinsiyet EŖleŖmeme

(178) John_i praised <his friend_i>but Bill_k criticized his friend_k.

John_i arkadaşını_i övdü ama Bill_k arkadaşını_k eleŖtirdi.

SBY-İyelik-Cinsiyet EŖleŖme

(179) John_i praised <his friend_i>but Mary_k criticized her friend_k.

John_i arkadaşını_i övdü ama Mary_k onun arkadaşını_k eleŖtirdi.

SBY-İyelik-Cinsiyet EŖleŖmeme

Anadili İngilizce olan (D1) ve ikinci dil olarak İngilizce (D2) konuşanlar hem deęişken okumayı hem de buna paralel olarak deęişmez okumayı kabul ettiler. D2 İngilizce konuşmacıları, eksiltmedeki göndergenin yorumlanmasıyla ilgili olarak çoęunlukla D1 İngilizce konuşmacılarına benzer şekilde davrandılar. Bu, D2 katılımcılarının yüksek dil yeterlilik seviyeleri nedeniyle olabilir. Benzer şekilde, Ying (2005), EÖE'de, hem daha yüksek dil yeterlilik düzeyine sahip ikinci dil konuşanların hem de birinci dil konuşanların, yalın bağlamlarda deęişken kimlik okuma tercihi ve referans bağlamlarda deęişmez okuma tercihi konusunda benzer davranışlar sergiledikleri yönünde paralel tercihler bulmuştur (ancak Gandón-Chapela ve Gallardo del Puerto (2019), D1 konuşanların, D2 konuşanlara göre daha deęişken kimlik okuma tercihleri sergilediklerini tespit ederken, bu miktarlar farklıdır).

Sonuç olarak, D2 İngilizce deneyinde elde edilen eğilimleri, D1 İngilizce ve D1 Türkçe deneylerinde elde edilen sonuçlarla karşılaştırdığımda, İngilizce iyelik yapılarında deęişmez okumanın Türkçe'ye oranla daha büyük ölçüde kabul edildiğini açıkça gözlemledim (çünkü Türkçe yapılarda deęişmez okumaların hepsi TD gerektirir). Hem EÖE hem de SBY'de Türkçe iyelik eki TD gerektirir. Öte yandan, D2 İngilizcedeki iyelik yapılarının D1 İngilizceye göre daha düşük kabul oranları, bizim durumumuzda, Türkçe olan D1'in etkisiyle açıklanabilir. Ancak, hem D1 hem de D2 İngilizcenin hem EÖE hem de SBY'sindeki iyelik yapılarındaki deęişmez okumanın D1 Türkçeye kıyasla daha yüksek kabul oranları, TD'nin eksiltme yapılarındaki göndergelerin işlemlenmesini etkilediğini düşündürmektedir.

TD'nin gönderge yorumlama üzerindeki etkisine dair bulguları toparlayacak olursak, D1 ve D2 İngilizce ve D1 Türkçe deney sonuçları, yorumlanması TD gerektiren yapıların daha az kabul gördüğünü ve daha zor olduğunu göstermektedir, bkz. Tablo 5. Dönüslü ve iyelik yapılarının her ikisinin de değişmez okumada TD gerektirdiği EÖE ve SBY yapılarına ek olarak, Türkçedeki iyelik yapılarının oldukça düşük tercih edilmesi, ve ayrıca Türkçede iyelik ve dönüslü yapı arasındaki farkın çok da büyük olmaması, ancak değişmez ve değişken okuma gerektiren yapıların kabulü arasında çok büyük bir fark olması, Türkçede de TD mekanizmasının zorluğunu desteklediği söylenebilir. D1 İngilizcedeki gibi hem iyelik yapısında hem de dönüslülük yapısında (EÖE ve SBY ikisi de TD gerektirmediği için) benzer kabul oranları bulmayı beklediğim değişken okuma konusunda ise, D2 İngilizce katılımcıları hem D1 İngilizce hem de D1 Türkçeden tamamen farklı bir davranış sergilediler. D2 konuşmacıları, genel olarak ancak özellikle SBY'de hem değişmez hem de değişken okumalarda daha çok iyelik yapılarını tercih etmişlerdir. SBY'nin bu sonuçları, aynı zamanda SBY ve EÖE'deki maddelerin yorumlanmasının genel karşılaştırmasını da etkilemiştir. Anadili İngilizce olmayanların, küresel düzeyde okuma ile iyelik yapılarını daha çok kabul ettiklerini gözlemledim. Bu, ikinci dili İngilizce ama anadili Türkçe olan bu kişilerin, iyelik yapılarında sorun yaşadığı D1'den dolayı bu davranışı sergilemediklerini açıkça göstermektedir, çünkü Türkçe deneyi sonuçları dönüslü yapıların daha çok tercih edildiğini göstermiştir.

Göndergelerin yönselliği açısından sadece D2 konuşucular geri doğru göndergeleri daha çok kabul etmişlerdir. Öte yandan, çevrimdışı tercihlerinin tam tersi yönde geri doğru gönderge içeren örneklerde daha uzun işlem süreleri görüntülenmiştir. Ancak, sadece çevrimdışı D1 İngilizce sonuçlarında ve çevrimiçi Türkçe sonuçlarında, SBY'deki değişmez okumanın EÖE'ye göre daha fazla tercih edildiğini, kısmen veya tamamen ileriye doğru göndergenin daha fazla tercih edildiğini ve daha kolay hesaplandığını gördüm. Ayrıca, üç katılımcı grubunun tümü, SBY'ye (geriye doğru eksiltme) kıyasla ileri doğru eksiltme örneği olarak EÖE'yi tercih etti. Son olarak, genel perspektiften, İngilizce katılımcı gruplarında dönüslü yapılardan daha çok iyelik yapıları kabul edilmiştir, ancak Türkçe 'de genel olarak bu durum tam tersi olarak bulunmuştur, özel bazı durumlarda iyelik yapıları Türkçede de daha çok kabul

edilmiştir, mesela TD gerektirmeyen yapılarda. D2 İngilizce konuşanlar dışında, anadili İngilizce ve anadili Türkçe olan her iki grup da EÖE yapısını SBY yapısından daha fazla tercih etti.

Tablo 5. Diller ve Katılımcı Grupları Arasında Temel Sonuçların Ara Özeti

| | Dönüştü Zamirler ile Değişmez okuma ile- İyelik Zamirleri Değişmez okuma -TD | Dönüştü Zamirler ile Değişken okuma- İyelik Zamirleri Değişken okuma- TD Olmayan | EÖE Değişmez okuma- SBY Değişmez okuma - Gönderge Yönlülüğü | EÖE Değişken okuma- SBY Değişken okuma- Eksiltme yönlülüğü | İyelik Zamirleri - Dönüştü Zamirler- Zamir Yapı Türü | SBY- EÖE- Eksiltme Yapı Türü |
|-----------------|---|--|--|--|---|------------------------------------|
| D1 İngilizce | P.001* İyl>Dön | P.05 | P.05 | P.001* EÖE > SBY | P.05* İyl> Dön | P.001* EÖE > SBY |
| D2 İngilizce | P.001* İyl> Dön | P.001* İyl> Dön | P.001* SBY> EÖE | P.001* EÖE> SBY | P.001* İyl> Dön | P.05 |
| D1 Türkçe | P.05* İyl>Dön | P.001* Dön> İyl | P.05 | P.05* EÖE> SBY | P.05* Dön> İyl | P.05* EÖE > SBY |

Ancak her iki eksiltme yapıda da değişken okumanın benzer oranlarda kabul edilmesini bekliyordum çünkü yapıların hiçbirinde TD mekanizması yoktu. Bu beklenti, tüm gruplarda çok benzer kabul oranlarıyla EÖE için karşılandı. Ancak, D2 İngilizce konuşanların hem D1 İngilizce hem de D1 Türkçe konuşanlardan daha yüksek kabul oranlarıyla SBY için karşılanmadı.

Bu bulgular, yapım tipinin (SBY'ye karşı EÖE) bir etkisi olduğunu göstermektedir; bu da, göndergenin yönlülüğü ve TD'nin sabit tutulmasıyla (ileri doğru gönderge, TD yok), katılımcıların ileri doğru eksiltme içeren cümleleri (EÖE) yorumlamayı geriye doğru eksiltme (SBY) içerenlere kıyasla daha kolay bulduğunu göstermektedir. Bu, geriye doğru eksiltme olarak SBY'nin sözdizimsel ve/veya anlamsal olarak ileri doğru eksiltme olarak EÖE'den daha kısıtlı olabileceği veya belki de SBY cümlelerinin karmaşıklığı ile ilgili olabilir.

Özetle, D2 İngilizce konuşanların daha yüksek kabul oranları ve D2 İngilizce konuşucularının geriye doğru göndergeleri daha çok kabul etmeleri dışında, diğer katılımcılar ile benzer (D1 İngilizce ve D1 Türkçe) sonuçlar buldum. Gönderge yönlülüğü değişkeninin ve dilin baş yönlülüğün mekanizmasının gönderge anlaşılmasında açık bir etkisine rastlamadım. Ancak TD'nin açık bir etkisini bulduk: daha zor olduğu için, TD gerektiren yapılar daha çok reddedilmiştir. Her iki dilde de bir dereceye kadar paralel sonuçlar buldum.

5.3. Özet

Göndergelerin yorumlanması, literatürde EÖE ile ilgili çok sayıda çalışma ile araştırılmıştır, ancak bildiğim kadarıyla SBY ile ilgili böyle bir çalışma yapılmamıştır. Ayrıca, SBY'de hangi okumanın (değişmez kimlik veya değişken kimlik) tercih edildiğini araştıran bir çalışma bulunmamaktadır. Bu tezde, EÖE'de değişmez ve değişken okuma tercihlerini inceleyen çalışmaları olan, ancak SBY'yi aynı perspektiften araştıran çok daha az çalışmayı içeren eksiltme tümcelerini yorumlama konusundaki araştırma alanındaki boşluğu doldurmak istedim. Ayrıca, bildiğim kadarıyla, Shaphiro vd (2003), bulguların tartışılmasında TD mekanizmasının etkisine kısaca değinmiştir, ancak hiçbir çalışma TD'nin etkisini özellikle incelememiştir. Bu nedenle, konuşmacıların yorumlama için TD gerektiren veya gerektirmeyen eksiltme göndergeleri kabul ve/ya tercih etmeme oranlarını deneysel olarak test ettim. Dönüslü cümlelerde (değişmez kimlik yorumunun zorunlu olarak TD'yi gerektirdiği) iyelik yapıları içeren (İngilizcede TD gerektirmeyen, ancak Türkçede TD gerektiren) cümlelerde değişmez okumayla özellikle ilgilendim. Ek olarak, göndergenin yönlülüğüne ve dilin tamlayan yönlülüğüne bağlı olarak gönderge yorumunu araştırdım; yani, TD tercihinin, önden eklemeli dil olarak İngilizcede ve sondan eklemeli dil olarak Türkçede ileri doğru eksiltme örneği olarak EÖE ve geriye doğru eksiltme örneği olarak SBY ortamlarında farklılık gösterip göstermediğini araştırdım. Son olarak, İngilizcede D1 ve D2 konuşanlar arasında bu yapılarda yorumlama farklılıkları olup olmadığını ve varsa D1 girişiminin D2 konuşmacılarının yorumlama davranışları üzerinde bir etkisi olup olmadığını araştırdım. Kısacası, bu çalışmanın temel amacı, karmaşık eksiltme cümlelerindeki gönderge yorumunu araştırmaktır.

İlk olarak, SBY araştırmasında, birinci ve ikinci bağlaçtaki iki öncül arasındaki cinsiyet uyumsuzluğunun, İngilizcedeki dönüşlü yapılarla değişken okumayı engellediği iddiasına odaklandım. Bu nedenle bu tür cinsiyet farklılıklarının gönderge yorumuna herhangi bir etkisi olup olmadığını test etmek istedim. Bu tezdeki kanıtlar bu iddiayı desteklemiyordu: Anadili İngilizce, anadili Türkçe olan farklı katılımcı gruplarıyla yapılan deneylerin hiçbirinde, konuşmacıların değişken okumaya erişmek için öncüller arasında cinsiyet eşleşmesi gerektirdiğine dair tutarlı hiçbir kanıt bulamadım. Sonuç olarak, kalan değişkenleri cinsiyet eşleşmesi ve cinsiyet uyumsuzluğu durumunu göz ardı ederek analiz ettim.

Bu tezin temel amacı olarak, İngilizcede dönüşlü yapılarda ve Türkçede hem dönüşlü hem de iyelik yapılarında değişmez okumalarına bakarak TD mekanizmasını ve bunun gönderge yorumlaması üzerindeki etkisini inceledim. Anadili İngilizce olan ve ikinci dil olarak İngilizce konuşanlardan elde edilen sonuçlar, TD'nin zor olduğunu açıkça ortaya koydu; amaçlanan yorum için TD gerektiren maddeler, TD gerektirmeyenlerden tutarlı bir şekilde reddedildi. Başka bir deyişle, dönüşlü yapıda iyelik yapılarına göre daha az değişmez okuma kabul edilmiştir. Ancak, anadili Türkçe olan kişilerin sonuçları, TD'yi inceleyen karşılaştırmalar için daha az net sonuçlar ortaya koydu. Ancak, özellikle D1 İngilizce sonuçlarıyla karşılaştırıldığında, TD'nin etkisi bu deneyde de açıkça tespit edilebilir. Örneğin, dönüşlü ve iyelik ekleri arasındaki değişmez okumaların kabul edilebilirlik farklılıkları, D1 Türkçe konuşanlar grubunda (her iki yapının da TD gerektirdiği durumlar) çok daha küçükken, D1 İngilizce grubunda bazı kısımları TD gerektiren dönüşlü yapının tercih edilme oranları, TD gerektirmeyen iyelik yapısına göre açıkça daha küçüktü. Türkçede de TD gerektiren değişmez okumaya kıyasla genel olarak değişken okuma tercihi buldum. İngilizcede ise, D1 ve D2 konuşanlar da değişmez okumadan daha ziyade önemli ölçüde değişken okumayı tercih ettiler, ancak fark, özellikle D1 İngilizce konuşan grupta çok büyük değildi. Bu, literatürde sıklıkla bahsedilen değişmez okumaya yönelik genel aşırı tercihin bir sonucu olabilir (örn. Fiengo ve May, 1994; Guo ve diğerleri, 1996; Foley ve diğerleri, 1997; Ying, 2005; Koornef ve diğerleri). al., 2012).

Gönderge yönlülüğünün etkisi açısından baktığımızda hem D1 İngilizce hem de D1 Türkçe katılımcı grupları gönderge yönlülüğünün eksiltmedeki gönderge yorumu

üzerinde kalıcı bir etkisi olmadığını ortaya koymuştur. Ancak hem Türkçede hem de İngilizcede eksiltmenin yönlülüğünün (veya eksiltme yapı tipinin) bir etkisini gözlemlerim: ileri doğru eksiltme içeren EÖE cümleleri, geriye doğru eksiltme içeren SBY cümlelerinden daha çok tercih edildi. Ancak araştırılan her iki dili anadili olarak konuşanlardan farklı olarak, ikinci dil İngilizce konuşan grubun sonuçları, gönderge yönlülüğün etkisini gösterdi. Ancak bulgular beklentilerimize aykırıydı: D2 konuşanlar geriye doğru göndergeyi ileri göndergeden daha kolay buldular. Ayrıca, anadili İngilizce olan katılımcıların hem İngilizce hem de Türkçe tercihlerinin aksine, D2 İngilizce konuşanlar genel olarak herhangi bir eksilteli yapıyı tercih etmemiştir. Genel olarak hem EÖE hem de SBY'yi aynı ölçüde kabul ettiler.

Ayrıca, Türkçede, eksiltme tümcelerindeki gönderge yorumunda iyelik yapısının dikkat dağıtıcı bir etkisinin olduğu tespit edilmiştir. Bu da Türkçe iyelik yapısının, eksiltme olmayan bağlaçta, doğası gereği belirsiz ve çözümlenmesi gereken bir düşürülmüş iyelik göndergesi içermesi ile açıklanabilir.

Sonuç olarak, ikinci dil konuşucularının davranışları, TD yorumlamada olası pozitif D1 (anadil) aktarımını gösterdi. Diğer katılımcı gruplarına benzer şekilde, D2 konuşucuları, TD gerektiren maddeleri reddettiler. Öte yandan, D2 konuşucular da anadili İngilizce olanlardan daha düşük olarak iyelik yapılarına sahip maddeleri kabul ettiler; bu, D1'in olumsuz aktarımından kaynaklanmış olabilir, çünkü değişmez okumalı hem iyelik hem de dönüşlü yapılar, Türkçede TD'yi içerir, zaten çoğu Türkçe konuşucu da bu tür yapıları reddetti. Öte yandan, değişkenler özel olarak tek tek analiz edildiğinde, ikinci dil konuşanlar, birinci dil Türkçe ve 1. dil İngilizce konuşanlardan daha fazla değişken kimlik okuma ile iyelik yapılarını kabul etme gibi özgün davranışlar da göstermişlerdir. Ayrıca, D2 konuşanlar, EÖE'ye göre SBY'de değişmez okuması olan hem iyelik hem de dönüşlü yapıları kabul ederken, D1 Türkçe konuşanların böyle bir tercihi hiç yoktu. D1 İngilizce konuşanlar ise, yalnızca SBY'de değişmez okuması olan dönüşlü yapıları kabul ederek geriye dönük gönderge için kısmi bir tercih gösterdiler. Ayrıca hem EÖE hem de SBY eksiltme yapılarının genel olarak daha düşük kabul oranları, D1 etkisinden kaynaklanmıyor olmalı çünkü D1 İngilizcede olduğu gibi Türkçede de EÖE yapıları yüksek yüzdelerle kabul edilmiştir. Son olarak, D1 Türkçe konuşanların genel olarak iyelik yapılarını okumaya daha fazla

zaman harcama davranışları, D2 İngilizce konuşmacılarının iyelik yapıları üzerindeki daha uzun işlem sürelerinin sebebi olabilir. Bununla birlikte, D2 İngilizce konuşanların, D1 İngilizce konuşanlara kıyasla genel olarak daha yüksek okuma/işlem süreleri, yani D2 konuşanların genel olarak tüm öğeleri D1 İngilizce konuşanlardan daha uzun sürede okuması, D2 konuşanların sığ veya sınırlı işlem kapasitesi ile ilgili olabilir.

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