SUSPENDED AFFIXATION IN TURKISH

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SUSPENDED AFFIXATION IN TURKISH

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Suspended Affixation in Turkish

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DECLARATION OF ORIGINALITY

I, Furkan Atmaca, certify that

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ABSTRACT

Suspended Affixation in Turkish

This study investigates Suspended Affixation (SA) and its environment. Lewis (1967) is credited with the term, but observations of SA can be found in earlier Turkish grammar books (Emre, 1945; Gencan, 1966). It is a morphological ellipsis process observed in constructions that contain conjuncts. Overt suffixes on the rightmost conjunct in a conjunction are interpreted in the other conjuncts. I provide both empirical and theoretical observations that paint a broader picture for SA. I argue for an ellipsis analysis in SA and propose analyses for the suffixes *ile/=(y)lA* and *-(y)Ip*. My findings indicate that the environment of SA greatly impacts its acceptability. The conjoiner *veya* 'or' has pragmatic implicatures that can hinder SA. On the other hand SA in *-(y)Ip* constructions might require changes in the information structure. In the literature on Turkish SA, Kabak (2007) provides constraints and Orgun (1995), Kornfilt (2012), Broadwell (2008) provide a lexical sharing analysis. The literature on other languages adopts an ellipsis approach (Guseva & Weisser, 2018; Erschler, 2018). My analysis is more in line with the ellipsis approach, yet it abides by the proposed constraints in the literature. I conducted three experiments. The first (214 participants) investigated if SA of derivational suffixes was acceptable and the second (160 participants) investigated if different amounts of SA changed processing difficulty. Both experiments investigated the effect of a conjoiner choice between *ve* 'and' and *veya* 'or'. The third experiment showed that SA can be a testing ground for sentence processing in Turkish. The experiment used an environment dependent on SA and showed effects of Reanalysis and how reanalyzed readings were accessible in further tasks. All the experiment results jointly indicated that the SA environment was more crucial than solely identifying suspendable affixes.

ÖZET

Türkçede Ertelenmiş Ekler

Bu çalışma Türkçedeki Ertelenmiş Ekleri (ErE) ve bu eklerin bulunduğu yapıları inceler. Ertelenmiş eklere ingilizce adını Lewis (1967) vermiş ancak bu yapı Türkçe gramer kitaplarında daha önce gözlemlenmiştir (Emre, 1945; Gencan, 1966). ErE biçimbilimsel bir eksilti işlemidir. Bir bağlaşımda sadece en sağdaki bağlaşımın taşıdığı biçimi diğer bağlaşıklar anlamsal olarak taşımaktadır. Bu çalışmada ben hem deneysel hem teorik yöntemler kullanarak ErE ve bulunduğu yapılar için analizler sunmaktayım. ErE'nin kendisi için doğrudan bir eksilti analizini savunup, ErE yapıları oluşturan *ile/=(y)lA* ve *-(y)Ip* ekleri için yapısal çözümler öneriyorum. Bulgularım ErE'nin bulunduğu yapıyla ilişkili olduğu ve bu yapının tabi olduğu bağlamsal değişikliklerden etkilendiğini göstermekte. Bu bağlamsal değişiklikler bağlaç seçimlerinde ErE yi olumsuz etkileyebilirken, *-(y)Ip* ile oluşturulan yapılarda bilgi yapısı değişikliği ErE için önkoşul haline gelebilir. Türkçe ErE ile ilgili Kabak (2007) birtakım önkoşullar ortaya koyar ve Orgun (1995), Kornfilt (2012), Broadwell (2008) ErE için yapısal paylaşım analizi öne sürer. Diğer dillerdeki ilgili kaynaklar (Guseva & Weisser, 2018; Erschler, 2018) ErE için doğrudan eksilti analizi sunar. Benim öne sürdüğüm analiz doğrudan eksiltiye daha yakın olmakla birlikte Kabak (2007)'ın ErE için önerdiği koşullara uymaktadır. Bu çalışmada yürüttüğüm 3 ayrı deneyi raporluyorum. Bu deneylerden ilki (214 katılımcı) ErE'nin yapım ekleriyle uyumlu olup olmadığını ve ikincisi (160 katılımcı) farklı ErE miktarlarının dil işlemesinde güçlük çıkarıp çıkarmadığını sorgulamaktadır. Ek olarak, iki deney de isimsel ve eylemsel düzlemdeki ErE içinde *ve* ile *veya* arasındaki bağlaç seçiminin etkilerini sorgular. Üçüncü deney (126 katılımcı) ErE'nin Türkçedeki dil işleme çalışmaları için önemli bir yapı sunabileceğini gösterir. Tüm deneyler ve yapısal analizler ErE'nin içinde bulunduğu yapıyı incelemenin ErE'ye dahil olabilen ekleri incelemekten daha verimli olduğunu göstermektedir.

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Language is in the epicenter of human interaction and it is a marvel of human cognitive capability. My main strife is understanding others, and embrace my place among them. I am glad that I chose linguistics as a scholarly career.

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work we have done, and for the times we shared together. I only feel like living when my voice is heard so thanks for listening to me.

I am a man of many words with shaky cohesion and difficult to follow points, but I wanted this piece of acknowledgement to be an exception. I try to be a good person and remembered as one, nothing more. I plan on doing right by the time I was spared, and it is only just to do so.

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ABBREVIATIONS

1	first person
2	second person
3	third person
ABIL	ability
ABL	ablative
ACC	accusative
AGR	agreement
ALL	allative
AND	and
AOR	aorist
AUX	auxiliary
BY	derivational *-(y)ArAK*
CASE	case
CAUS	causative
COM	comitative
COMP	complementizer
CON	conative
COND	conditional
COP	copula
DAT	dative
DECL	declarative
DER	derivational suffix
DET	determiner
DIM	diminutive
EMP	emphasis
EV	evidential
F	feminine

FOC	focus
FP	free participle
FUT	future
GEN	genitive
ILL	illative
IMP	imperative
INESS	inessive
INF	infinitive
INFL	inflectional suffix
INS	instrumental
LCASE	local case
LOC	locative
M	masculine
NEC	necessitive
NEG	negative
NMLZ	nominalizer
NOM	nominative
OBL	oblique
OR	or
PART	partitive
PASS	passive
PC	predicate concatenator
PL	plural
POSS	possessive
PP	past participle
PREF	prefix
PRF	perfect
PROB	probability
PROG	progressive

PRS	present
PRV	preverb
PST	past
PTCP	participle
Q	question particle
REL	relative
SCASE	structural case
SG	singular
SUP	suppletive
TOP	topic
WHEN	derivational *-(y)IncA*
WO	derivational *-mAdAn*

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CHAPTER 1

INTRODUCTION

1.1 Aim of the thesis

The aim of this thesis is to explore the constraints affecting Suspended Affixation (henceforth SA) and how SA can relate to sentence processing. SA is the elision of affixes from conjuncts in a conjunction environment. In (1) the suffix ACC is only overt on the second conjunct but it is interpreted for the first conjunct too.

(1) SA of ACC

Kitap ve kalem-i al-dı.
book AND pencil-ACC take-PST[3SG]
'S/he took the book and the pencil.'

In discussing SA and its constraints, I provide analyses by drawing inferences from both empirical and theoretical devices. These analyses include empirical investigations into the division of literature in treating derivational suffixes, the processing cost of suspension, and observations that contradict some theoretical constraints proposed for SA. I also bring the effect of the environment, conjunctions, into the discussion of Turkish SA.

There can be many points and facets in the discussion of SA. I cover and provide arguments for the points in (2). These are about what the literature disagrees on, misses to address, or proposes.

(2) i. What are the analyses for SA in Turkish and in other languages?

ii. What kind of morphemes can be targeted by SA?

iii. Does the conjoiner have an effect in performing SA?

iv. What is the processing cost of SA?

v. How can SA be used for sentence processing?

vi. Is SA beyond a morphological word possible?

1.2 Conventions utilized in the thesis

I follow Leipzig glossing conventions (Comrie et al., 2008) in my language glosses[1]. Concatenated morphemes are separated with a dash '-' like *araba-lar* 'car-PL', and non-concatenative morphemes are separated with a dot '.' like *araba-m* 'car-POSS.1SG'. I use square brackets '[]' to indicate a morpheme with zero exponent like *git-ti.* 'go-PST[3SG]'. Words that hold specific relations are provided subscripts. For example, a subscript 'i, j, k, ...' is used to indicate referents like 'He$_i$ and Ahmet$_j$', a case assigning preposition or postposition can be marked by the case it assigns like 'of$_{ACC}$'.

1.3 Suspended affixation in Turkish

Suspended affixation is a morphological phenomenon where only one of the conjuncts has overt affixes that the other conjuncts share in interpretation. (3a) shows an abstract representation where there are two conjuncts 'A' and 'B' and the overt suffix(es) α on the second conjunct. SA is possible with more than two conjuncts (3b).

(3) a. A conjoiner B-α

Interpretation: 'A-α conjoiner B-α'

b. A conjoiner B conjoiner C-α

Interpretation: 'A-α conjoiner B-α conjoiner C-α '

SA appears in languages usually as a backwards process, where the linearly rightmost conjunct bears the overt morphemes. Limited examples from Caucasian languages can also be found where affixes that occupy the left edge of the word are shared. (4) shows an example for SA of 1SG-ALL where the leftmost conjunct bears the overt suffix.

(4) a. $\alpha-$A conjoiner B

Interpretation: '$\alpha-$A conjoiner $\alpha-$B'

[1] capital letters are used to indicate possible phonological changes. K = [k] or [ɣ], A = [ɑ] or [e], I = [ɯ], [i], [u], or [ü], C = [ʤ] or [ʧ], and D = [d] or [t]

b. Adyghe (Northwestern Caucasian) SA of 1SG-ALL

s-jə-pɕaɕe-re *ʧ'ale-re* *zezaox.*
1SG-ALL-girl-AND boy-AND fight.each.other
'My son and daughter are fighting.'

Adapted from Erschler (2012)

In the following paragraphs, I lay out the examples and configurations of Turkish SA in two parts. First is the nominal domain and the second is the verbal domain. Most examples of SA in the nominal domain are made with the CASE, POSS, and PL suffixes in Turkish. Table 1 shows the suspendable suffixes in the nominal domain.

Table 1. Suspendable Turkish Suffixes in Nominals

Case		Possessive				Plural
ACC	*-(y)I*		1^{st}	2^{nd}	3^{rd}	*-lAr*
DAT	*-(y)A*	SG	*-(I)m*	*-(I)n*	*-(s)I*	
LOC	*-DA*	PL	*-(I)mIz*	*-(I)nIz*	*-lArI*	
ABL	*-DAn*					
GEN	*-(n)In*					

All the suffixes in Table 1 can be interpreted as φ-features[2] and thereby inflectional, but some claim that derivational suffixes can also be suspended. That is going to be addressed in the following sections. In (5), I give some possible examples of SA in the nominal domain.

(5) a. SA of ABL

Hoca *ve* *ders-ten* *kork-uyor-um.*
instructor AND course-ABL scared_of-PROG-1SG
'I fear the instructor and the course.'

b. SA of POSS-ABL

Hoca *ve* *ders-im-den* *kork-uyor-um.*
instructor AND course-POSS.1SG-ABL scared_of-PROG-1SG
'I fear my instructor and my course.'

[2]see Harbour et al. (2008) and Rezac (2011) for the development and evaluations of φ features.

c. SA of PL-POSS-ABL

Hoca ve ders-ler-im-den kork-uyor-um.
instructor AND course-PL-POSS.1SG-ABL scared_of-PROG-1SG
'I fear my instructors and my courses.'

The sentences in (5) show examples of full SA in a string of PL-POSS-CASE in the first conjunct. Performing SA for all the suspendable suffixes is not obligatory, only CASE in a string of PL-POSS-CASE can also be suspended. (6) illustrates this point.

(6) SA of ABL in a string of PL-POSS-ABL

Hoca-lar-ım ve ders-ler-im-den kork-uyor-um.
instructor-PL-POSS.1SG AND course-PL-POSS.1SG scared_of-PROG-1SG
'I fear my instructors and my courses.'

The sentence in (6) shows the suspension of only CASE in the first conjunct in a string of PL-POSS-CASE. Some deem an SA of POSS ungrammatical in the example (7) where there is a suspension of POSS-CASE in a string of PL-POSS-CASE.

(7) *Hoca-lar ve ders-ler-im-den kork-uyor-um.*
instructor-PL AND course-PL-POSS.1SG scared_of-PROG-1SG
'?I fear my instructors and my courses.'

SA is not exclusive to the conjunctions formed by *ve* 'and', it can also take place in a conjunction formed by a negator like *değil* 'not', as shown in (8).

(8) a. SA of PL-ABL

Ders değil hoca-lar-dan kork-uyor-um.
course NEG instructor-PL-ABL scared_of-PROG-1SG

b. SA of ABL

Ders-ler değil hoca-lar-dan kork-uyor-um.
course-PL NEG instructor-PL-ABL scared_of-PROG-1SG
'I am not scared of the courses but the instructors.'

SA in the verbal domain has two shapes. One is the SA of agreement markers after TAM I (Tense, Aspect, Modality) markers. The other is the SA of TAM II and agreement markers together. I provide a list for inflectional suffixes in the verbal domain in Table 2. I give some possible examples for SA in the verbal domain in (9).

Table 2. TAM I, II, and Agreement Markers

TAM I		TAM II		Agreement		
Aorist	*-Ir*	Conditional	*-(y)sA*		SG	PL
Conditional	*-sA*	Evidential	*-(y)mIş*	1^{st}	*-(I)m*	*-k*, or *-(I)z*
Future	*-(y)AcAK*	Past	*-(y)DI*	2^{nd}	*-(sI)n*	*-(sI)nIz*
Necessitive	*-mAlI*			3^{rd}	-	*-lAr*
Past	*-DI*					
Perfect/Evidential	*-mIş*					
Progressive	*-Iyor*					

Adapted from Göksel (2002)

(9) a. SA of 1SG

Ev-e gid-ecek ve dinlen-eceğ-im.
house-DAT go-FUT AND rest-FUT-1SG
'I will go home and rest.'

b. SA of EV-1SG

Ev-e gid-ecek ve dinlen-ecek-miş-im.
house-DAT go-FUT AND rest-FUT-COP.EV-1SG
'I was supposed to go home and rest.'

c. SA of EV-1SG-PROB

Ev-e gid-iyor ve dolan-ıyor-muş-um-dur.
house-DAT go-FUT AND stroll-PROG-COP.EV-1SG-PROB
'I might have been going home and strolling.'

The sentences in (9) show the suspension of only Agreement(1SG), suspension of TAM II and Agreement (EV-1SG), and suspension of TAM II, Agreement, and Probability marker *-DIr* (EV-1SG-PROB). The important observation made by the given examples is that SA is a rightward-bound process, meaning that the suspension of only α in a string of suffixes -α-β is not allowed. It is either suspension of β, or -α-β.

Additionally, there are two configurations: one in compounding, and one in serial verb constructions in Turkish that could be considered as SA. The example in (10) shows SA of compound/agreement marker (POSS.3SG in glosses) on an inner compound. This marker is optionally covert in some cases. This optionality can be a suspension of the compound marker *-(s)I(n)*.

(10) *Beykoz koru-(su)* *mesire alan-ı*
B grove-(POSS.3SG) picnic area-POSS.3SG
'Beykoz grove's picnic area'

Another example of SA comes from serial verb constructions in Turkish. It is achieved with the suffix *-(y)Ip* (Predicate Concatenator) PC in glosses). (11) shows an example of possible SA for the tense and agreement suffixes. Here the insertion of the suspended affixes is not allowed unlike the examples given so far.

(11) SA of PST-1SG

Ev-e *gel-(-di)-ip* *uyu-du-m.*
House-DAT come–(PST)-PC sleep-PST-1SG
'I came home and slept.'

Suspendability of derivational suffixes show wide variation among suffixes and among native speakers. There are limited number of examples with varying degrees of acceptability[3]. In (12), I give some examples of SA taking place with the derivational suffixes: *-lI*, *-sIz*, *-lIK*, and *-CI* (DER in glosses). Note that these examples are not widely acceptable and display great variation.

(12) a. SA of *-lI*

?Çilek ve çikolata-lı dondurma
strawberry AND chocolate-DER ice_cream
'Ice cream with chocolate and strawberry'

b. SA of *-sIz*

?Şeker ve yağ-sız yiyecek-ler
sugar AND fat-DER food-PL
'Sugar and fat free foods'

c. SA of *-lIK*

?Bahar ve yaz-lık ceket
spring AND summer-DER jacket
'Spring and summer jacket'

[3]This is addressed more in depth in the first experiment I conducted in §3

d. SA of *-CI*

?futbol ve basket-çi
football AND basketball-DER
'Football and basketball player'

1.4 Conjunctions in Turkish

In this study, a conjunction refers to the whole structure of conjoined elements, for example conjunction of two nouns like *kalem ve kitap* 'pencil and book'. A morpheme that signals or carries out the conjunction is called the conjoiner like *ve* 'and', and the individual elements that are conjoined are called the conjuncts like *kalem* 'pencil', and *kitap* 'book'. I use these terms in the rest of my study.

There are two free form conjoiners *ve* 'and' and *veya* 'or' in Turkish that are of interest for this study. These can be used both in verbal and nominal domains to conjoin arguments and sentences. (13) shows some examples for the conjoiners *ve* 'and' and *veya* 'or'.

(13) a. *ve* 'and' conjoining nouns

Kalem ve kitap çok pahalı.
pencil AND book very expensive
'The pencil and the book are expensive.'

b. *ve* 'and' conjoining sentences

Ahmet ev-e gel-di ve Mehmet on-u gör-dü.
A[NOM] house-DAT come-PST[3SG] AND M[NOM] him-ACC see-PST[3SG]
'Ahmet came home, and Mehmet saw him.'

c. *veya* 'or' conjoining nouns

Ahmet kalem veya kitap al-mak iste-m-iyor.
A[NOM] pencil OR book buy-NMLZ want-NEG-PROG[3SG]
'Ahmet does not want to buy a book or a pencil.'

d. *veya* ‘or’ conjoining sentences

Ahmet ev-e gel-di veya Mehmet kapı-yı
A[NOM] house-DAT come-PST[3SG] OR M[NOM] door-ACC
aç-tı.
open-PST[3SG]
‘Ahmet came home, or Mehmet opened the door.’

These conjoiners can have different functions depending on what they conjoin or in which environment they are used. A conjoiner like *ve* ‘and’ can have additive effects when used with nouns such as *kalem ve kitap* ‘pencil and book’, ordering effects when used with verbs such as *koştum ve düştüm* ‘I ran and then fell’. A conjoiner does not necessarily need to be overt, prosodic breaks can signal conjunction like in *domates, biber, patlıcan* ‘tomato, pepper, and eggplant’. In Turkish, there are some overt prosodic operators that function like the conjoiners. These are: *hem . . . hem (de). . .* , *ya . . . ya (da) . . .* , and *(ya). . . ya da . . .* , I give some examples in (14).

(14) a. *Ahmet hem kitab-ı hem (=de) kalem-i al-dı.*
A[NOM] hem book-ACC hem (=FOC) pencil-ACC take-PST[3SG]
‘Ahmet bought both the book and the pencil.’

b. *Ahmet ya kitab-ı ya (=da) kalem-i al-dı.*
A[NOM] ya book-ACC ya (=FOC) pencil-ACC take-PST[3SG]
‘Ahmet either both the book or the pencil.’

1.5 Morphological machinery

The dictionary description for ‘morphology’ as it is used in other fields refers to the shape or form of an object. In the case of language, this usually boils down to the words and their identifiable lexical and functional parts. In this study, I regard a functional head as a morpheme and not the identifiable or concatenative forms. This means that an expression like *fell* consists of two morphemes: one lexical *fall* and one functional PST. In this study, some tenets of Distributed Morphology (DM) (Halle & Marantz, 1993, 1994) are used. Namely the notions of abstract morphemes, vocabulary items, late insertion and readjustment rules as adapted from Embick & Halle (2005). I give some explanations and examples in the following subsections.

1.5.1 Abstract morpheme

Abstract morphemes are composed exclusively of non-phonetic features, such as PST or PL. These morphemes occupy the morphological structure together with lexical morphemes. Further processes of vocabulary insertion and readjustment rules form the phonological exponents. This means that an expression like *kitap-lar-ım* 'my books' has the morphemes of 'book-PL-POSS' as is its glossing.

1.5.2 Vocabulary item

Vocabulary items pair a morphosyntactic context with a phonological exponent where the exponent is a sequence of phonetic feature complexes that can be addressed for phonological changes. A morpheme can have different vocabulary items. A straightforward example is the vocabulary items for PL in English. The general vocabulary item for PL is '-s', but different vocabulary items like '-ren, -en, ∅, . . . ' can be inserted depending on the lexical morpheme that PL is attached to.

1.5.3 Late insertion

Late insertion, or vocabulary insertion is the introduction of phonological exponents to the morphological or syntactic structure after they are formed. For the purposes of this study, it means that phonological representations follow after all the structural representations are at place instead of working in tandem. There is a Subset Principle (Halle, 2000) that regulates late insertion for pairing a collection of features to a vocabulary item. Subset principle states that the smallest vocabulary item that has most of the features as its subset is inserted as a phonological exponent.

1.5.4 Readjustment rules

Readjustment rules are phonological rules which affect changes in each morphosyntactic context and typically include lists of lexical and abstract morphemes that undergo or trigger these changes. These rules represent the phonological processes such as assimilation and vowel harmony.

1.5.5 Example

In an expression like *çök-tü-m.* (sit.down-PST-1SG) 'I sat down' in Turkish, there are 1 lexical and 3 abstract morphemes. The vocabulary items for the lexical morpheme and the abstract morphemes are: *çök* as lexical morpheme, *-di* as PST, and *-m* as 1SG. The items are then inserted and form *çök-di-m*, phonological readjustments begin after this point. The assimilation and vowel harmony takes place, then the expression becomes *çök-tü-m.* 'I sat down'.

DM hosts many other notions and operations like Root, Fusion, Fission, and Impoverishment (Halle, 2000; Bonet, 1991; Embick, 2015) to explain and capture several morphological phenomena. I do not particularly use all tenets of DM, which regards morphology as either a part of syntax or a continuum of it. Some aspects of DM, and the theory in general, are recently criticized by Spencer (2019). My focus is mainly on DM being a realizational approach to morphology. Meaning that phonological exponents and morphological structure do not follow a one to one match and morphology comes before phonological exponents. I adopt some tenets of DM for my analyses and arguments. I do not use the compositional properties that DM assigns to morphology as an integrated or a continuous module to syntax. Ackema & Neeleman (2007) best exemplifies my application of late insertion and vocabulary items while still holding morphology as a separate module in language.

1.6 Approaches to sentence processing

In this section, I introduce some approaches to sentence processing that relate to the experiment hypotheses and analyses. In general, there are two main lanes of approaches to sentence processing, or how a parser operates. These two lanes are serial and parallel parsing. There are further divisions within each lane that operate on different bases. In this section, I reduce many of the serial approaches to parsing into two.

The notion 'parser' refers to the cognitive agency of someone while processing language material and assigning structural interpretation for it. It can be

represented as a skilled memory retrieval process (Lewis & Vasishth, 2005) where values of language features for semantic properties (e.g. gender, number), syntactic categories (e.g. noun, adjective, verb), thematic roles (e.g. subject, object), and pragmatic information (e.g. speaker, referent) are stored as chunks of information in memory (Miller, 1956). A serial parser is regarded to have or retain one line of interpretation in memory, instead of maintaining many interpretations in parallel. It operates incrementally, meaning that pieces of information is integrated cyclically as they are encountered.

The first kind of approach is the deterministic serial parser, which mainly consists of the garden path model (Frazier & Fodor, 1978; Frazier, 1987). The second is the probabilistic serial parser, which can use information outside syntax in sentence processing. Approaches such as the unrestricted race model (Traxler et al., 1998; van Gompel et al., 2001, 2005), the constraint based approach (MacDonald et al., 1994), and surprisal (Levy, 2008) allow for varying types of information to be included in sentence processing. These approaches can vary in how they operate (parallel vs serial) or even contradict one another in some cases. What they all share is the possibility to use extra-syntactic information in sentence processing. I rely on the unrestricted race model in the explanation of the probabilistic serial parser.

Additionally, I introduce the good enough approach (Ferreira et al., 2001; Ferreira & Patson, 2007) which proposes that the parser does not always parse complete structures that are fully accounted for. These approaches are not an exhaustive list of the literature. I present only the ones I intend to utilize in my experiment predictions and analyses when necessary.

1.6.1 Deterministic serial parser

In a garden path model of sentence processing, the parser operates in a deterministic manner that is strongly biased in using structural information regardless of other possible information. The parser always operates in a manner that integrates the input according to the syntactic norms it has. In structurally unambiguous points in the

input, this operation faces no problems in deriving structurally sound interpretations. In ambiguous points in the input, the parser is left to make a choice, the key feature of a garden path model is that the parser always chooses one way to continue the integration no matter how. If the parser is later proven wrong and forced to change its commitment, this causes reanalysis which has an extra processing cost (Frazier & Fodor, 1978). The garden path model is also referred to as the two stage model. It operates based on two principles. The principle of minimal attachment and the principle of late closure (Frazier, 1987). Minimal attachment dictates that the parser does not form unnecessary structural nodes. This means that when possible, the parser selects the route of integration that is structurally more minimal. (15) is an example for minimal attachment where a main clause analysis 'hit with a book' of the PP 'with a book' is preferred to the modified noun analysis 'the girl with a book'. Interpreting the PP under the VP does not require positing a complex structure of a modified noun. It is theoretically simpler to integrate a PP to a VP.

(15) John hit the girl with the book.

Adapted from Frazier (1987)

Late closure dictates that the integration of the new input should be made to the existing phrase as long as grammatically permissible. (16) is an example for late closure where the attachment of the adverb 'yesterday' to the subordinate clause attachment 'left yesterday' is preferred to the main clause attachment 'said yesterday'.

(16) Joyce said Tom left yesterday.

as cited in Frazier (1987)

When the parser is proven wrong in choosing one attachment over the other, reanalysis takes place. That in turn increases the processing cost. (17) is a famous example for Reanalysis where the minimal attachment requires the verb 'raced' to be interpreted as the main verb for the noun 'the horse', this choice is proven wrong

by the actual main verb ‘fell’. In this case, the verb ‘raced’ turns out to be a reduced relative clause for ‘which was raced’.

(17) The horse raced past the barn fell.

as cited in Frazier (1987)

In the literature, these kinds of attachments are referred to as ‘local ambiguity’. The sentence itself is unambiguous, but more than one attachment is possible at specific points of the input.

1.6.2 Probabilistic serial parser

A parser that operates solely by syntactic information and structural complexity can’t predict reading preferences based on probabilistic information that a language user might employ. An example of minimal attachment in (15) can be changed only by using a different noun in the PP that is more related to the noun than the verb as in (18). The noun ‘skirt’ might be more plausible to be associated with a ‘girl’ instead of being a tool for ‘hitting’.

(18) John hit the girl with the skirt.

An approach that utilizes probabilistic information is the unrestricted race model (van Gompel et al., 2005, 2001; Traxler et al., 1998). In this model, the parser has access to extra-syntactic or even extra-linguistic (Willits et al., 2015) information which makes it ‘unrestricted’. The ‘race’ aspect comes about in how it operates. Instead of accessing the probabilistic information immediately, it is used in the competition of possible structures being built. At any point of a structural ambiguity, the parser initiates the building of all the structures. The one that is built first gets to be chosen as the preferred interpretation. The probabilistic information that favors one or the other comes into play in the building process. This way, pieces of information outside syntax can have additive or relational effects, without being accessed immediately when a language input is encountered.

1.6.3 Good enough approach

In both deterministic and probabilistic parsers, dependencies and relations are completed to the full. The parser is oriented towards making all the input as integrated as possible. Some research in sentence processing shows that the parser aims for full compatibility of parts when establishing a dependency relation. For example, the parser is looking for a specific set of values in the memory and comes across a partial match. In order to bypass this partial match, the parser must allocate more resources, increasing processing difficulty (van Dyke & Johns, 2012; van Dyke & McElree, 2006). On the other hand, another line of research suggests that these partial matches can cause illusory effects in sentence comprehension (Parker & Phillips, 2016; Mendia et al., 2018; Wagers et al., 2009). This points to the realization that the parser might accept a partial match for resolving a dependency even though it is not grammatical. In good enough approach to sentence processing, the parser may choose to partially fulfill the requirements of a dependency (Ferreira et al., 2001; Ferreira & Patson, 2007) either in memory retrieval or the actual building process itself. The type of the task for a parser can affect how it behaves in terms of partially fulfilling dependency requirements (Swets et al., 2008; Logačev & Vasishth, 2016). This means that the parser is task-oriented and if the task does not require it, some dependencies can be partially resolved. This usually leads to the effects of a variable reflecting itself in places other than a point of disambiguation or online measurements.

1.6.4 What these approaches have in common

All these approaches make sentence processing operate on structures above words. The morphemes and their values are reduced to pieces of information stored in chunks in some work (Lewis & Vasishth, 2005). Any reanalysis, or integration is based on the structure of the sentence instead of the inner parts of the words. These pieces of information, however, can be crucial for the well-formedness of a structure in establishing agreement relations like gender and number.

1.7 Statistical inference

I use Bayesian inference in evaluating the results of my empirical studies. I report the results of the regression models with $posterior$ probability distributions. In the psycholinguistic research, using statistical inference that has a significance filter like p value is shown to be problematic (Vasishth et al., 2018; Wagenmakers, 2007; Kruschke, 2011). As a linguist, one might not be aware of the inner workings of a statistical inference method. McElreath (2020) is a good introduction and includes several practices that are very helpful. Bayesian inference shows the effects of a predictor for data in a more accessible way that reflects the uncertainty or variance.

I implemented the regression model descriptions using brms (Bürkner, 2017) in R (Team, 2013). I provide the dependent variable, the predictors (independent variables), and the data family appropriate for the dependent variable.

1.7.1 How to interpret the results

I present plots of the regression models' results. They host the following information: on the x axis, transformed values for the coefficients are placed. A point for the median estimate, a thick horizontal line for the %50 credible intervals, and a thin line for the %95 credible intervals. The y axis has the individual and interaction effects of the predictors. They are called coefficients because they are all multiplicative effects in their original scale. Adding up the transformed values correspond to multiplication. I do not provide the estimate for the grand mean (Intercept) as one is usually interested in the effects rather than the mean values. The numerical size of the estimate determines the size of the effect and the sign of the estimate (+/-) indicates the effect increasing or decreasing the grand mean. The credible intervals indicate the uncertainty for a given coefficient.

The reason for using transformed scales is to reduce the effects of the extremes in data. Because of the mathematical transformation, the outliers in the original scale get closer to the other values in a transformed scale. This way the effects of the extremes in data are mitigated to an extent.

1.7.2 Predictor contrasts

For any comparison to be drawn in data depending on a predictor, contrasts among the levels of a predictor needs to be defined. There are many types of contrasts and each one is used depending on the predictor. In my analyses, I needed sum contrasts and sliding differences.

Sum contrasts are used if the predictor has levels which are compared to a grand mean. If a predictor 'A' has two levels 'X, and Y', they are coded to sum up to 0 like '-1 and +1' for a comparison. This way, the effects are centered around a hypothetical baseline '0'. I order the level of a predictor and use 'contr.sum' function of R to set sum contrasts. The plots reflect the effect of the level(s) coded with '+1'.

Sliding differences contrasts are used when a variable has ordered levels by its nature. Suppose that a variable 'B' has three levels 'J', 'K', and 'L'. If there is an order among the levels like J<K<L, one might want to use sliding differences. This way, the comparisons are drawn between K versus J and L versus K. I order the levels of the predictor and use 'contr.sdif' function provided by the R package MASS (Venables & Ripley, 2002) to set contrasts of sliding differences. The plots display results for each comparison with a dash '-' between the levels that the comparison is made for.

1.8 Outline of the thesis

In Chapter 2, I present the current theoretical considerations of SA in Turkish followed by SA or related phenomena in other languages. I then present different accounts for how conjunctions are represented. In Chapter 3, I present 2 exploratory experiments with 214 and 160 participants. Both try to answer the following questions respectively:

- Is SA reserved for the inflectional paradigm?
- What is the processing cost of SA by the number of affixes?
- What is the effect of a conjoiner *veya* 'or'?

In the pursuit of answering these questions I provide the results of the two experiments I have conducted. The first is an acceptability study and the second is a self paced reading study. In Chapter 4, I present an experiment with 132 participants that tries to answer the following question:

- How does SA interact with sentence processing?

In the pursuit of answering this question, I present what process is assumed to take place in SA by the structural analyses provided for it in Broadwell (2008), Kornfilt (2012), Guseva & Weisser (2018), and Erschler (2018). Instead of trying to justify which analysis best represents what SA is, I take on the prediction that all the analyses would make and the consequences of which for sentence processing. I present a language environment where the effects can be investigated and how the results can be interpreted. In Chapter 5, I present some analyses for SA by drawing inferences from the experiment results and the theoretical outlines. I present analyses for the suffixes *ile/=lA* and *-(y)Ip*. In Chapter 6, I give my conclusions and the further points that can be pursued for the study of SA. I provide what were my expectations and the workflow I had during the process of writing this thesis.

CHAPTER 2

LITERATURE SURVEY

Lewis (1967) is credited with the term SA and the first observations of it in Turkish. A closer look in the literature written in Turkish reveals that the phenomenon is observed and even addressed before (Emre, 1945; Gencan, 1966).

Emre (1945, par 219) observes that copular forms of *-DI* and *-mIş* can be suspended together with the agreement markers. He does not recognize the sole suspendability of the agreement markers. One difference in his observation is that not performing SA is interpreted as an emphasis on the conjuncts. This is a point which has not been raised since. He does not provide examples of SA in the nominal domain. Gencan (1966, par 382) gives similar examples of SA in the verbal domain, however he includes examples of SA in the nominal domain and almost all suffixes that can be suspended are represented. He claims that performing SA creates discrepancies in the sentence so avoiding them makes the contrasts in a sentence more apparent.

Categorized as an agglutinating language with many inflectional and derivational functions represented mostly by distinct morphemes, Turkish has many affixes that can be suspended, both in nominal and verbal domains. Some articles that exclusively examine SA in Turkish are: Orgun (1995), Kabak (2007), Broadwell (2008), Kornfilt (2012), Kharytonava (2011, 2012a,b), and Akkuş (2016).

Some other articles investigating SA in other languages are: Erschler (2012), and Erschler (2018) for Ossetic, Yoon (2017) for Korean, Despić (2017) for Serbian, Guseva & Weisser (2018) for Mari, and Pounder (2006) for German. These articles range from giving the relative data and its limitations to the structural accounts and predictions for SA. In this chapter, I first summarise the literature regarding SA in Turkish, later I summarise the literature regarding SA in other languages. I finish the chapter by providing some accounts for conjunctions.

2.1 Suspended affixation in Turkish

2.1.1 Orgun (1995)

Orgun argues for an analysis of SA as a structural sharing process. He provides the examples in (1). These examples show that SA of POSS is ungrammatical in a string of PL-POSS. This is peculiar considering that SA of POSS is grammatical in (2).

(1) a. SA of POSS

**tebrik-ler ve teşekkür-ler-im*
congrats-PL AND thanks-PL-POSS.1SG

b. SA of PL-POSS

tebrik ve teşekkür-ler-im
congrats AND thanks-PL-POSS.1SG
'My congratulations and thanks'

(2) a. SA of POSS

Kitap ve kalem-im
book AND pencil-POSS.1SG
'My book and my pencil'

Orgun proposes to place the suffixes PL and POSS on the same hierarchical level as in Figure 1. This way, he explains the ungrammatical SA of POSS (1a) and grammatical SA of POSS (2). The string of PL-POSS are interpreted as hierarchically equivalent so SA cannot target only one of them.

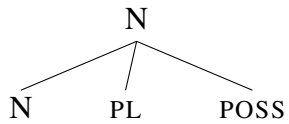


Figure 1. Ternary branching analysis for SA

He provides a three-way ambiguity of an expression like *it-ler-i* 'dog-PL-POSS' (3) for the support of ternary branching (1). The three-way ambiguity results from the order of composition. All items are on the same hierarchical level, so the order of composition becomes ambiguous resulting in the different readings.

(3) *it-ler-i*
dog-PL-POSS
'her/his dogs'

'their dog'

'their dogs'

Adapted from Orgun (1995)

Reading in between the lines, I assume that Orgun takes PL and POSS suffixes to have a different interaction than any other pair of suffixes holds, in a way that they form a complex head when they are adjacent. What he is proposing is not a ternary branching but a complex head formation. A representation of this formulation reflected on the ungrammatical SA in (1a) is given in Figure 2.

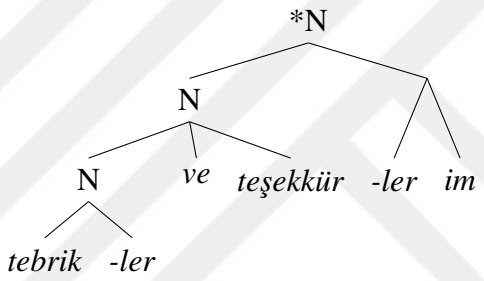


Figure 2. PL and POSS forming a complex head in ungrammatical SA

Forming a complex head of PL-POSS makes the interpretation of the word *tebrikler* and the suffix *ler-im* 'PL-POSS' ungrammatical. The same complex head, however, does not cause a problem for the grammatical SA in (1b) as Figure 3 shows. Figure 3 has equivalent conjuncts and an interpretable relation between the complex suffix *-ler-im* 'PL-POSS' and the nouns *tebrik* 'congrats', and *teşekkür* 'thanks'.

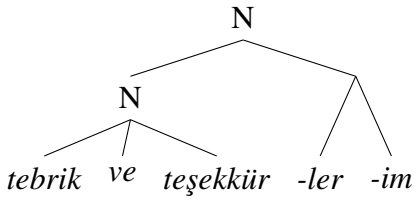


Figure 3. PL and POSS forming a complex head in grammatical SA

Orgun goes on to show that ternary branching is needed for some morphological configurations to satisfy the minimal phonological size ($\sigma\sigma$)

constraint, citing Itô & Hankamer (1989), together with Orgun & Inkelas (1992). He proposes a structural sharing analysis for SA and a ternary branching for PL and POSS suffixes to capture the inseparable SA of PL-POSS. Support for ternary branching in SA comes from somewhat unrelated phonological constraints in affixation of monosyllabic words, i.e. **do-m* [σ] 'do-POSS.1SG', *sol-üm* [σ-σ] 'sol-POSS.1SG'. The ungrammatical SA in (1) is not subject to such a constraint and the three-way ambiguity of an expression like *it-ler-i* 'dog-PL-POSS' is not convincing enough to propose ternary branching. In finalizing the observation that Orgun makes, I provided Figures 2 and 3 following the discussion and the examples provided in Orgun (1995) to paint a more comprehensible picture of his analysis.

2.1.2 Kabak (2007)

Among the papers discussing SA in Turkish, Kabak's paper seems to be the most extensive in terms of providing how SA can take shape in both verbal and nominal domains. The paper provides some conditions for SA. The analysis of Kabak relies on the definition of a morphological word. He defines a morphological word as a word where the final morpheme can terminate a sentence independently of agreement markers. He claims that any inflectional morpheme can be suspended as long as the remainder is a morphological word. Kabak proposes the following:

- Terminal suffix: *A suffix that is allowed to appear at the end of a word, where further affixation is not obligatory.*

He claims that only terminal suffixes can be suspended. He posits that bare verbs are not morphological words in Turkish. He provides Table 3 for verbal terminal suffixes. If any suspension attempt is made with these morphemes, it is only permitted under the condition that what is left is a morphological word.

Kabak classifies clitics like *=mI* '=Q', and *=DA* '=FOC' as non-terminal morphemes but recognizes their ability to end an expression in Turkish (4).

Table 3. Verbal Terminal Morphemes

(i) Agreement markers	
(ii) Aspect/ Modality markers	AOR *-(I)r/(A)r* PROG *-Iyor* FUT *-(y)AcAK* EV *-mIş* NEC *-mAlI*
(iii) Converb markers	*-(y)IncA* *-(y)Ip*

Adapted from Kabak (2007)

(4) a. *koş-tu-n =mu?*
run-PST-2SG =Q
'Did you run?'

b. *ağla-mış-sın =da.*
cry-EV-2SG =FOC
'It looks like you have cried also.'

Adapted from Kabak (2007)

Kabak argues against Kornfilt (1996)'s formulation for SA (5) with two points. According to Kornfilt (1996)'s analysis only the copular forms and further inflectional morphemes can be suspended in the verbal domain.

(5) [$V_{Participle}$ conjunction $V_{Participle}$] + V_{Copula} + Inflectional Morphemes

First, some forms that can be the complements of the copula are not participles and do not always give way to grammatical instances of SA. Although Kornfilt (1996) does not define *-DI* as forming a participle, it is still able to be a complement to a copula *i*. That is why SA in (6) should be grammatical because what is left is a complement to a copula.

(6) a. **O yaz Finike-ye git-ti ve deniz-e gir-di-y-di-k.*
that summer Finike-DAT go-PST AND sea-DAT enter-PST-COP-PST-1PL
Intended 'That summer (we) went to Finike and went swimming.'

b. **Ev-imiz-i sat-sa ve dükkan al-sa-y-dı-k.*
house-POSS.1PL-ACC sell-COND AND shop buy-COND-COP-PST-1PL
'(We) wish (we) have sold our house and bought a shop.'

Adapted from Kabak (2007)

Second, the participle that is formed by the suffix *-mAlI* behaves different than other participles formed by *-mIş* and *-(y)AcAK*. Participles formed by *-mAlI* can't modify nouns (7a). It should be noted that not all participle forms can modify nouns (e.g. formed with *-Iyor*), and despite a lack of modifying capability, *-mAlI* formed participles act as predicted by Kornfilt (1996) in an SA configuration (7b).

(7) a. **çalış-malı adam*
work-NEC man

b. SA of 1SG

ev-e git-meli ve uyu-malı-yım.
home-DAT go-NEC AND sleep-NEC-1SG
'I need to go home and sleep.'

Another point Kabak provides with the example (8), is the suspension of POSS when used together with PL. This contradicts the observations of Orgun (1995).

(8) SA of POSS

Asker-ler ve komutan-lar-ımız
soldier-PL AND commander-PL-1PL.POSS
'Our soldiers and commanders'

Adapted from Kabak (2007)

Kabak points out the effects of some phonological changes in what is left after SA, specifically 1SG and 2SG pronouns that go under base modification (*ben* > *ban*, *sen* > *san*) when affixed with DAT as shown in (9).

(9) a. SA of DAT

Kargo-lar Ahmet ve Mehmet-e gel-di.
shipment-PL A AND M-DAT come-PST[3SG]
'The shipments arrived for Ahmet and Mehmet.'

b. **Kargo-lar ben ve san-a gel-di.*
shipment-PL 1SG AND 2SG-DAT come-PST[3SG]

c. **Kargo-lar ban ve san-a gel-di.*
shipment-PL 1SG AND 2SG-DAT come-PST[3SG]

d. *Kargolar ban-a ve san-a gel-di.*
shipment-PL 1SG-DAT AND 2SG-DAT come-PST[3SG]
'The shipments arrived for me and you.'

For the SA in the verbal domain, Kabak provides an approach that is rather interesting. He makes an observation from Good & Yu (2005), in the spirit of Erdal (2000), about the agreement paradigms in Turkish. In his citing, Kabak says that the z-paradigm of agreement markers contains cliticized forms of words, and the k-paradigm of agreement markers has lexical suffixes. Kabak realizes the shortcomings of this approach and notes there are constructions in which the k-paradigm SA is applicable and other conditions where the z-paradigm SA is not applicable. The k-paradigm is not suspended on its own, but it is suspendable if the tense marker it is attached to is in a TAM II position as in (10).

(10) SA of 1PL

Ev-e git-miş ve uyu-muş-tu-k.
home-DAT go-EV AND sleep-EV-PST-1PL
'There was the time we went home and slept.'

As a last summary, Kabak gives the following points for SA in the verbal domain:

i. the ability of a verbal morpheme to terminate a word is related to its ability to stand without an agreement marker
ii. SA is only applicable if what is left after suspension is a morphological word, and both the conjuncts end with terminal morphemes
iii. Conjuncts with cliticlike endings are interpreted as 3^{rd} person singular, causing agreement mismatches in SA
iv. Nonfinal conjunct's terminal suffix must be overt

Adapted from Kabak (2007)

Kabak recognizes that in SA what is relevant is the size of what is left after suspension. The 'cliticlike' condition on his third point is not clear-cut, and can be extended to other suffixes which have 3^{rd} person singular suffixes that allow SA, that can seemingly end a word without copula (*-mIş*, *-(y)AcAK*, and *-Iyor*, to name a few). This condition relies heavily on what is 'cliticlike'. The paramount observation that Kabak (2007) provides is the relation between a successful SA and what is left as

a morphological word[1]. Kabak evaluates the examples of SA with derivational suffixes as natural coordination of nouns in the lexicon (Wälchli, 2007), and does not regard such examples as SA.

2.1.3 Broadwell (2008)

Broadwell provides a representation for SA using the tools of Lexical Functional Grammar (LFG henceforth). In this approach, the two identical phrases form a new phrase in conjunction that has the same structural properties of its parts. After this point, the suspended affixes are added. The phonological exponent of the right edge conjunct and the suspended affixes are *coinstantiated* as one word. Figure 4 illustrates the structural representation for the SA of PL-POSS in (11). Broadwell claims that this way of representation for SA saves us from (i) interpreting affixes that can be suspended as clitics, (ii) positing conjunction in the lexicon, and (iii) having special annotation for the rightmost conjunct.

(11) SA of PL-POSS

tebrik ve teşekkür-ler-im
congrats and thanks-PL-POSS.1SG
'My congratulations and thanks'

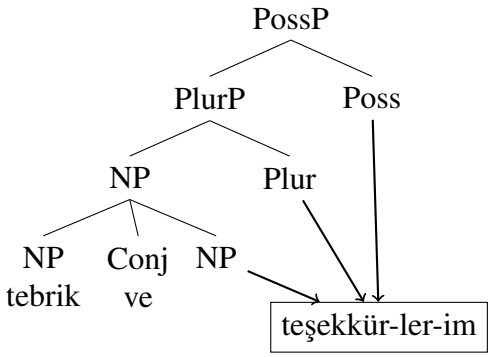


Figure 4. Lexical sharing analysis of PL and POSS in SA

[1] A note of Kabak's informs the reader about the grammaticality judgments that come from 4 native speakers including himself. They all use, as he mentions, the 'İstanbul' variety of Turkish. Some refer to 'Istanbul' variety as 'standard' Turkish. I oppose both the terms since no comprehensive study is provided to define what constitutes a 'standard' or 'Istanbul' variety of Turkish. I take Kabak's statement as his care for not including some regional changes, for example, in agreement paradigms like those later provided in Sağ (2013) for Denizli Dialect, which hosts some observations for the unsespendability of the k-paradigm agreement markers.

An important point which Broadwell makes is that Turkish is relatively productive in SA, but it also makes distinctions that cannot be addressed with a purely lexical approach. It might be posited that SA is only permitted with affixes that can attach to conjoined phrases. This analysis however does not explain why the suspension of POSS is ungrammatical in a string of PL-POSS and does not explain how to categorize suffixes that can have conjoined bases, missing the morphological word requirement of SA in the verbal domain.

2.1.4 Kornfilt (2012)

Kornfilt reiterates points in Kornfilt (1996). Mainly that SA is a syntactic operation much like gapping or ellipsis, that can only target syntactic categories. She gives her account of RNR (Right Node Raising) to account for SA. She claims that a suffix can be suspended only if it has a syntactic projection. This way, she predicts to posit functional heads like Num (NumP), Case (KP), and Possession (PossP) since all three can have SA distinctly. Figure 5 illustrates the abstract RNR analysis for the examples of SA in (12).

(12) a. SA of PL

Kitap ve defter-ler
book AND notebook-PL
Reading1: 'Books and notebooks'

Reading2: 'A book and notebooks'

b. SA of ACC

Kitap ve defter-i al-dı-m.
book AND notebook-ACC buy-PST-1SG
'I bought the book and the notebook.'

c. SA of POSS

Kitap ve defter-im nerede?
book AND notebook-POSS.1SG where
Reading1: 'Where is the book and my notebook?'

Reading2: 'Where is my book and notebook?'

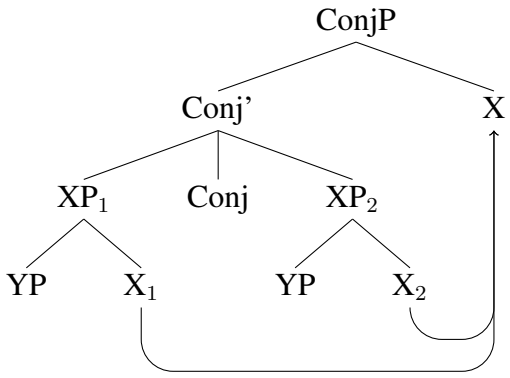


Figure 5. RNR proposal for SA

This is the same analysis that Kornfilt provides for backwards ellipsis for a sentence like (13) as in Figure 6. This way Kornfilt regards SA as another ellipsis process operating on projection heads instead of phrases.

(13) *Ahmet al-dı ve Mehmet sat-tı kitab-ı.*
A[NOM] buy-PST[3SG] AND M[NOM] sell-PST[3SG] book-ACC
'Ahmet bought and Mehmet sold the book.'

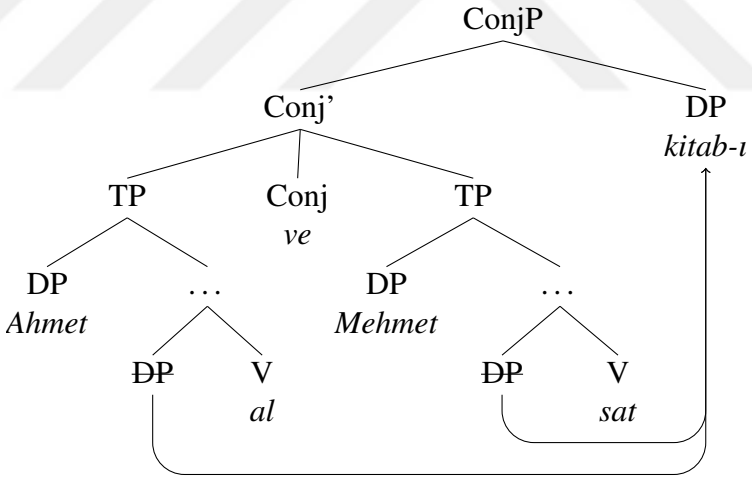


Figure 6. RNR analysis for Backward Ellipsis

Kornfilt argues against SA of derivational suffixes because an example like (14) has a fixed order of conjuncts for a successful suspension. This makes a clear distinction for what is possible to suspend and what is not.

(14) a. *[tuz ve limon]-luk*
salt AND lemon-DER
'[salt and lemon] shaker'

b. **[limon ve tuz]-luk*
lemon AND salt-DER
'[lemon] and [saltshaker]'

The proposed analysis of Kornfilt does not explain why SA of POSS is ungrammatical in a string of PL-POSS. As a terminal node in syntax, there is nothing preventing SA of POSS in PL-POSS by the RNR analysis. It also does not predict why SA of PL-POSS is ambiguous, but SA of CASE is not as shown in (15).

(15) a. Ambiguous SA of PL

kitap ve kalem-ler
book AND pencil-PL
SA: 'books and pencils'

No SA: 'a book and pencils'

b. Ambiguous SA of POSS

kitap ve kalem-im
book AND pencil-POSS.1SG
SA: 'my book and my pencil'

No SA: 'a book and my pencil'

c. Unambiguous SA of ACC

kitap ve kalem-i al-dı-m.
book AND pencil-ACC take-PST-1SG
SA: 'I took the book and the pencil.'

No SA: '* I took a book and the pencil.'

2.1.5 Kharytonava (2011, 2012a,b)

In all her articles, Kharytonava specifically inspects SA in Turkish noun compounds. For a start consider the noun compounds in (16).

(16) a. *Anne-m not defter-i-ni yıka-mış.*
mother-POSS.1SG note book-POSS.3SG-ACC wash-PRF[3SG]
'It seems like my mother washed the notebook.'

b. *Anne-m not defter-im-i yıka-mış.*
mother-POSS.1SG note book-POSS.1SG-ACC wash-PRF[3SG]
'It seems like my mother washed my notebook.'

The default agreement marker is POSS.3SG in Turkish when no possessor is present for the compound. The SA that Kharytonava presents comes into play in compounds with shared bases. (17) shows an example where the shared base is *doğum* 'birth' and the markers on the conjoined nouns can be fully expressed (No SA) or can have two shapes of SA (partial-full).

(17) a. No SA

doğum yer-iniz ve tarih-iniz.
birth place-2PL AND date-2PL

b. Partial SA

doğum yer-i ve tarih-iniz.
birth place-3SG AND date-2PL

c. Full SA

doğum yer ve tarih-iniz.
birth place AND date-2PL
'Your birthplace and birth-date.'

Adapted from Kharytonava (2012a)

The possessive marker is suspended in (17c) and there is no remnant of agreement whereas (17b) leaves behind a possessor that is 3SG. The interpretation of possessive for the second conjunct is still 2SG. On the surface, the existence of POSS.3SG after SA for a POSS.2SG seems problematic. Kharytonava addresses this not as a structural sharing analysis, she rather uses Impoverishment and Feature Geometry to explain such a configuration of SA. She indicates that features are monovalent for referring expressions in Turkish and exponent insertion is modulated by Subset Principle. Table 4 shows the feature geometry she provides for Turkish possessors with the corresponding exponents.

SA in noun compounds works by deleting features. The feature templatic view of no SA is (18a). The feature set for ADDRESSEE-GROUP, by Subset Principle, is *-InIz*. On this templatic view the features in the first conjunct instead of the exponent itself are deleted. This feature deletion results in the following templatic

Table 4. Feature Geometry of POSS in Turkish

Features		Exponent
Participant	Individuation	
Speaker	∅	*-Im*
Addressee	∅	*-In*
Speaker	Group	*-ImIz*
Addressee	Group	*-InIz*
∅	∅	*-(s)I(n)*
∅	Group	*-lArI*

view (18b) and the exponent *-(s)I(n)* is inserted after the first conjunct. Kharytonava (2011) shows that Turkish speakers prefer the Partial SA in (17) to the full SA. This type of analysis for SA falls under an ellipsis analysis which has more appeal and makes better predictions about SA in noun compounds than structural sharing approaches.

(18) a. α-ADDRESSEE-GROUP AND β-ADDRESSEE-GROUP

b. α-∅-∅ AND β-ADDRESSEE-GROUP

Using this deletion analysis, instances like (19) can also be a deletion of the referential feature alongside the tense. 3SG on verbal and nominal predicate domain is not expressed by an overt phonological exponent. The readings should have contrasted in their subject readings if this were to be the case.

(19) a. *Ben hasta ve yorgun-du-m.*
1SG[NOM] sick[3SG] AND tired-PST-1SG
'I was sick and tired.'

b. *Ben ev-e gid-ecek ve gel-ecek-ti-m.*
1SG[NOM] house-DAT come-FUT[3SG] AND come-FUT-PST-1SG
'I was going to come home and go.'

2.1.6 Akkuş (2016)

Akkuş provides some examples for SA in derivational suffixes. He argues that the existence of such examples is not numerous but not that rare. He provides some examples like (20).

(20) a. . . . *yedi ve yirmi-nci bölüm-ler* . . .
. . . seven AND twenty-DER episode-PL . . .
'. . . seventh and twentieth episodes . . . '

b. . . . *beş lira ve on dolar-lık banknot-lar* . . .
. . . five lira AND ten dollar-DER banknote-PL . . .
'[five lira and ten dollar] worth banknotes'

c. . . . *Deprem ve Afet-zede An-ma Yürü-yüş-ü* . . .
. . . earthquake AND disaster-DER remember-NMLZ walk-NMLZ-ACC . . .
'[Earthquake and Disaster] Victims Remembrance March'

d. . . . *dost ve arkadaş-ça bir hava* . . .
. . . fellow AND friend-DER DET air . . .
Lit:'a [friend and fellow]-like armosphere'

Mean: 'a friendly and amiable atmosphere'

Adapted from Akkuş (2016)

Akkuş argues that a natural coordination explanation (Wälchli, 2007) provided in Kabak (2007) falls short of explaining instances of derivational SA. Akkuş reiterates examples from Ackema & Neeleman (2004) and Lieber & Scalise (2006), and points to the two options for explaining derivational SA. First is what is provided in Lieber & Scalise (2006), which suggests that morphology has access to the output of syntax. Second is what is provided in Ackema & Neeleman (2004), which suggests three modules in language, namely syntax, semantics, and phonology, that can have interactions with one another placing morphology within syntax. Both the approaches would allow for morphological elements to have complex bases for derivation or inflection.

2.2 Interim summary of the literature

The literature of SA for Turkish provides some valuable observations, that make it easier to navigate the problems and workings of SA in Turkish. They feature useful data, approaches like LFG, syntactic movements like RNR, and comprehensive coverage of morphological constraints in SA. In the following paragraphs, I

summarise the points made in the literature about SA, and in what ways it can be improved. Then I put a finger on the unaddressed issues.

Orgun (1995) puts forward an anomalous behaviour in the suspension of POSS in a string of PL-POSS. Orgun's solution is to hierarchically align the two for handling the problem of inseparable suspension of POSS.

The observations of Kabak (2007) indicate that the morphological size of what is left after suspension is crucial for a successful SA. Bare verbs are not considered as morphological words even though they are phonological words and get stress under negation *-mA*. The observation of morphological word constraint in SA is quite important since some similar phenomenon of a backwards process in, for example, German only requires the remnant after suspension to be a phonological word (Smith, 2000; Pounder, 2006; Kenesei & Others, 2007). Kabak's paper shows that SA might be possible with some derivational suffixes, yet he strongly suggests that the base for the derivational suffix is a compound like noun that uses a conjoiner for its parts.

Broadwell (2008) entertains a different mode of operation for the analysis of SA. Rather than the suspended suffix originating in both conjuncts, the conjoined phrase is only merged with a single projection of the 'suspended' suffix. Later, as a tool of LFG, the rightward elements coinstantiate as a single word of multiple exponents, appearing as though only the second conjunct has the suffix whereas it is shared structurally and the two conjuncts are at the same level of representation.

According to Kornfilt (1996, 2012), SA is a syntactic operation of RNR, and suspendable suffixes are projections in syntax. This defines a line for the capability of SA for derivational and inflectional suffixes. Her analysis does not explain why SA of CASE is not ambiguous, but the SA of PL or POSS is. The importance of Kornfilt's proposal is the observation of the productivity of SA in the inflectional paradigm. This places an analysis of SA more in the structural side that should have access to syntactic inputs.

Kharytonava (2011, 2012a,b) deviate from all the others in dealing with SA because they deal with a peculiar SA observed in noun compounds. The preference studies that Kharytonava have carried out suggest that partial SA conditions are preferred more than complete morpheme deletions. Unfortunately, the reporting of the studies are not very clear. Only percentages in terms of participant preferences are provided. Furthermore, some arbitrary schemes for grouping subjects by choice frequency are used to draw inferences from the responses being interpreted as grammatical or not.

Akkuş (2016) points to the instances of derivational SA in corpora and argues that they need an explanation contra Kabak's view of natural coordination (Wälchli, 2007). He argues for a revised understanding of what Lexical Integrity Hypothesis in the sense of either Ackema & Neeleman (2004) or Lieber & Scalise (2006) in explaining instances of derivational SA. Akkuş's paper is the only paper that argues for a structural interpretation of SA in derivational suffixes.

As a conclusion, the current literature for Turkish SA provides possible solutions and analyses for SA. The literature does not have a good standing when it comes to answering in what level of language derivation SA takes place. It is not pinpointed well enough to argue for or against any analysis, be it ellipsis or structural sharing. There is no exposure of different conjoiners and what they bring to SA. An analysis of SA should take the SA environment into consideration for a better understanding of the constraints that govern SA.

2.3 Suspended affixation in other languages

The focus and effort of this study is limited to SA in Turkish, but it is beneficial to take observations from other languages where similar SA and SA-like phenomena exist. In the following subsections I provide summaries of such articles in a chronological order. Pounder (2006) shows examples of SA and conjunction reduction from German, Guseva & Weisser (2018) shows examples of SA from Mari, Despić (2017) shows an example of a certain Serbian clitic that mimics SA-like

behaviour, Yoon (2017) shows examples from Korean, and Erschler (2012, 2018) show examples from Ossetic.

2.3.1 German

In Pounder (2006), Pounder presents some example configurations in German for ellipsis-like morphological phenomena. These phenomena, called morphological brachylogy in the paper, include SA, conjunction reduction, and shared bases in German. The paper puts a high emphasis on a diachronic difference in SA of suffixes. Pounder claims that these ellipsis-like processes can be employed in many levels of grammar, the inflectional paradigm, word-formations, and compounding to name a few. While the paper itself provides and lays out a nice presentation of data, this summary revolves around brachylogy of affixes that I refer to as SA for consistency.

I reiterate one of Pounder's examples before moving on with examples of SA in German. In the example (21), the two conjuncts are prefixed verbs, both of which share the same base. The shared base is a verb and the prefixes are conjoined in interpretation. A dash '-' is used to indicate that there is a missing piece in the word.

(21) a. *werde... nicht re-, sondern ent-sozialisier-t*
be... NEG PREF- but_rather PREF-socialize-PART.
'be... not socialized but rather desocialized.'

b. *nicht re-sozialisier-t sondern ent-sozialisier-t*
NEG PREF-socialize-PART but PREF-socialize-PART.
'not resocialised but rather desocialized.'

Adapted from Pounder (2006)

Pounder dubs what is left after the elision of the morphological part as 'fragment' whereas what is elided or reconstructed is called 'recuperand', and the form that the language user infers the recuperand from is called 'target'. For example, in (21a) the fragment is the prefix *re-*, the recuperand is *sozialisiert*, and the target is *sozialisiert*. (22) shows an example from Turkish. In this example, the fragment is a noun *kitap* 'book', the recuperand is ACC, and the target is *kalem-i* (pencil-ACC) 'the pencil'.

(22) SA of ACC

kitap ve kalem-i al-dı-m.
book AND pencil-ACC take-PST-1SG
'I took the book and the pencil.'

I reiterate another example from Pounder in (23) for the example of SA and I provide a mirroring example from Turkish.

(23) a. SA of DER-DER *-schaft-lich*

freund- oder feind-schaft-lich-e Beziehungen
friend- OR enemy-DER-DER-PL relations
'with relations of friendship or enmity'

Adapted from Pounder (2006)

b. *?dost veya düşman-lığ-ı bitir-en ilişki-ler*
friend OR enemy-DER end-FP relation-PL
'the relations that end friendship or enmity'

The expression in (23a) shows an instance of SA for the suffixes *-schaft* and *-lich*, both suffixes are derivational. I gave a similar configuration in (23b) where there is SA of a derivational suffix *-lIK* and ACC. Pounder reports that this process in German has a phonological constraint citing Smith (2000). (24) shows the suffix DER *-isch* that changes the make-up of a phonological word and it cannot be suspended.

(24) **die Provenz-al- und Roman-isch-en Dichter*
the.PL Provence-DER AND romance-DER-PL poets
Intended 'the Provençal and Romantic poets'

Adapted from Pounder (2006)

Pounder cites Booij (1985) in reporting that the vowel initial suffix leads to a mismatch between the phonological and morphological word. She shows a historical contrast in the contemporal ungrammaticality of (24) where SA exists in written form. She claims that German standardization is behind the ungrammaticality of (24) and provides some examples from 17^{th} and 18^{th} century German (25).

(25) a. *Absicht- und Regl-en*
intention- AND rule-PL
'Intensions and rules'

b. *Geberd- und Bewegung-en*
gesture- AND movement-PL
'Gestures and movements'

c. *bey dorf- und stet-en*
by village- AND town-PL.DAT
'In villages and towns'

Adapted from Pounder (2006)

There is an important point to make in (25b). Pounder notes that the fragment *Geberd-* is not the base modified counter part of *Gebärden*. In the suspended version, no umlaut takes place. This shows that SA takes place before a phonological operation like umlaut. (26) shows an example of base modification in Turkish. 1SG pronoun goes under base modification from *ben* to *ban* when it is marked for DAT. SA is not felicitous with both modified and unmodified bases.

(26) a. **Ban ve Ahmet-e bak-tı.*
1SG AND Ahmet-DAT look-PST[3SG]
b. **Ben ve Ahmet-e bak-tı.*
1SG AND Ahmet-DAT look-PST[3SG]
c. *Ban-a ve Ahmet-e bak-tı.*
1SG-DAT AND Ahmet-DAT look-PST
'(S/he) looked at me and Ahmet.'

In the German example (25b), the reconstruction of the fragment and the recuperand is at a more abstract level than phonology since there is no umlaut in the first conjunct. In the Turkish example (26), the reconstruction of the fragment and the recuperand cannot override an expected base modification in the fragment, or even further SA cannot be carried out at all with base modified fragments. Pounder (2006) goes on to interrogate the formulation of conjunction where SA takes place unlike the literature in Turkish.

2.3.2 Mari

Mari is an Eastern Uralic language that has a rather interesting set of data when it comes to SA. Guseva & Weisser (2018) (GW henceforth) provide some examples and analysis for SA in Mari. In (27), I give examples of SA from Mari. Previous

observations of SA have shown that it is a rightward-bound process, but the examples in (27) show not rightward-bound suspensions.

(27) a. SA of INESS in a string of INESS-POSS.2SG

Üder mej-en uše-m den tej-en süm-ešte-t.
girl 1SG-GEN mind-POSS.1SG AND 2SG-GEN heart-INESS-POSS.2SG
'The girl is in my mind and in your heart.'

b. SA of ILL in a string of ILL-POSS.3SG

Pjötr kart-em mej-en perdež-em den omsa-ške-že
Peter map-ACC 1SG-GEN door-POSS.1SG AND wall-ILL-POSS.3SG
pižekta.
pin.3SG.PRS
'Peter pins maps to my door and his wall.'

c. SA of PL-INESS in a string of PL-INESS-POSS.1PL

A-vlak tud-en sad-še den memn-an
child-PL 3SG-GEN garden-POSS.3SG AND 1PL-GEN
pasu-vlak-ešte-na mod-et.
field-PL-INESS-POSS.1PL play-3PL.PRS
'The children are playing in his garden and in our fields.'

Adapted from Guseva & Weisser (2018)

This peculiar SA should not be taken as an evidence against its rightward-bound nature. In Mari, the order of the morphemes in the nominal domain show a relatively free order. The morphemes in question are PL, POSS, Structural and Local cases (SCASE and LCASE in glosses respectively). Table 5 shows some possible orders of these morphemes. There is an optional positioning for the POSS marker. The POSS either occupies the left or the right edge of the morphemes, where the right edge can only build up to the SCASE. It is a barrier that POSS cannot alternate to the right of.

In Mari, there are two linearizations of POSS, PL and LCASE. SA with the surface orderings of LCASE-POSS and PL-LCASE-POSS goes against the rightward-bound constraint, but this observation overlooks the other possible orders of POSS-LCASE and POSS-PL-LCASE. This ambiguous ordering of morphemes is the clue to

Table 5. Mari Nominal Domain Morpheme Order

PL > POSS	*pasu-vlak-na*
POSS > PL	*pasu-na-vlak*
PL > LCASE	*pasu-vlak-ešte*
PL > SCASE	*pasu-vlak-em*
LCASE > POSS	*pasu-šte-na*
POSS > SCASE	*pasu-na-m*
PL > LCASE > POSS	*pasu-vlak-ešte-na*
POSS > PL > LCASE	*?pasu-na-vlak-ešte*
PL > POSS > SCASE	*pasu-vlak-na-m*
POSS > PL > SCASE	*pasu-na-vlak-em*
pasu 'garden', *-vlak* PL, *-na* POSS.1PL, *-(e)šte* INESS, *-(e)m* ACC	

Adapted from Guseva & Weisser (2018)

understanding in what level of derivation SA takes place. This is the point that GW show with an example, adapted here as (28).

(28) a. *Pörjeng memnam da nunem už-eš.*
man.NOM us.ACC AND them.ACC see-3SG.PRS

b. **Pörjeng me da nunem už-eš.*
man.NOM us.ACC AND them.ACC see-3SG.PRS

c. *Pörjeng memna da nunem už-eš.*
man.NOM us AND them.ACC see-3SG.PRS
'The man sees us and them.'

Adapted from Guseva & Weisser (2018)

The 1PL pronoun is *me* in Mari, and the stem for ACC changes from *me* to *memna*. SA is not possible with *me*, but it is possible with the stem *memna*. A similar base or stem change in Turkish also happens when 1SG and 2SG pronouns are used with DAT (*ben* >*bana, sen* >*sana*). Turkish does not allow SA in such instances (29), with or without base or stem change.

(29) a. SA with unchanged base

**Ben ve san-a kitab-ı bul-du.*
1SG AND 2SG-DAT book-ACC buy-PST[3SG]

b. SA with base change

**Ban ve san-a kitab-ı bul-du.*
1SG AND 2SG-DAT book-ACC buy-PST[3SG]

c. No SA

Ban-a ve san-a kitab-ı bul-du.
1SG-DAT AND 2SG-DAT book-ACC buy-PST[3SG]
'S/he bought the book for me and you.'

GW go on to analyze SA in Mari with proposed projections for POSS, PL, and CASE as NumP, DP, and KP. Following Merchant (2015), they propose an underlying order like (30a). On this order, a process of D-lowering takes place and the new ordering looks like (30b). It is at the order of (30b) that SA marks morphemes for zero exponance (shown with a subscript 0) as in (30c). Later, a D-metathesis is performed and the ordering for vocabulary insertion looks like (30d). This is how the suffix orderings in (27) are achieved, an example is partly repeated here.

(30) a. [[[NP] Num]$_{NumP}$D]$_{DP}$ K]$_{KP}$ Underlying Order

b. [[[NP] D Num]$_{NumP}$ t$_D$]$_{DP}$ K]$_{KP}$ D-Lowering

c. [[[NP] D Num$_0$]$_{NumP}$ t$_D$]$_{DP}$ K$_0$]$_{KP}$ SA marking

d. [[[NP] D K$_0$ Num$_0$]$_{NumP}$ t$_D$]$_{DP}$ t$_K$]$_{KP}$ D-Metathesis

Adapted from Guseva & Weisser (2018)

(27') SA of PL-INESS

tud-en sad-še den memn-an pasu-vlak-ešte-na
3SG-GEN garden-POSS.3SG AND 1PL-GEN field-PL-INESS-POSS.1PL
'. . . in his garden and in our fields'

There are important observations to be made in Guseva & Weisser (2018). First, the examples in (27) show that SA is not performed at the surface form. This observation is vital to distinguish SA from Backward Ellipsis in Turkish because Backward Ellipsis takes the surface form into account. Second, (28) shows that SA does not operate morphemes on a derivational level before morpheme specific rules are applied (base/stem change), yet (29) shows that even taking those representations into account does not result in a successful SA in Turkish.

2.3.3 Serbian

According to Despić (2017), Serbian does not have SA, but a certain second-place clitic shows some similarities to affixes in Serbian. This clitic in turn can take place in SA-like ellipsis. SA in Turkish verbal domain has a relation to the clitic copula *-i/ y/ ∅* (31) and the discussion of Serbian provides some insights for it. The existence of the clitic is inferred from the stress[2]. In Turkish, the stress falls on the phonological word and a clitic changes the stress pattern.

(31) a. *Ev-e gel-ecék ve uyu-yacák-tı-m.*
house-DAT come-FUT AND sleep-FUT=COP.PST-1SG

b. *Ev-e gel-ecék ve uyu-yacák i-di-m.*
house-DAT come-FUT AND sleep-FUT =COP-PST-1SG
'I was going to come home and sleep.'

(31a) shows an SA of PST and AGR morphemes, but a closer look reveals what is suspended is a copular form together with tense and agreement markers. This copular which is a clitic can have an overt phonological form *i* which allows for SA (31b). The overtness of the clitic is not enforced, and it is even ungrammatical in some instances (32).

(32) a. *hastá ve yorgún-um.*
sick AND tired-1SG[PRS]
'I am sick and tired.'

b. **hastá ve yorgún i-yim.*
sick AND tired COP[PRS]-1SG

The instance where SA-like process takes place involves the infinitival marker *-ti* and second-place future clitic *će* in Serbian. The bare bones explanation for second-place clitics is that in a clause they occupy the linearly second-place. If they are cliticized to the phonological word they are attached to, then the word can occupy the first place in the clause.

I want to draw a similarity between the infinitival marker *-ti* in Serbian and the infinitival marker *-mAK* in Turkish. Verbs are not free forms in Serbian, just like verbs are not morphological words in Turkish. There is no need for an infinitival

[2]stress is indicated by an accent on the vowel

marker when the verb is inflected, and the inflection is performed on to the left of *-ti* or *-mAK*.

In Serbian, some phonological processes are not triggered by clitics. (33) shows an example for the assimilation of [s] to [ʃ]. This is triggered by the diminutive suffix *će* but not by the second-place future clitic *će*. The suffixes both have the same phonological environment.

(33) a. *Paš-će*
dog-DIM
'small dog'

b. *Vas =će videti*
you.PL.ACC =AUX.3SG.FUT see.INF
'S/he will see you.'

Adapted from Despić (2017)

The second-place future clitic *će* in (33b) is used as a free-standing word. It does not cause phonological changes like the diminutive suffix *će*. (34) shows an example of the second-place future clitic *će* causing phonological change. This time, however, it is adjoined to the word instead of being in its free form.

(34) a. **Jes=ćeš.*
eat=AUX.2SG.FUT

b. *Ješ=ćeš.*
eat=AUX.2SG.FUT
'You will eat.'

Adapted from Despić (2017)

The observation in (34) may place the clitic as a suitable candidate for SA. (35) shows an elision of the second-place future clitic *će* from the second conjunct. In (35), what is left after the elision is not a phonological string of what comes before the clitic, but an infinitival form.

(35) Elision of *će* 'FUT'

a. *Otići će i pogleda=će novi film.*
go.INF AUX.3SG.FUT AND see=AUX.3SG.FUT new.ACC film.ACC

b. **Otići će i pogleda novi film.*
go.INF AUX.3SG.FUT AND see new.ACC film.ACC

c. *Otići će i pogledati novi film.*
go.INF AUX.3SG.FUT AND see.INF new.ACC film.ACC
'He will go and see the new movie.'

Adapted from Despić (2017)

Despić goes into an in-depth analysis to refute an idea of structural sharing of the future clitic. He provides the following example (36). There can be two different subjects in (36), so there is no VP-level conjunction. Despić further examines TP level adverbs in conjunctions, refuting a *v*P level conjunction too.

(36) *Polufinalni program će otvoriti Juentus i Real Madrid, a*
semi_final program AUX.3SG.FUT open.INF J AND R M AND
zatvoriti ga Barselone i Bajern.
close.INF 3SG B AND B
'Juventus and Real Madrid will open the semi-final program, and Barcelona and Bayern will close it.'

Adapted from Despić (2017)

I reiterate an example from Despić about the elision of the second-place future clitic *će* in (37). This example shows that it is possible to delete the second-place future clitic *će* in Serbian under mismatching φ-features.

(37) a. *Ti ćes doći a ja (ću) otići.*
2SG AUX.2SG.FUT arrive.INF AND 1SG (AUX.1SG.FUT) leave.INF
'You will come, and I will leave.'

Adapted from Despić (2017)

This is a direct contradiction to all the suspendable affixes in Turkish verbal domain which have clitic properties. The suspendable agreement marker *-Iz* '1PL' belongs to the m-paradigm and has clitic properties. The unsuspendable agreement marker *-k* '1PL' belongs to the k-paradigm and does not have clitic properties. (38) illustrates both points.

(38) a. *Ev-e gid-ecék ve dinlen-ecéğ-iz.*
house-DAT go-FUT AND rest-FUT-1PL
'We will go home and rest.'

b. **Ev-e git-tí ve dinlen-dí-k.*
house-DAT go-PST AND rest-PST-1PL
Intended 'We went home and rested.'

The m-paradigm agreement markers cannot be suspended under mismatching φ-features unlike the Serbian second-place future clitic *će*. I give an example in (39) where suspension of 2SG is not permitted if the target of the SA is 1SG.

(39) **Sen ev-e gid-ecek ve ben dinlen-eceğ-im.*
2SG house-DAT go-FUT AND 1SG rest-FUT-1SG
Intended 'You will go home, and we will rest.'

As a summary, the Serbian second-place future clitic shows affix like properties, but it undergoes an ellipsis process where mismatches in φ-features can be overlooked. As a contrast, some agreement markers in Turkish show clitic like properties yet they cannot undergo SA when there is a mismatch in φ-features.

2.3.4 Korean

Another language that hosts similar phenomena like SA is Korean. Korean could be considered to be typologically closer to Turkish than the other languages German, Mari, and Serbian. Yoon & Lee (2005), and Yoon (2017) provide a good set of data and some contrasts for SA and its environment. In the following paragraphs, I give the relevant summary of the two papers.

Yoon & Lee (2005) present two conjunction types in Korean that differ in how their conjuncts are formed. In the first, the conjoiner suffix *-kwa* (AND in glosses) conjoins two conjuncts, out of two only the second can be marked for CASE. A mirroring morphological form to this conjoiner could be the cliticized *ile/=lA* in Turkish. I give an example in (40). The second type of conjoiner is the free form *kuliko* 'and', for the sake of argument it can be mirrored by *ve* 'and' in Turkish (41).

(40) a. Korean

John-kwa Mary-ka cip-ey ka-ss-ta.
J-AND M-NOM home-LOC go-PST-DECL
'John and Mary went home.'

Adapted from Yoon & Lee (2005)

b. Turkish

Can=la Meryem ev-e git-ti.
C=AND M[NOM] home-DAT go-PST
'Can and Meryem went home.'

(41) a. Korean

John-i kuliko Mary-ka cip-ey ka-ss-ta.
J-NOM AND M-NOM home-LOC go-PST-DECL
John and Mary went home.

Adapted from Yoon & Lee (2005)

b. Turkish

Can ve Meryem ev-e git-ti-(ler).
C AND M[NOM] home-DAT go-PST-(3PL)
'Can and Meryem went home.'

The two different conjoiners show difference in interpretation. The reading differences lie in distributive or non-distributive readings, compatibility with collective modifiers, and compatibility with collective predicates. An example for the order of readings for both conjuncts is given in (42).

(42) a. *John-kwa Mary-ka ochen-pwul-ul pelessta.*
J-AND M-NOM 5000-dollars-ACC made

b. *John-i kuliko Mary-ka ochen-pwul-ul pelessta.*
J-NOM AND M-NOM 5000-dollars-ACC made
Reading 1: John and Mary each made $5000.

Reading 2: John and Mary together made $5000.

(42a): Reading 2>Reading 1 (42b): Reading 1>Reading 2

Adapted from Yoon & Lee (2005)

This preference for readings is different in both conjoiners, but it does not mean that the conjoiner *-kwa* is incompatible with distributive readings. (43a) shows

a distributive reading for *-kwa*. Another observation is that the conjoiner *kuliko* is incompatible with collective readings (43b).

(43) a. *John-kwa Mary-ka kakkak cip-ey ka-ss-ta.*
J-AND M-NOM each home-LOC go-PST-DECL
'John and Mary each went home.'

b. **?Cheli-ka kuliko Yenghi-ka chayksang-ul hamkkey mantul-ess-eyo.*
C-NOM AND Y-NOM desk-ACC together make-PST-DECL
Intended: 'Chelswu and Yenghi made a desk together.'

Adapted from Yoon & Lee (2005)

The two conjoiners differ with respect to SA. The conjoiner *-kwa* triggers CASE SA, but the conjoiner *kuliko* does not. Yoon & Lee (2005) show a distinction between the two conjoiners deeming *-kwa* as a conjoiner for phrase levels and *kuliko* as a conjoiner for clauses. These observations made so far about Korean conjoiners *-kwa* and *kuliko* show the importance of analyzing conjunction structure.

Yoon & Lee (2005) provide some data and analysis for two conjoiners in Korean, but Yoon (2017) is focused on SA. Yoon presents derivational Korean suffixes that derive verbs or adjectives from nominal bases. These suffixes display a clear-cut difference in allowing SA. In providing SA-independent contrasts between these suffixes, Yoon presents some examples with Lexical Integrity tests of conjoined base, modifying the base, and gapping/ellipsis of the suffix. In expressing the difference between two suffix groups, Yoon uses the terms: Transparent suffix and Opaque suffix. These two terms represent a suffix's ability to be either treated as transparent and visible in morphological or syntactic derivations, or it is treated as opaque and non-compositional. (44) shows overt examples for the contrast between the two groups.

(44) Conjoined base

a. **[Kunul-kwa kilum]-ci-n ku kos*
shade-AND oil-DER-REL that place
'That plot of land, which is shaded and fertile'

b. *Ku-nun [yongkamha-n kwunin-kwa cincengha-n*
3SG-TOP courageous-REL soldier-AND genuine-REL
aykwukca]-taw-ass-ta.
patriot-DER-PST-DECL
'He really lived up to his reputation as a courageous soldier and true patriot.'

Modified base

c. *Cenyek-ey-nun *[etwuw-un kunul]-ci-nun kos*
dusk-LOC-TOP dark-REL shade-DER-REL place
'A place that gets dark at dusk'

d. *Ku-nun [hwullyungha-n hakca]-tap-key yenkwu-lul swi-ci*
3SG-TOP outstanding-REL scholar-DER-COMP research-ACC stop-COMP
anh-nunta.
NEG-PRS
'He never stops dping research, as befits his reputation as an outstanding scholar.'

Gapping/Ellipsis

e. **Ku kos-un kilum-_ kuliko i kos-un kunul-ci-ta.*
that place-TOP oil-_ AND this place-TOP shade-DER-DECL
Intended 'That place is fertile while this place is shady.'

f. *Cheli-nun kwunin-_ kuliko Tongswu-nun haksayng-tap-ta.*
Cheli-TOP soldier AND Tongswu-TOP student-DER-DECL
'Cheli is every bit a soldier and Tongswu (every bit) a student.'

Adapted from Yoon (2017)

(44) shows a clear distinction in the tests, but a suffix does not always behave the same. For example, in (45), the suffix *-tap* behaves like *-ci* in not allowing modification of base. Yoon dubs this category of suffixes as Double-duty suffix.

(45) **[Ceng-kwa alum]-taw-un sa.i*
affection-AND beautiful-DER-REL relation
'Close and beautiful'

The behaviours of suffixes in (44) show that derivational suffixes can have different responses to structural configurations. This is an observation that can prove useful for identifying why, if any, some derivational suffixes in Turkish can take part

in SA and some cannot. Yoon, after further tests and contrasts, provides a table indicating the different category of derivations, a short version is given in Table 6.

Table 6. Response of Different Category Suffixes in Korean to Lexical Integrity Tests

Suffix	Coordination	External Modifiers	Gapping (Base)
Opaque	N	N	N
Transparent	Y	Y	N
Double-duty	N/Y	N/Y	N
Suffix	**Gapping (Suffix)**	**Inbound Ana Island**	**Extraction**
Opaque	N	N	N
Transparent	Y	Y	N
Double-duty	N/Y	N/Y	N/Y

Adapted from Yoon (2017)

The observations of Yoon show that not all derivations are representable as one sub-syntactic and opaque process. Even the ones that have a transparent relation with syntax do not behave the same. Yoon proposes an analysis using word-internal phases, citing Marantz (2007). The analysis boils down to these suffix categories belonging to different word phases. Opaque suffixes combine with the $\sqrt{ROOT}$ assigning the category and take place in the first phase of word derivation. Transparent suffixes combine with category assigned words and take place in the second phase of word derivation. Figure 7 illustrates both phases.

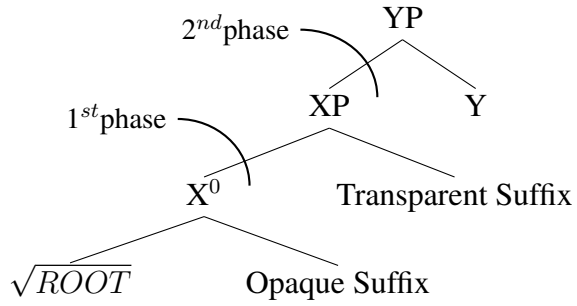


Figure 7. Root internal phase in word-derivation

In Figure 7, there is one suffix for each phase. This does not mean that an opaque suffix always culminates the first phase. According to Yoon, there could be several suffixes that could form a new Root from a base Root without category assignment as the Figure 8 illustrates.

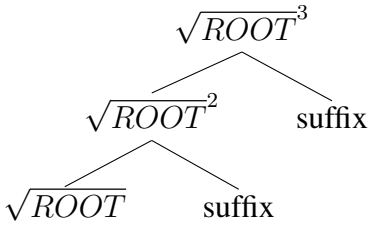


Figure 8. Derived Roots from Root bases in first word derivation phase

The explanation of word formation phases captures the differences in the suffix groups of Transparent and Opaque. Opaque suffixes merge with Roots and cannot be targeted by SA, but Transparent suffixes merge with category assigned words and can be targeted by SA. This explanation can be utilized in explaining why bare verbs are not morphological words and why SA cannot take place with bare verb remnants in Turkish.

2.3.5 Ossetic

Erschler (2012) and Erschler (2018) deal with SA in Ossetic. Ossetic is a language spoken in Caucasus. Ossetic displays a set of data that on the surface seems to be inconsistent when it comes to SA. For example, when a pronoun and a proper noun is conjoined, the choices of CASE for the both conjuncts change depending on the order of the conjuncts (46). In (46a), it seems there is no SA since the pronoun 2SG is marked for OBL. On the other hand, in (46b) there is SA of ABL from the proper noun *Alan*.

(46) SA of ABL

a. *dɐw ɐma Alan-ɐj tarstɐn.*
2SG.OBL AND A-ABL be.afraid.PST.1SG
'I am afraid of you and Alan.'

b. *Alan ɐma dɐw-ɐj tarstɐn.*
A[NOM] AND 2SG-ABL be.afraid.PST.1SG
'I am afraid of Alan and you.'

Adapted from Erschler (2012)

Erschler (2012) deals with SA of CASE in Ossetic. He provides some background into the case system of Ossetic before moving on with examples and

analysis of SA. Definite animates, and personal pronouns are obligatorily marked OBL, inanimate objects are marked NOM, and modifiers are not case marked. All plural nouns in Ossetic lose their final [ɐ] sound when marked by vowel initial case markers. This is taken to be a phonological constraint since consonant initial case markers do not trigger the same alternation. (47) shows an example of dropping [ɐ].

(47) a. *bɐχ-tɐ*
horse-PL[NOM]

b. *bɐχ-t-ə*
horse-PL-OBL

Adapted from Erschler (2012)

Erschler proposes some constraints, first of which is that any case marker can be suspended. This is not so much of a constraint but an observation. The examples in (48) host SA for OBL, SUP, ABL, and LOC.

(48) a. SA of OBL

Soslan ɐma Zalijn-i χɐʤrɐ
S AND Z-OBL house.
'the house of Soslan and Zalina.'

b. SA of SUP

Alan ɐma Soslan-bɐl is-ɐmbalttɐn.
A AND S-SUP PRV-meet.PST.1SG
'I met Alan and Soslan.'

c. SA of ABL

Alan ɐma Soslan-bɐj tarstɐn.
A AND S-ABL be.afraid.PST.1SG
'I was afraid of Alan and Soslan.'

d. SA of LOC

budur ɐma ʁɐd-i bɐrɐ č'ewu-tɐ iš-šerdtoncɐ.
field AND forest-LOC many bird-PL PRV-find.PST.3PL
'They found many birds in the field and the forest.'

Adapted from Erschler (2012)

The second constraint is that the first conjunct in SA should be the base of the case marker, without phonological processes like [ɐ] deletion (49).

(49) a. *bɐχ-t-imɐ ɐmɐ gɐl-t-imɐ*
horse-PL-COM AND OX-PL-COM

b. **bɐχ-t ɐmɐ gɐl-t-imɐ*
horse-PL AND OX-PL-COM

c. *bɐχ-ta ɐmɐ gɐl-t-imɐ*
horse-PL AND OX-PL-COM
'with horses and oxen'

Adapted from Erschler (2012)

Complying with the same constraint, personal pronouns that have different bases for some of the cases need to have those bases as their remnants in the first conjunct (50).

(50) a. *dɐw/*du ɐma Alan-bɐl is-ɐmbalttɐn.*
2SG[OBL]/*2SG[NOM] AND A-SUP PRV-meet.PST.1SG
'I met you and Alan.'

b. *dɐw/*du ɐma Alan-ɐj tɐrsun.*
2SG[OBL]/*2SG[NOM] AND A-ABL be.afraid.PRS.1SG
'I am afraid of you and Alan.'

Adapted from Erschler (2012)

The third constraint for Ossetic SA is what is left after suspension should be an independent (morphological) word. The two branches of Ossetic differ in regarding a reciprocal form 'each other' as an independent word. In Iron Ossetic, it is an independent word and can take part in SA whereas the Digor counterpart is not an independent word and does not take place in SA (51).

(51) a. Iron Ossetic

ʔnɐ=dəwɐ gɐdy-je kɐrɐzi ɐmɐ nɐ=kʷəz-ɐj
POSS1PL=two cat-OBL each.other AND POSS1PL=dog-ABL
tɐrš-ənc.
be.afraid.PRS.3PL
'Our two cats are afraid of each other and of our dog.'

b. Digor Ossetic

nɐ=duwɐ tikiš-i kɐrɐʤe ɐma nɐ=kuj-ɐj
POSS1PL=two cat-OBL each.other AND POSS1PL=dog-ABL
tɐrs-uncɐ.
be.afraid.PRS.3PL

Adapted from Erschler (2012)

The fourth constraint of Ossetic SA is that what is left after SA should not have idiosyncratic meaning. This constraint relates to the 3SG pronoun form *wəm* which has the meaning 'there' that serves as the base for the Dative marked 3SG pronoun (52).

(52) a. *wəm ɐmɐ mɐdinɐ-jɐn didinʤəɐ ratta.*
there AND M-DAT flowers gave

b. *wəm-ɐn ɐmɐ mɐdinɐ-jɐn didinʤəɐ ratta.*
3SG-DAT AND M-DAT flowers gave
'S/he gave flowers to her and Madina.'

Adapted from Erschler (2012)

The final constraint for Ossetic SA is that when both conjuncts are pronouns no suspended affixation takes place, a point illustrated in (53).

(53) a. *mɐn-bɐl ɐmɐ dɐw-bɐl ɐwwɐnduj.*
1SG-SUP AND 2SG-SUP believe.PRS.3SG
'S/he believes me and you.'

b. **mɐn ɐmɐ dɐw-bɐl ɐwwɐnduj.*
1SG[OBL] AND 2SG-SUP believe.PRS.3SG
Intended 'S/he believes me and you.'

Adapted from Erschler (2012)

Following these observations, Erschler argues that SA needs to be a phonological deletion process after vocabulary insertion instead of a structural sharing process. Erschler argues against an approach where case markers are treated as syntactic projections. This in turn makes the structural sharing argument less appealing. He provides the examples in (54) where the complements of adpositions cannot control depictives, but case marked arguments can.

(54) a. *soslan χetɐg-i χɐccɐ rasug-ɐj ʤor-uj.*
S[NOM] X-OBL with drunk-ABL talk-PRS.3SG
'Soslan$_i$ is talking to Xetag$_i$ when he$_{i/*j}$ is drunk.'

b. *soslan χetɐg-bɐl rasug-ɐj=dɐr ɐwwɐnd-uj.*
S[NOM] X-SUP drunk-ABL=EMP believe-PRS.3SG
'Soslan$_i$ believes in Xetag$_i$ even when he$_{i/j}$ is drunk.'

Adapted from Erschler (2012)

In Erschler (2018), he further develops the approach of ellipsis for SA. He provides the alternative question configurations in which SA can take place (55) to show that SA is an ellipsis process.

(55) a. *sɐrmɐt(-mɐ) ɐvi uruzmɐg-mɐ ʤurdtaj?*
S(-ALL) OR.Q U-ALL you.called
'Did you call Sarmat or Uruzmag?'

b. *adɐjmag k^wəd fɐžənd? arv-ə c'ɐʁ(-ɐj) ɐvi šəʤət-ɐj $rajg^w$ərd*
human how appeared sky-OBL blue-ABL OR.Q clay-ABL was.born
'How did the humans appear? Were they born from the sky blue or from clay?'

Adapted from Erschler (2018)

I mirror the examples in (56) for Turkish in two ways. First, the exclusive alternative question is formed by two question clitics *=mI*. Second is a disjunctive yes/no question which is formed with *or* 'veya'. The exclusive alternative question does not allow SA, but the disjunctive yes/no question does.

(56) a. *Ali*(-yi)=mi Mehmet-i=mi ara-dı-n?*
A-ACC=Q M-ACC=Q call-PST-2SG
'Did you call Ali, or did you call Mehmet?'

b. *Ali veya Mehmet-i=mi ara-dı-n?*
A OR M-ACC=Q call-PST-2SG
'Did you call Ali or Mehmet?'

Turkish exclusive alternative questions do not allow for SA unlike Ossetic. One important point needs to be made here. The question clitic *=mI* in Turkish is a focusing element which draws focus to the preceding argument it is attached to. In

exclusive alternative questions, the question clitic *=mI* focuses the target word for SA.

Erschler moves on to pinpointing where the deletion process takes place after claiming that SA is an ellipsis process. He uses the DM framework, and argues that SA takes place after vocabulary insertion but before morpheme specific readjustments. The support for SA taking place after vocabulary insertion comes from the example in (57a) since the fragment after SA is the base for SUP and not the base for NOM. The support for SA taking place before morpheme specific phonological adjustments comes from the example in (57b) since the phonological assimilations of [g]>[ʤ] and [k]>[ʧ] dont take place in the first conjuncts under SA of OBL.

(57) a. *dɐw(-bɐl)/*du ɐma mɐdinɐ-bɐl isɐmbalttɐn.*
2SG.OBL-(SUP)/2SG.NOM AND M-SUP 1SG.met
'I met you and Madina.'

b. i. *park ɐmɐ wənʤ-ə.*
park AND street-OBL
'in/of the street and the park.'

ii. *wəng ɐmɐ parʧ-ə.*
street AND park-OBL
'in/of the park and the street.'

Adapted from Erschler (2018)

Erschler argues that SA is a backward ellipsis process under identity where not all conjuncts should bear [+EMP] feature. He cites Herbeck (2016) in defense of positing information structure features in the lexicon for lexical items where Herbeck argues that Spanish overt pronouns have feature [+FOC]. Overt pronouns need to be discourse configured hence the feature [+EMP] because Ossetic is a pro-drop language like Turkish (cf. Öztürk (2001) overt Turkish pronouns).

2.4 Summary

As a summary of the literature presented in this chapter, I provide the following observations about SA:

- It is a rightward-bound process in the underlying morpheme order: Examples provided in Kabak (2007), Pounder (2006), and Guseva & Weisser (2018) show this for Turkish, German, and Mari.
- It is found both in inflectional and derivational paradigms: Examples provided in Akkuş (2016), and Yoon (2017) show this for Turkish and Korean.
- It takes place after vocabulary insertion and before phonological readjustments: Examples provided in Pounder (2006), Guseva & Weisser (2018), and Erschler (2018) show this for German, Mari and Ossetic.

These are the observations that seem to be consistent in all the articles. However, not all the articles align in the structural analysis of SA. The dominant account for Turkish seems to be structural sharing in nature (Orgun, 1995; Kornfilt, 1996; Broadwell, 2008; Kornfilt, 2012). This account is in line with Ackema & Neeleman (2004), Kunduracı & Göksel (2016), and Bruening (2018) since an output of syntax can become an input for morphology and word formation in such form of language derivation. The accounts provided for other languages like Serbian, Mari, and Ossetic are all ellipsis analyses (Despić, 2017; Guseva & Weisser, 2018; Erschler, 2018). The summary of the literature for Turkish SA presents the following points to be addressed for any further study. It is the aim of this thesis to scrutinize these issues and contribute to the literature in an orderly and comprehensive manner.

- Is SA of derivational suffixes possible in Turkish? If so how, if not why?
- What empirical studies can be used to determine the processing cost of SA?
- How does SA interact with sentence processing?

2.5 Conjunction

The environment of SA is conjunction. I give what conjunction analysis I follow and what the constraints are in forming conjunctions in this section. The functional cue or signal for such conjunction usually have a conjoiner like *veya* ‘or’ and *ve* ‘and’.

These structures are not necessarily additive, and depending on the parts they are putting together, the relations that the parts hold to one another can change. A conjoiner like *ve* 'and' can have additive properties when it conjoins nouns, but an ordering one when it conjoins sentences. (58) shows an example for each.

(58) a. *Ahmet kalem ve kitap al-dı.*
A[NOM] pencil AND book buy-PST[3SG]
'Ahmet bought some pencils and books.'

b. *Ahmet ev-e git-ti ve bulaşığ-ı yıka-dı.*
A[NOM] house-DAT go-PST[3SG] AND dishes-ACC wash-PST[3SG]
'Ahmet went home and washed the dishes.'

The structural representation of conjunctions can prove a bit difficult when other language processes are considered. One interesting behaviour of conjunctions is that the extraction of a conjunct from the conjunction is not felicitous. This is commonly known as Coordinate Structure Constraint (Ross, 1967). (59) illustrates this constraint in Turkish.

(59) **Ahmet ne ve kitap al-mış?*
A[NOM] what AND book buy-PST[3SG]
'*Ahmet bought what and book?'

In addition to this behaviour, conjunctions are not always carried out by overt conjoiners. Some instances of conjunctions can be signalled by small prosodic breaks. I give an example of this in (60) where commas indicate prosodic breaks.

(60) a. *Ahmet pazar-dan domates, biber, patlıcan al-dı.*
A[NOM] market-ABL tomato pepper aubergine buy-PST[3SG]
'Ahmet bought tomatoes, peppers, and aubergines from the market.'

b. *Ahmet pazar-a git-ti, domates al-dı.*
A[NOM] market-DAT go-PST[3SG] tomato buy-PST[3SG]
'Ahmet went to the market, and bought tomatoes.'

Constraints like CSC and the possibility of conjoining more than two elements with or without conjoiners made conjunctions receive a ternary branching analysis. This analysis regards all the conjuncts as elements of the same hierarchical level. Figure 9 shows a simple example for conjunction of three conjuncts.

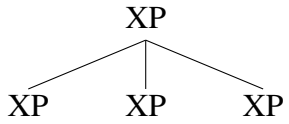


Figure 9. Early conjunction analysis

This analysis however is problematic when binding principles (Chomsky, 1993; Haegeman, 1994) are considered. More specifically, Principle B which states that a pronoun must be free in its binding domain. I use the c-command relation for a simple consideration of what constitutes a binding domain. (61) shows Principle B in Turkish. In this example, the proper noun *Ahmet* c-commands the pronoun 'o(n)' 3SG. This means that the pronoun cannot be co-referential with the proper noun since it is in the binding domain of the pronoun.

(61) *Ahmet*$_i$ *on*$_{*i/j}$*-un arkadaş-ın-ı sev-iyor.*
A[NOM] 3SG-GEN friend-POSS.3SG-ACC like-PROG
'Ahmet$_i$ likes his$_{*i/j}$ friend.'

An analysis like Figure 9 predicts all conjuncts to c-command one another. This means that no conjunct should be able to bind a pronoun within the conjunction. (62) shows an example that goes against such a prediction. In this example, the pronoun *o* 3SG can be co-referential with a proper noun *Ahmet* even if they are in a conjunction.

(62) *Ahmet*$_i$ *ve on*$_{i/j}$*-un arkadaş-lar-ı*
A AND 3SG-GEN friend-PL-3SG
'Ahmet$_i$ and his$_{i/j}$ friends'

Co-referentiality in (62) would have been infelicitous if the pronoun *Ahmet* were to c-command the other conjunct. This means that a ternary branching analysis that treats all conjuncts belonging to the same hierarchical level is problematic.

There are at least three different ways that a binary representation of conjunctions can be achieved. These are Munn (1993)'s adjoined Boolean Phrase (BP) analysis, Johannessen (1998)'s Co(njunction/ordination) Phrase (&P) analysis, and lastly Te Velde (2006)'s pure merge analysis. I briefly explore these analyses in the next subsections.

2.5.1 BP analysis

Munn (1993) revisits and revises the observations made in Munn (1987) for an asymmetric structural interpretation for conjunctions. He proposes that conjoiners form a Boolean Phrase, and work on the basis of semantics. The conjoiner takes an argument, makes a Boolean Phrase (BP), and takes another semantically equivalent argument to form a complete conjunction. The resulting structure bears the syntactic category of the last argument. Figure 10 illustrates a basic representation of the analysis.

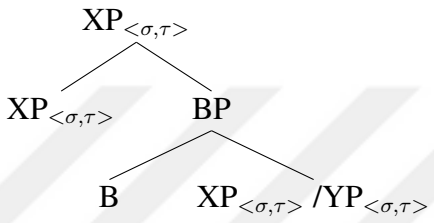


Figure 10. Boolean phrase analysis of conjunction

The structure Munn provides is head initial, and it works on the semantic denotation of the conjuncts. The only requirement for a conjunction is the semantic equivalence. The example (63) shows conjunction of two different syntactic categories in Turkish. The first conjunct is an adverb phrase and the other is a post-positional phrase.

(63) a. *Ahmet dikkatlice ve azim-le çalış-ıyor.*
A[NOM] carefully AND tenacity-INS work-PROG[3SG]
'Ahmet is working carefully and with tenacity.'

Changing the headedness of the analysis can fit it into Turkish and predict the correct c-command relations for (62). Figure 11 illustrates an abstract representation of BP and conjunction.

2.5.2 &P analysis

Johannessen (1998) proposes asymmetric conjunction analysis following the irregularities that conjunctions display in several languages.[3] She categorizes

[3]the title of her work is 'Coordination', and the explanations are provided with that naming. For the sake of cohesiveness I replace the 'Coordination' with 'Conjunction'

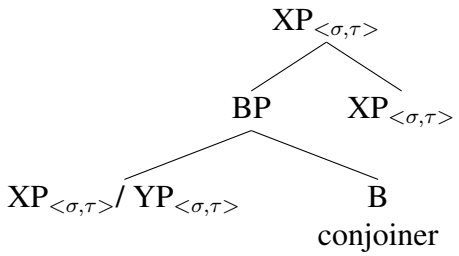


Figure 11. Structural representation of BP for Turkish

conjunctions into unbalanced and balanced conjunctions where a balanced conjunction has, order wise, reversible conjuncts with no cost of grammaticality or form but an unbalanced conjunction does not have reversible conjuncts without a cost of change in the conjuncts or grammaticality. The unbalanced conjunctions can have different types. One of those types that Johannessen dubs 'assigning type unbalanced conjunction' is the base argument for the peculiarities of conjunctions.

In the assigning type conjunctions, one of the conjuncts determine the syntactic relations that the conjunction and other processes hold, such as agreement on the verb. An example for person agreement from Czech (64a) and and example of gender agreement from Latin (64b) are provided in Johannessen where one of the conjuncts determine the agreement. In (64a), the verb holds person agreement with the first conjunct. In (64b), the verb holds gender agreement with the second conjunct.

(64) a. Czech

Půjdu tam [já a ty].
will.go.1SG there 1SG AND 2SG
'You and I will go there.'

b. Latin

[Populi provinciaeque] liberatae sunt.
people.M.PL province.F.PL.AND liberated.F.PL are
'The people and the provinces are liberated.'

as cited in Johannessen (1998)

Johannessen goes on to present more conjunctions of this type to show the conjunction should receive its own syntactic category so that the kind of

constructions like assigning unbalanced conjunctions can be accounted for. Figure 12 illustrates the structural representation she proposes.

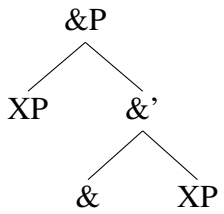


Figure 12. Conjunction phrase analysis

In this analysis, the conjoiner is a functional head that takes two arguments and projects a conjunction phrase. The headedness of the structure follows from the language and in the case of Turkish, the first conjunct is the first argument of the conjoiner and the second conjunct is the second argument. The final conjunction phrase carries the syntactic label of the second conjunct, if syntactic processes that require lexical categories are concerned.

One shortcoming of Johannessen's analysis is that she uses examples of SA from languages like Eastern Mari, Old Uighur, and Turkish to argue for unbalanced conjunctions. I repeat some examples provided by Johannessen (1998) for unbalanced conjunctions in (65). These examples fall into examples of SA. This is not a concern for her analysis, but I mention it here for its relevance to my study.

(65) a. Eastern Mari, SA of PL

[Rveze den ydərvlak] modət
boy AND girl.PL play.3PL
'The boy(s) and the girls are playing.'

b. Old Uighur, SA of ACC

[Jalaŋuq-lar tynlyɣ-lar-yɣ]
man-PL animal-PL-ACC
'the men and the creatures'

c. Turkish, SA of PL and ACC

Elma veya armut-lar-ı ye-di-niz mi?
apple OR pear-PL-ACC eat-PST-2PL =Q
'Did you eat the apples or the pears?'

Adapted from Johannessen (1998)

2.5.3 Pure merge

Te Velde (2006) provides some theory internal objections to both the analysis of Munn (1993) and the analysis of Johannessen (1998). These include the assumptions that both the analyses hold with respect to the conjunct positions. The analysis of Munn suggests that the Boolean Phrase, which has the conjoiner and one conjunct, is adjoined to the other conjunct. The analysis of Johannessen suggests that the conjoiner projects to a conjunction phrase where one of the conjuncts is the complement and the other conjunct is placed on the specifier position of the conjunction phrase. Te Velde argues that the specifier adjunct positions should be subject to movement in theory. Movement out of a conjunct on the other hand is not permitted (Ross, 1967).

Te Velde argues for an analysis that regards a conjoiner as a defective syntactic category with no phrase projection akin to BP or &P. He claims that conjunction is carried out at the base positions with 'Pure Merge' as he cites Chomsky (1999). The conjoiner signals a process of conjunction that triggers certain constraints that are set for a conjunction. These include the copying and checking over the syntactic and semantic features, where the features differ in their influence over the well-formedness of the conjunction. This solves a theory internal problem in terms of the place status of conjuncts. Base generation removes the analyses of adjunction or specifier positions.

Te Velde provides an example from German where two prepositions are conjoined and used with a single noun. In (66a), the preposition *in* 'in' assigns DAT and *um* 'around' assigns ACC. The noun *Stadt* is used with an accusative article *die* instead of a dative *der*. Te Velde argues that there is no independent evidence to argue for an ellipsis analysis to account for (66a) as in (66b).

(66) a. *Wir kaufen heute in*$_{\text{DAT}}$ *und um*$_{\text{ACC}}$ *die Stadt ein.*
we buy today in AND around the.ACC city in
'We're going shopping in and around the city.'

b. *Wir kaufen heute in ~~der Stadt~~ und um die Stadt ein.*

Te Velde (2006)

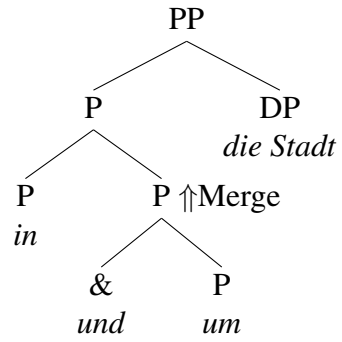


Figure 13. Base generated conjunction

I have provided three analyses of conjunctions in this section. All of them have a hierarchical representation. Munn (1993) provides an adjunction analysis of BP where BP consists of one conjunct and a conjoiner. BP is later adjoined to the other conjunct. Johannessen (1998) provides a full conjunction phrase analysis where one of the conjuncts is the complement and the other is the specifier of &P which is headed by a conjoiner. Te Velde (2006) provides a pure merge analysis where one of the conjuncts is merged with the other at base position. In this study, I follow the analysis of Munn (1993). The analysis of Johannessen places one of the conjuncts on a specifier position which should be open to movements as Te Velde argues. Te Velde further argues against an adjunction analysis of Munn but he recognizes that adjunction and merge do not have clear distinctions to argue against. Te Velde's arguments mostly revolve around arguing against a conjoiner that could check or assign case, or a specifier position for conjunctions. I recognize that Te Velde's analysis can prove useful as a general interpretation of conjunction but none of the examples he provides are adjusted for a head final and an agglutinative language like Turkish. One of the examples Te Velde provides right after (66a) is (67). He provides the structural representation in Figure 14 for the analysis of (67).

(67) *Fritz dankt und begrüßt den Herrn.*
F thanks AND greets the.ACC gentleman
'Fritz thanks and greets the gentleman.'

Te Velde (2006)

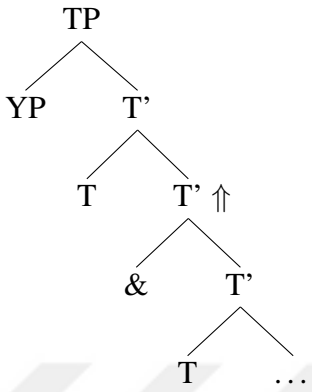


Figure 14. Te Velde tense conjunction

I give a sentence with argument structure of (67) in (68). The same structural analysis Te Velde provides cannot be carried out for Turkish. The functional head for tense is suffixed to the verb. A base merge of a partial construction to the head projection of tense as in Figure 14 is not possible.

(68) *Ahmet adam-ı gör-dü ve çağır-dı.*
A[NOM] man-ACC see-PST[3SG] AND call-PST[3SG]
'Ahmet saw and called the man.'

Accounting for the sentences like (68) requires a whole other exploration of the mechanisms of conjunction that Te Velde provides. Not all are related to this study. That is why I only use the semantic equivalence condition for a successful conjunction of phrases and adopt Munn (1993)'s analysis in treating conjunctions.

CHAPTER 3

TESTING SUSPENDED AFFIXATION

In this chapter, my aim is to explore some aspects of SA empirically. These include the suspendability of derivational suffixes, the processing cost of SA, and the effect of the conjoiner. I present 2 experiments I conducted. The first is an acceptability study with 214 participants that investigates the suspendability of derivational suffixes with two conjoiners. The second is a self-paced reading study with 160 participants that investigates the processing cost of SA with different number of suffixes and two different conjoiners.

3.1 Experiment 1

In the literature of SA in Turkish, it is claimed that SA is only operational for inflectional suffixes (Orgun, 1995; Kornfilt, 1996; Broadwell, 2008; Kornfilt, 2012) apart from Akkuş (2016). Isolated examples for SA of derivational suffixes can be found in corpora, but the literature treats them as exceptions. One similarity of this exceptionalism can be argued for the instances of SA in German. The examples provided in German (Pounder, 2006) have a dash "-" character at word endings where the suspended affix should be recovered, and the examples are from written literature sources dating back to 17^{th} century. I designed a simple acceptability study to see whether SA of derivational suffixes are acceptable, and how the conjoiner choice affects the acceptability. I took a subset of the derivational suffixes that take nominal bases and produce nominals from a list in Göksel & Kerslake (2004). I give the derivation examples for the suffixes in (1).

(1) a. *düş-er-cesine*
fall-AOR-DER
'as if falling'

b. *yalan-cı*
lie-DER
'liar'

c. *kahve-msi renk*
coffee-DER colour
'colour resembling coffee'

d. *üç-üncü*
three-DER
'third'

e. *sorun-lu adam*
problem-DER man
'troubled man'

f. *düşman-lık*
enemy-DER
'enmity'

g. *sınır-sız internet*
limit-DER internet
'limitless internet'

h. *iki-şer*
two-DER
'two by two'

The suffixes I chose do not have a particular property that makes them suitable candidates for SA. I used some of the observations of Yoon (2017) where he suggests that some suffixes belong to a different morphological phase and retain their atomic properties even after vocabulary insertion. The morphemes that retain syntactic visibility choose category assigned bases and can take part in SA. Among the suffixes I selected, some show differences in what they take as a base. In (2), I provide a small description for the unique differences that some suffixes display.

(2)
- *-CasInA* can take bases that are modified with a participle like PRF, PROG, or AOR.
- *-CI* takes noun bases and it is an agent nominalizer
- *-(I)msI* takes properties (adjectives,nouns) and returns properties similar but not equal to its base
- *-(I)ncI* takes numerals and returns an ordinal numeral
- *-(ş)Ar* takes numerals and returns adverbs

I designed an acceptability study where a yes or no answer is provided for an expression hosting an SA construction. My purpose in this experiment was to investigate how much the suspension of the suffixes in (1) were acceptable and how they compared to ACC. Additionally, I investigated the effect of a conjoiner choice between *ve* 'and' and *veya* 'or'. In the following subsections I lay out the participants, materials, procedure, results, and analysis of the experiment.

3.1.1 Participants

The participants were 214 students from Boğaziçi University who are native speakers of Turkish. In exchange for their participation, they received 1 point to their overall course score with the consent of the course's instructor.

3.1.2 Materials

The experiment comprised of two variables: Suffix with 9 different levels (8 derivational and 1 inflectional ACC suffixes) and Conjoiner with 2 levels (*ve*'and', *veya* 'or'). For each suffix there were 3 distinct items. This way there were 54 experimental items. Additionally there were 27 grammatical and 27 ungrammatical fillers. A latin square design by conjoiner type was applied, forming two lists of 27. This resulted in each participant seeing only 27 experimental items and 54 fillers. The order of trials was randomized for each participant. An example set of experimental items for ACC and *-CAsInA* is given in (3). I carried out the experiment using ibexfarm (Drummond, 2013). For the full list of items and fillers (1-27 and 100-154), see Appendix A.

(3) a. DER_AND

Ev-e koş-ar ve zıpla-r-casına gel-di-m.
house-DAT run-AOR AND jump-AOR-DER come-PST.1SG

b. DER_OR

Ev-e koş-ar veya zıpla-r-casına gel-di-m.
house-DAT run-AOR OR jump-AOR-DER come-PST.1SG
'I came home as if running and/or jumping.'

c. INFL_AND

Ev-e defter ve kitab-ı getir-di-m.
house-DAT notebook AND book-ACC bring-PST.1SG

d. INFL_OR

Ev-e defter veya kitab-ı getir-di-m.
house-DAT notebook OR book-ACC bring-PST.1SG
'I brought home the book and/or the notebook.'

3.1.3 Procedure

Participants were provided with a link to the experiment prompting them with a consent page. Upon giving consent participants went through 5 practice items and they were prompted again for the beginning of the experiment. Each trial proceeded with a full sentence and participants decided on whether the sentence they read was a natural/ok sentence in Turkish. They professed their decision by pushing 'Q' key for 'yes' and 'P' key for 'no' on the keyboard. The experiment only recorded choice and response time. Participants were redirected to a separate page where they provided their student information to be relayed to the course's professor for the extra credit after the experiment was done. This information is kept separate from the experiment results, keeping participant information and experimental data anonymous.

3.1.4 Results

The results were recorded onto a csv file and imported to R (Team, 2013) for data cleaning, aggregation, and analysis. The data consisted of 17415 data points before cleaning. 1 experimental item with a typo and 1 experimental item with a possible ambiguity are excluded from the data. A further 3 filler items are excluded because they had particular configurations that lead to increased misparsing like garden path sentences. After this exclusion, accuracies of the participants are calculated relying on their answers for filler items. 9 participants with accuracies lower than 70% are excluded from the data. Trials that were not between 2-20 seconds of response time are considered outliers and also excluded from the data. This cleaning process resulted in the loss of 14% of the data. In Figure 15, I give the average acceptability of each suffix by conjoiner type[1].

For more inference in the acceptabilities, I fit a linear mixed model to responses using Conjoiner and Suffix as predictors with random effects for subject and item. I give the results of the model in Figure 16. The points indicate median estimates and the thick line represents %50 credible intervals and the thin line

[1] from here on out all vertical errorbars indicate confidence intervals adjusted for within subject variation (Cousineau, 2017).

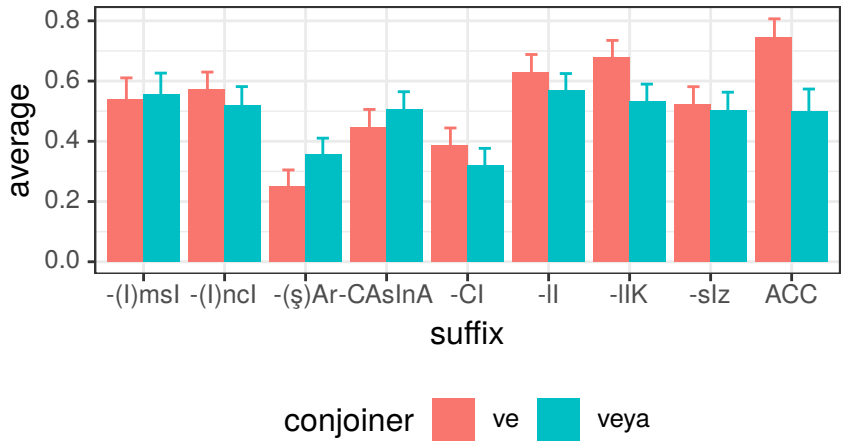


Figure 15. First experiment, average acceptability for SA of suffixes by conjoiner

represents the %95 credible intervals. The log-odd estimates above zero indicate increased odds of suspendability relative to the other derivational suffixes or conjoiner.

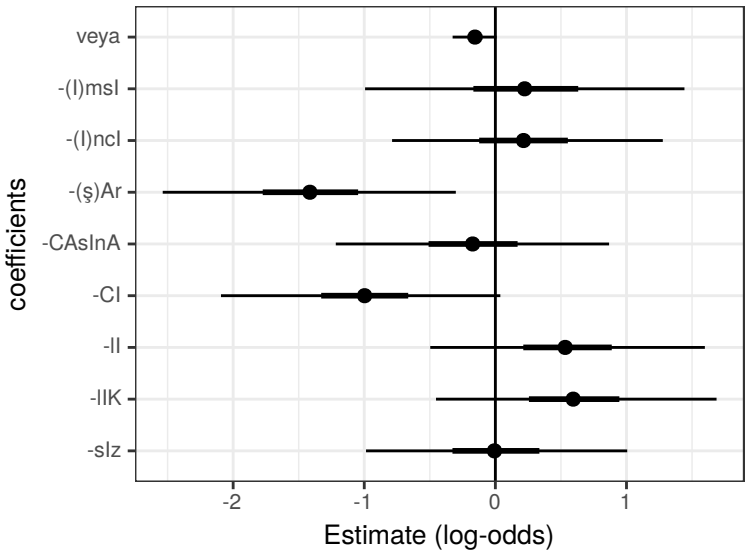


Figure 16. First experiment, model results fit to grammaticality judgments with the predictors Suffix(8 derivational, 1 inflectional) and Conjoiner(ve, veya)

3.1.5 Analysis

Figure 16 shows wide posterior probability distributions for the coefficients. One of the reasons for this is the low item count for each suffix. Another reason can be the varying degree of behaviour among the participants. The conjoiner choice of *veya*

"or" decreases the acceptability for SA in general. It also shows that suffixes do not behave uniformly in terms of acceptability. The suffixes *-lI* and *-lIK* seem to have the highest acceptabilities among all derivational suffixes, trailed by *-(I)ncI* and *-(I)msI*. There is no particular grouping of derivational suffixes in terms of acceptability. Positive estimates in this case don't indicate suspendability being grammatical or not, it is just a comparison made relative to a grand mean.

The two suffixes *-(I)ncI* and *-(ş)Ar* take numerals as their base and they both derive a nominal. They differ in average acceptability and the model results indicate a very small overlap in credible intervals. The suffix *-CAsInA* takes participle forms as its base[2] and participle forms can end sentences with 3SG interpretation in Turkish. This indicates that such bases are already assigned a lexical category.

The varying degree of average acceptabilities among derivational suffixes and the similar results of the model show that SA of derivational suffixes in Turkish does not rely on a morphological phase analysis. If such an analysis were to hold true, the suffixes that take the same base should have behaved the same and the suffix taking participle base should have faired better. If a morphological phase analysis is not viable according to the experiment results, an approach that could capture the varying degree of acceptability is needed. The approach I take is the frequencies of the suffixes. For this purpose I extracted the frequencies of all four derivational suffixes (*-lI,-lIK,-sIz*, and *-CI* that TS Corpus (Sezer et al., 2013) had parsed). I give the relative proportion of the suffixes in Figure 17.

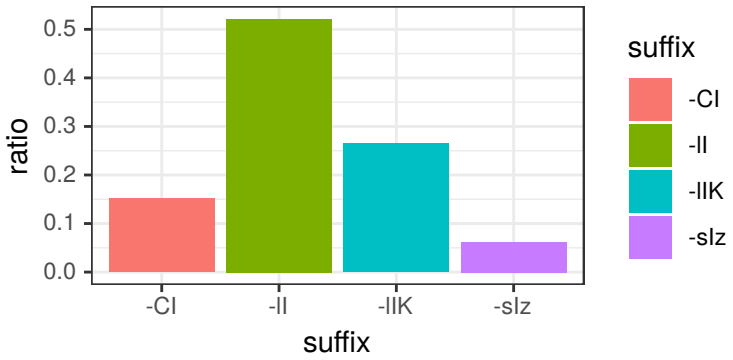


Figure 17. Relative proportion of derivational suffixes in TS Corpus

[2]it can take simple nouns too, but all the examples in the experiments are participle forms.

The suffixes with the highest acceptabilities were *-lI* and *-lIK*. These two are the first two most frequent suffixes among the four presented in Figure 17. Unfortunately not all derivational suffixes are readily extractable from the corpus data. The relative frequency of the suffixes in the corpus is not equally reflected by the experiment results and the experiment results indicate *-CI* being less likely to be suspended compared to *-sIz* even though it is relatively more frequent in the corpus.

The experiment results do not reflect the order of relative frequencies of these suffixes. The suffixes *-lI* and *-lIK* indeed have the highest acceptabilities in the experiment results, yet they aren't to the proportions of their relative frequencies. The suffix *-CI* is relatively more frequent compared to *-sIz* but fairs less acceptable in the experiment results. This means that raw frequency of a morpheme is not enough to explain the results. The two suffixes *-(I)ncI* and *-(I)msI* might hold an answer. These two suffixes receive similar acceptabilities with close estimates and overlapping credible intervals.

I made a search in TS Corpus (Sezer et al., 2013) for examples of SA of the two suffixes *-(I)ncI* and *-(I)msI*. I provide two small CQP search keys (Hardie, 2012)[3] in (4) for SA of *-(I)ncI*, with the numbers ranging from one to ten, and for *-(I)msI* with noun and adjective bases.

(4) a. *-(I)ncI* TS corpus search key

[word="(bir|iki|üç|dört|beş|altı|yedi|sekiz|dokuz|on)"][word="ve"]
[word="(.+nc(ı|i|u|ü))"]

b. *-(I)msI* TS corpus search key

[PosTag="Noun|Adj"][word="ve"][PosTag="Adj" & word="(.+ms(ı|i|u|ü))"]

There are many examples for the SA of *-(I)ncI* within ∼500 hits. The same can not be said for *-(I)msI* which has the same acceptance rate as *-(I)ncI* but the corpus search does not result in an SA of *-(I)msI* within ∼500 hits. This discrepancy

[3]CQP notation lets the user combine multiple features for a word in a corpus. These features include things like lexical category and morphological composition, together with regular expressions to specify certain character strings. A hit means a positive result matching the provided search key, and not all hits mean examples of suspended affixation.

between similar acceptabilities but different corpus results can be explained by the relative frequency of these suffixes according to the context they are used in. The examples for SA of *-(I)ncI* mostly comprise of texts written by clerks or reporters that refer to the passage or paragraph numbers of a law. In (5), I give some partial examples from the corpus search results for (4a).

(5) SA of *-(I)ncI* in corpus

a. *. . . hüküm-ler bir ve iki-nci fıkra-lar-da yeniden*
. . . provision-PL one AND two-DER paragraph-PL-LOC again
düzenlendiğinden . . .
change.because . . .
'. . . because the provisions were adjusted again in the first and second paragraphs . . . '

b. *. . . kanun-un dört ve beş-inci madde-ler-i*
. . . law-GEN four AND five-DER article-PL-POSS.3SG
değiş-tir-il-miş . . .
change-CAUS-PASS-PRF[3SG] . . .
'. . . the forth and the fifth articles of the law were changed . . . '

There are examples in texts related to football, education, and others but texts related to law are more prominent. Unfortunately, text types are not tagged in TS Corpus. That's why it is hard to identify which text belongs to which context. I made a pseudo classification for the search results with the text categories of law, football, education, and others. I made the categorization depending on what the twenty words before and after the search hit contained. If those words contained an inflected or derived form of some words they are categorized according to the list of words they match. In (6), I provide what words defined a category of text. If twenty word periphery of the search hit contained an inflected or derived word outside the lists, it is categorized as 'others'. This resulted in the classification of total 513 hits into 229 counts of law, 175 counts of others, 58 counts of education, and 51 counts of football in terms of what context the hit was in. This means that texts that are related to 'law' are more numerous, thereby they are more likely to host examples for SA of *-(I)ncI*.

(6) a. Law: *kanun, hüküm, fıkra, madde, paragraf, yönetmelik, nüsha*

‘law, provision, paragraph(archaic), article, paragraph, regulations, copy(archaic)’

b. Football: *gol, takım, lig, futbol, puan, oyun*

‘goal, team, football, point, game’

c. Education: *sınıf, ders, okul, eğitim, öğrenci*

‘class, course, school, education, student’

3.1.6 Conclusion

The results of the experiment, comparisons of some derivational suffixes, and the related corpus searches provide two main observations about the suspendability of derivational suffixes. First, purely structural explanations can’t predict varying acceptabilities. Second, suffixes with similar acceptabilities do not result in similar number of examples in the corpus. The examples in corpus show that the acceptability for SA of a derivational suffix is related to its relative frequency given the context it is used in. Taking these observations into consideration, I propose the following: The acceptability for SA of a derivational suffix is related to the relative frequency of the suffix given the context it is used in. When the relative frequency increases, the acceptability should increase too. Additionally the conjoiner *veya* ‘or’ decreases acceptability for all suffixes.

3.2 Experiment 2

The aim of this experiment is to see what the cost of SA in a local environment is and if it is additive by the number of suffixes using a self-paced reading study. A local environment means that the target conjunct and the source conjunct for the suspended affix(es) are in the adjacent periphery of the conjoiner. Target conjunct is where the affix is interpreted but phonologically covert and the source conjunct is where it is overt. In the case of Turkish, the source conjunct is the rightmost conjunct as illustrated in (7).

(7) CONJ1$_{target}$ (conjoiner) CONJ2$_{source}$

SA in the nominal domain is ambiguous except than the SA of CASE. SA in the verbal domain, on the other hand, does not result in ambiguity, and the SA capable suffixes can be stacked. This enables me to test the effects, if any, of suspending different number of suffixes. In addition to changing the amount of suffixes, I investigate if the acceptability decreasing effect of the conjoiner *veya* 'or' in the first experiment will be reflected by increases in reading times.

There is one concern with using verbal domain for SA. The target conjunct can only be reduced to a verb plus a participle morpheme. These participle morphemes can have 3SG agreement interpretations on their own. Should an effect arise in SA amount changes, it might be related to the mismatches between the first and second conjuncts instead of SA. There are additional conditions to meet this concern. These conditions are formed by changing an aspect or agreement of the first conjunct. This provides a contrast in terms of distinguishing an effect of suspension from feature mismatches. I lay out the experiment and analysis of the results in the following subsections.

3.2.1 Participants

The participants were 160 students from Boğaziçi University who are native speakers of Turkish. In exchange for their participation they received 1 point to their overall course score with the consent of the course's instructor.

3.2.2 Materials

The experiment comprised of three variables. The first variable was the Amount of SA with the levels: No SA, One SA, and Full SA. In No SA, no suffix is suspended. In One SA, only one suffix is suspended. In Full SA, two suffixes are suspended. The second variable is the Conjoiner with the levels: *ve* 'and' and *veya* 'or'. The third variable is Contrast with the levels: Contrast and Parallel (No SA). In this last variable one of the suffixes in the first conjunct is altered to have a grammatical

feature mismatch between the conjuncts. This contrast is only performed on the No SA conditions. This resulted in an experiment design with 4x2 conditions combining the amount of SA and conjoiner type, plus two conditions where there is a contrasting first conjunct for No SA condition. There were 24 distinct items together with 48 filler items. All experimental and filler items were grammatical. A latin square design by condition was applied, forming 8 lists of 24. This resulted in each participant seeing only 24 experimental items and 48 fillers. All the experimental items had a four-word pre and four-word post conjunction regions. (8) shows a template for an experimental item. In (9), I give an example set of experimental items with all the conditions. All the experimental items and fillers had a comprehension question with half of them having "yes" and the other half having "no" as the correct answer. I carried out the experiment using ibexfarm (Drummond, 2013). For the full list of items and fillers (1-24 and 100-148) see Appendix B.

(8) 4WORDS CONJ1-α-β *ve/veya* CONJ2-α-β 4WORDS

(9) a. No SA:AND/OR

. . . yap-sa-ymış-ım ve/veya gönder-se-ymiş-im . . .
. . . do-COND-PRF-1SG AND/OR send-COND-PRF-1SG . . .

b. One SA:AND/OR

. . . yap-sa-ymış ve/veya gönder-se-ymiş-im . . .
. . . do-COND-PRF AND/OR send-COND-PRF-1SG . . .

c. Full SA:AND/OR

. . . yap-sa ve/veya gönder-se-ymiş-im . . .
. . . do-COND AND/OR send-COND-PRF-1SG . . .

d. Contrast:AND/OR

. . . yap-sa-ymış-ız ve/veya gönder-se-ymiş-im . . .
. . . do-COND-PRF-1PL AND/OR send-COND-PRF-1SG . . .

3.2.3 Procedure

Participants were provided with a link to the experiment prompting them with a consent page. Upon giving consent participants went through 5 practice items and then they were prompted again for the beginning of the experiment. Each trial proceeded by the participants pushing the "space" key, for each key stroke a word at the center of the screen appeared and by each key stroke it was replaced with the following word in the sentence. After the sentence was read, the participants were presented with a statement that was either true or false according to the sentence they read. The statement was made about a dependency that was formed within the sentence. This could have been a modification of a noun or the verb, or the argument relations within the sentence. Participants professed their decision by pushing "Q" key for "yes" and "P" key for "no" on the keyboard. The experiment only recorded word reading times, responses, and response times. After the experiment was done, the participants were redirected to a separate page where they provided their student information to be relayed to the course's professor for the extra credit. This is kept separate of the experiment results, keeping participant information and experimental data anonymous.

3.2.4 Results

The results were recorded onto a csv file and imported to R (Team, 2013) for data cleaning, aggregation, and analysis. Two items with a typo are excluded from the data (they do not count in initial data points). The data consisted of 38720 points before cleaning. 4 articipants whose accuracies were below 70% are excluded from the data. After these exclusions, 15.48% of the trials which had incorrect answers for the comprehension question is excluded from data analysis. The trials in which a word had a reading time that was outside 100-3000 milliseconds were considered outliers and those trials are also excluded. The whole cleaning resulted in the loss of 25.03% of the data. In Figure 18, I give the average reading times per word with a representative sentence for the conditions of suspension amount.

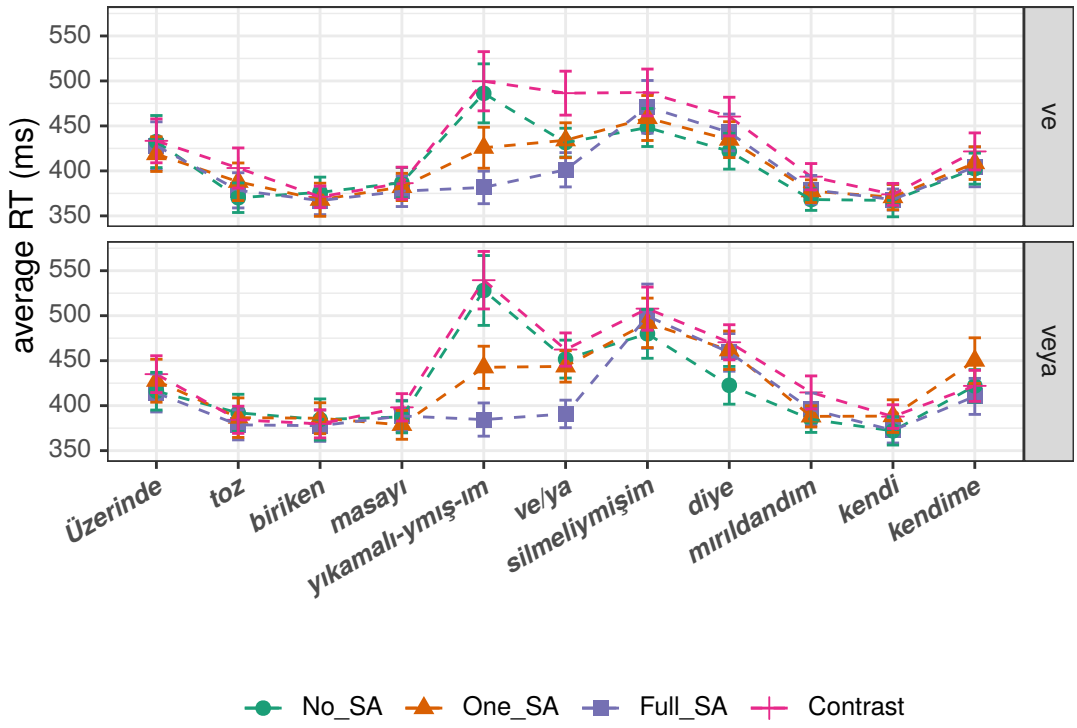


Figure 18. Second experiment, average reading times of a sentence for all categories(No SA, One SA, Full SA, Contrast) and conjoiners(ve, veya)

The critical region in all the sentences is the 7^{th} word. In the case of Figure 18 it is *silmeliymişim* '(I) should have cleaned (something)'. The spillover region is the two words after the critical region. In this case the words *diye* 'saying that' and *mırıldandım* ' (I) mumbled'. In Figure 19, I give the average reading times of the critical and spillover region words by experimental conditions.

There is an increase in critical and spillover regions with the conjoiner *veya* 'or'. The amount of suspension does not display a similar trend in all the regions. In the critical region and the first spillover word, there is a slight increase by the number suspended suffixes. Contrasting sentences have higher reading times compared to suspension of one and two suffixes. This indicates that feature mismatches between the conjuncts lead to different processes other than SA.

For more inference on the effects of SA, I fit 3 linear mixed models for the reading times of the critical and spillover region words. I used SA amount and Conjoiner as predictors with random effects for subject and item. I used sliding differences contrasts for the SA amount, and sum contrast for the Conjoiner. Sliding

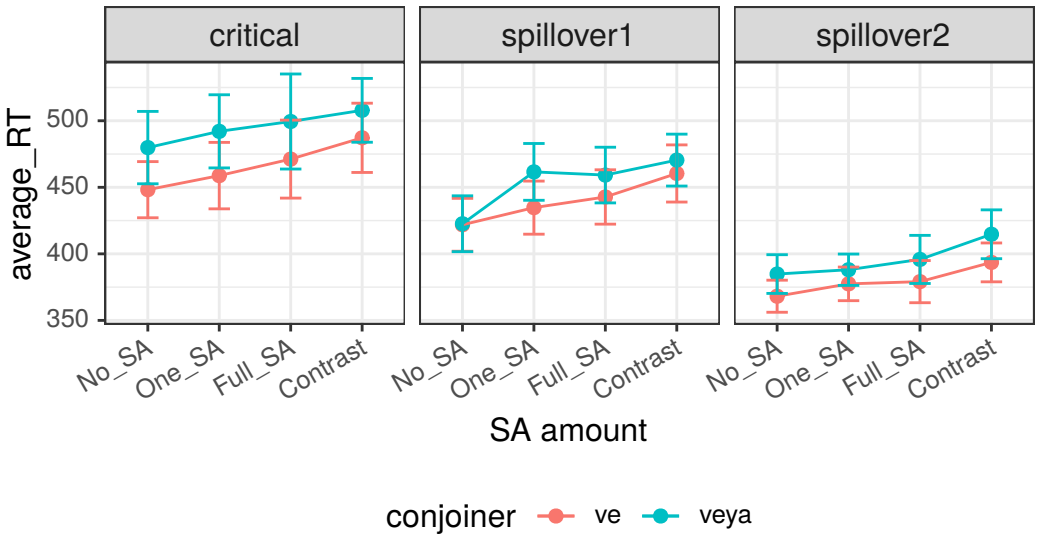


Figure 19. Second experiment, average reading times of critical and spillover regions for all categories(No SA, One SA, Full SA, Contrast) and conjoiners(ve, veya)

differences mean that the comparisons are made between the levels of the differences. This follows from the expectation of varying effects depending on the SA amount, which is an incremental but not a categorical change. I give the models' results for SA amount in Figure 20. The model results indicate an increase in spillover region for the suspension of one suffix, with no additive effects by suspending one more suffix. The conjoiner *veya* 'or' increased reading times consistently in all regions.

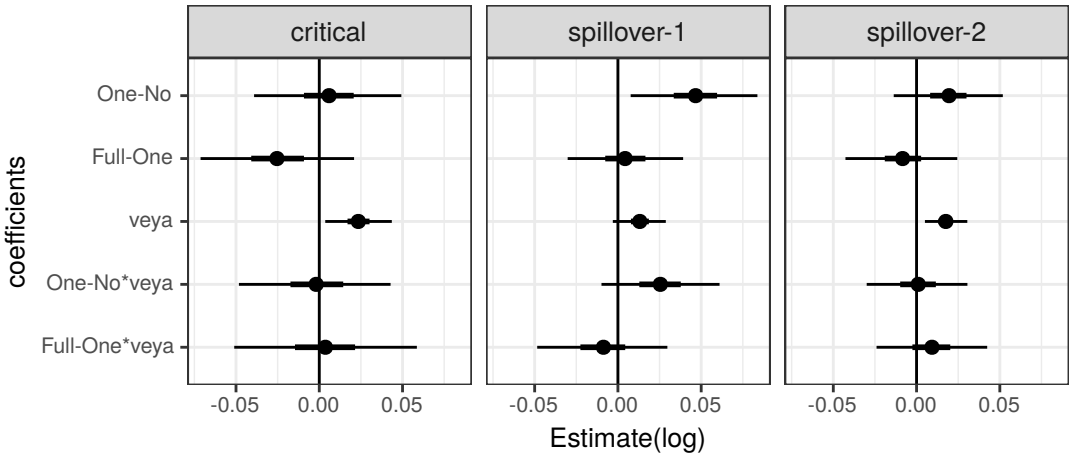


Figure 20. Second experiment, model results for the SA amount conditions fit to reading times with the predictors SA amount(No SA-One SA-Full SA) and Conjoiner(ve, veya)

In addition to the effects of SA, I fit another 3 models for the reading times of the critical and spillover region words using feature match between conjuncts and conjoiner as predictors with random affects for subject and item. I used sliding difference for feature match, comparing Contrast to No SA, and sum contrast for the conjoiner. The results indicate an increase in reading times in Contrast conditions (Contrast, No SA) in all regions, with an increase in reading times by the conjoiner *veya* 'or' only in the critical region and the second spillover region word.

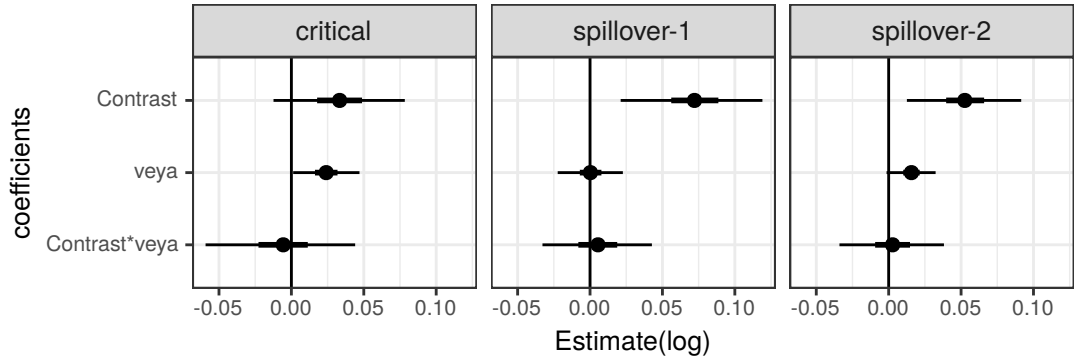


Figure 21. Second experiment, model results for the feature mismatching conjuncts fit to reading times with the predictors Contrast(Contrast, No SA) and Conjoiner(ve, veya)

Figures 20 and 21 indicate that suspending an affix and feature mismatches between conjuncts increase reading times. I fit 3 other models to compare only One SA and Contrast conditions in all the regions with random effects for subject and item. This time I used sum contrasts across the board. If the two levels behave the same, the comparison should result in indifference between One SA and Contrast. I give the models' results in Figure 22. The results indicate increased reading times in Contrast conditions compared to One SA. This differentiates the operation of SA and feature mismatches between the conjuncts.

3.2.5 Analysis

In this experiment, the main aim was to identify the cost of SA. The results indicate that suspending a suffix is costly but it is not additive. The conjoiner *veya* 'or' increased reading times, this is a similar trend of decreasing acceptabilities in the first

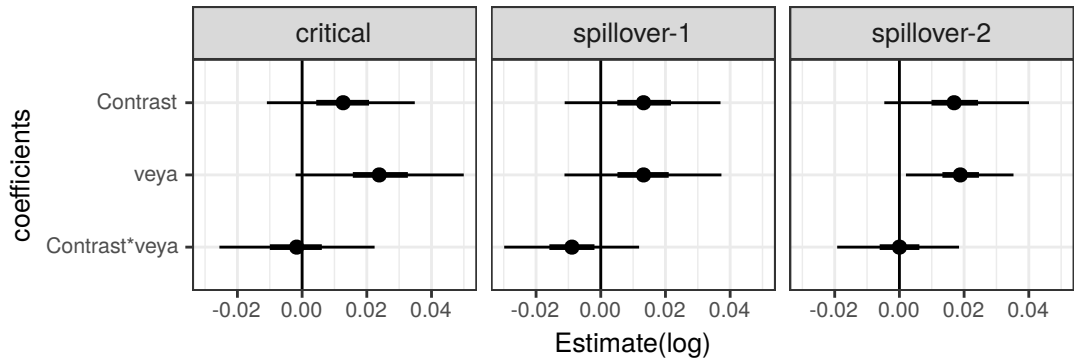


Figure 22. Second experiment, model results for the comparison of suspending an affix (One SA) and feature mismatching conjuncts (Contrast) fit to reading times with the predictors of Category(Contrast-One SA) and Conjoiner(ve, veya)

experiment. The feature mismatches between the conjuncts also lead to increased processing cost but they are greater than those of suspension. In the first experiment this effect is directly realted to SA, because the response was directly related to SA. In this experiment the main effect of the conjoiner in reading times can not be tied to SA. An increase in reading times can be caused by the semantic difference between the two conjoiners *ve* 'and' and *veya* 'or'. This means that the conjoiner effect in this experiment is not related to SA directly. If there was such a relation, the conjoiner *veya* 'or' and the suspension conditions should have had an interaction effect, presumably an increase in reading times for suspending suffixes in an environment formed by the conjoiner *veya* 'or'.

3.3 Conclusion of Experiments 1 and 2

The first experiment was conducted in the nominal domain and the analyses were based on responses. It aimed to compare suspendability of derivational suffixes to the suspension of inflectional ACC. The results and the analyses indicate that suspendability of derivational suffixes is less related to structural explanations than it is to the frequency of those suffixes. This does not mean, however, that a structural explanation is not required. If the context relative frequency of a suffix is given as an explanation, a more gradient measurement is needed. Additionally using a conjoiner

veya ‘or’ decreased acceptability of SA overall, this needs to be addressed theoretically. I reserve the discussion of the conjoiner to Chapter 5.

The second experiment was conducted in the verbal domain and the analyses were made based on the reading times. It aimed at observing the effects of performing SA. It compared suspending different number of suffixes with using two different conjoiners for the environment. It made another comparison using contrasting features in the first conjunct to distinguish an effect of SA from an effect of feature mismatch between the conjuncts. The results and the analyses indicate that performing SA is costly but not additive. The cost of performing SA is different than an effect of mismatching features between the conjuncts.

CHAPTER 4

SUSPENDED AFFIXATION AND SENTENCE PROCESSING

The previous chapter focused on SA and its environment. The results of the first experiment showed that SA is mostly reserved for inflectional suffixes and changes in the environment of SA affects its acceptability. The second experiment showed that performing SA has a non-additive cost that differs from an effect of conjuncts with mismatching features.

In this chapter my aim is to investigate how SA would interact with sentence processing. I first give the structural explanations for SA. I then present a structural ambiguity environment dependent on SA. I come up with an experiment design using the ambiguity environment and come up with hypotheses for the results. I end the chapter by reporting on the experiment results and analysis.

4.1 Processing suspended affixation

The overall interpretation from Chapter 2 indicates that SA is interpreted under two approaches. The first approach (Orgun, 1995; Broadwell, 2008; Kornfilt, 2012) argues for structural sharing in different ways, the second approach (Erschler, 2018; Guseva & Weisser, 2018) argues for an ellipsis analysis where exponents of morphemes are deletedİn the following subsections I give what both approaches predict for the processing of SA.

4.1.1 Lexical sharing

In the lexical sharing approach, the suspended affix is affixed to the whole conjunction as illustrated in Figure 23.

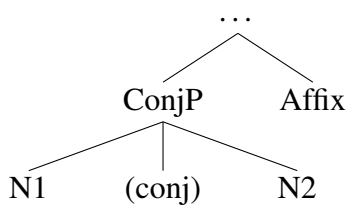


Figure 23. Abstract representation of lexical sharing

In this approach, the feature values for the suffix are encoded in the whole conjunction as opposed to being only encoded in the second conjunct. Figure 24 shows a representation of SA in the expression *kitap ve kalem-ler-i* 'the books and the pencils'.

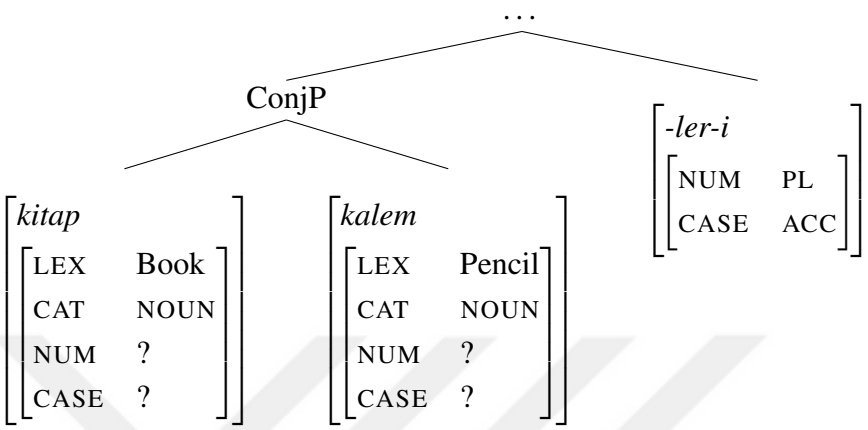


Figure 24. SA of PL and ACC in lexical sharing

The number feature has two values in Turkish: SG and PL. PL has an overt exponent *-lAr* but the exponent for SG is ∅/zero. The exponent for NOM in case feature is also ∅/zero. A basic lexical sharing approach would never have SA if zero exponents are used for feature encodings. The nouns would already have feature encodings with zero exponents. A remedy for this can be an update of the features, where the feature encodings in the affix override the default values signalled by zero exponent (∅). In ambiguous cases of SA, such as the suspension of the PL and POSS, this update depends on a choice to perform SA or not. In unambiguous cases of SA, such as the suspension of CASE, this update is not a choice but obligatory for a successful interpretation.

4.1.2 Ellipsis

In the ellipsis approach, the suspended affix is encoded for the second conjunct and the value of that affix is recovered for the first conjunct as illustrated in Figure 25.

In this approach, the feature values of the suffix are first encoded to the conjunct it is attached to. Later, the values for that suffix are encoded for the first

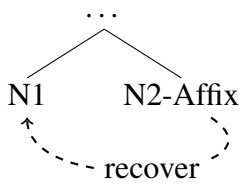


Figure 25. Abstract representation of ellipsis analysis

conjunct. Figure 26 illustrates the ellipsis analysis for SA of PL-ACC in *kitap ve kalem-ler-i* 'the books and the pencils'.

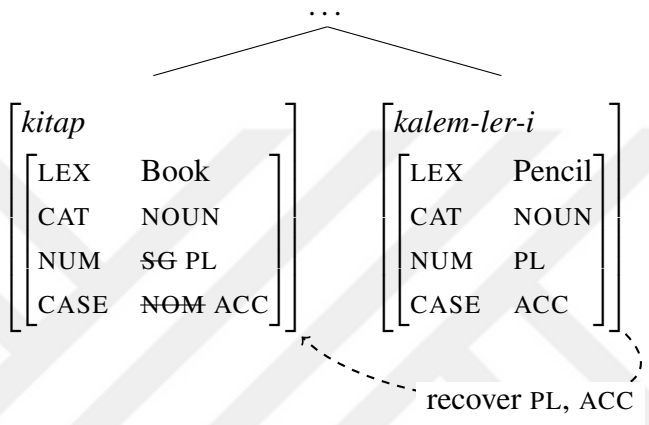


Figure 26. SA of PL and ACC in ellipsis

The two approaches do not predict differences in the processing of SA. For both approaches to work, a process of updating feature values takes place. In the cases where SA is ambiguous this update depends on the parser's choice. On the simplex sentences, the SA of CASE is unambiguous. The unambiguous CASE SA is an incentive for both approaches to predict that SA of CASE is always carried out in a local environment where the first conjunct is encoded by zero (∅) exponent. In this study, I investigate if the unambiguous CASE SA in simplex sentences have effects on ambiguous CASE SA in complex sentences. In the next section I introduce the ambiguous environment that depends on whether CASE SA takes place.

4.1.3 Environment

In Turkish, there is an ambiguity environment where the ambiguity depends on whether SA of CASE takes place. See (1) for an example. The ambiguity depends on

the SA of ACC. If SA takes place, the nouns *çocuk* 'child' and *kadın* 'woman' form a conjunction and become the object of the embedded verb *kurtar-* 'to save'. If SA does not take place, the noun *çocuk* 'child' and the noun *adam* 'man' form a conjunction and become the subject of the main clause.

(1) *çocuk ve kadın-ı kurtar-an adam ev-e gel-di.*
child AND woman-ACC save-FP man home-DAT come-PST
SA: '[the man who saved the child and the woman] came home.'
No SA: '[the child] and [the man who saved the woman] came home.'

This means that the unambiguous CASE SA in a simplex sentence can be made to be ambiguous in a complex one. This ambiguity can be regulated by a pronoun as a disambiguator like in (2).

(2) *kadın ve yolcu-yu kurtar-an adam [onları/ birbirlerini] uyar-dı.*
woman AND passenger-ACC save-FP man them/ each_other warn-PST
'the man who saved the passenger and the woman warned them.'
'the woman and the man who saved the passenger warned each other.'

In this environment, a pronoun *birbirlerin*-CASE 'each_other' requires two antecedents that are both subjects. A main clause subject in Turkish requires NOM as CASE. This means that the CASE value for the first conjunct should remain NOM as encoded by the zero (∅) exponent. This requires that no SA to take place. The other pronoun *onlar*-CASE 'them' requires a resolution of two antecedents that are the objects of the relativized verb. In this case, SA needs to take place for the pronoun to be processed grammatically.

4.2 Experiment 3

The main aim in this experiment is to answer the following questions:

- Do people keep performing CASE SA even when it is ambiguous?
- If so, does the parallelism between the conjuncts influence it?

4.2.1 Hypotheses

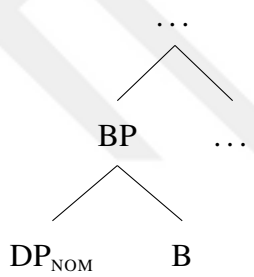
Now that the SA of CASE is made to be ambiguous, I present how the deterministic and probabilistic parsers can operate in this ambiguity environment. I first outline the two outcomes that the deterministic serial parser predicts, then I outline how the probabilistic serial parser can operate and what is predicts.

4.2.2 Deterministic serial parser

The two main principles of this parser is minimal attachment and late closure. The ambiguity environment depends on how the conjunction is formed. Specifically how CASE is taken into consideration when forming a conjunction. In an example like (3), the first word receives a NOM value for CASE and by the time the conjoiner is reached the first conjunct is formed.

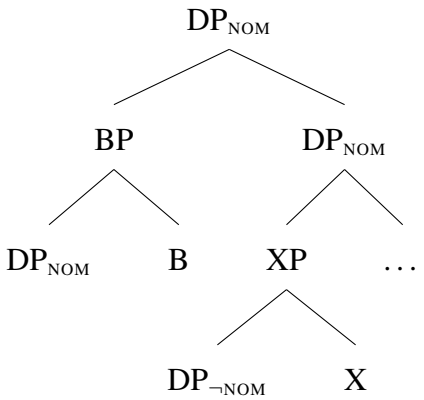
(3) a. *adam* *ve* ...
man[NOM] AND ...
'the man and ...'

b.



If the conjunction continues with a noun that is not marked with the same CASE, there are two options to consider. The first one works as the following. The CASE value of the first conjunct determines the CASE value of the second because nouns marked with different cases can't be conjoined in Turkish. Once the second conjunct is designated to have NOM as its CASE value, encountering a noun with a different CASE should result in positing an embedded clause and the different CASE marked noun to be interpreted within it. As illustrated in (4). This amounts to maintaining late closure, because the second conjunct was designated to have NOM as its case.

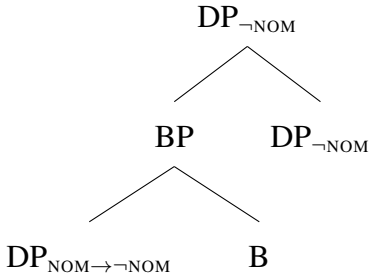
(4)



A deterministic serial parser does not force the structure in (4). That is a result of assuming that the parser keeps conjuncts parallel in their CASE value immediately after the conjoiner. If such a parallelism is not taken into account and CASE mismatches are only handled after a possible conjunction is formed, a different structure is predicted.

Let us assume that the parser is given a second conjunct that is not marked with NOM as in (5). The correct parsing of this structure requires a grammaticality filter. Once both conjuncts are encoded with their own CASE values, a filter of comparing the two and deciding whether or not the conjunction can be saved needs to take place. In (5), the first conjunct is marked with NOM which does not have an overt exponent. This enables the parser to perform SA. This amounts to keeping minimal attachment, even though it requires additional processes that are costly. The resulting conjunction is marked with the case of the second conjunct and the parsing continues with the embedded verb taking the conjunction as its argument.

(5)



The specific environment I provided uses embedded sentences to establish an ambiguity of CASE SA. To achieve that, the noun after the conjoiner is followed by a relativized verb. If the structure in (4) is adopted, the verb is interpreted only with the second noun. The head noun of the relative clause is marked with NOM. This head

noun becomes the second conjunct, satisfying CASE match with the first conjunct. If the structure in (5) is adopted, the verb is interpreted with both nouns that come before it and the head noun of the relative clause becomes one noun that is not part of a conjunction.

As a result, a deterministic serial parser can predict either performing SA or not depending on the assumption of how a conjunction is formed. If the conjuncts are taken to be parallel in CASE immediately after the conjoiner, SA is not performed. If the CASE parallelism is a grammaticality filter after a potential conjunction is formed, SA is performed.

4.2.3 Probabilistic serial parser

As per the deterministic serial parser, the probabilistic one can also predict both outcomes of performing or not performing SA in ambiguous environments. This time however the difference does not rely on how the conjunction is formed, but it relies on the processes that would include and follow performing or not performing SA. Instead of a filter of grammaticality or syntactic interpretation, a race between the options is taken. Following from the representation of (3), the parser encounters the second conjunct that is not marked with NOM. Performing or not performing SA are the two structural options.

Let us take the route of performing SA and consider the processes that it entails. For a parser to know that it is in an SA environment, it needs to compare the CASE values of both conjuncts to see if SA is even felicitous. This can be an operation initiated by the conjoiner even before the second conjunct is reached, as a constraint for building a grammatical structure. Once the comparison is made and the first conjunct is shown to have NOM as its CASE, an operation of feature value update of the first conjoiner from NOM to the CASE of the second conjunct takes place. Then a conjunction of the two nouns is formed and the verb after the second noun takes the conjunction as its argument. This amounts to performing SA. The processes are the

comparison of the two conjuncts in their CASE values and updating the feature value of the first conjunct when permissible.

Taking the route of not performing SA requires other processes. When the second conjunct is encountered and it is marked with CASE other than NOM a comparison of CASE with the first conjunct is made, as presumably initiated by the conjoiner and not by the second conjunct. Not performing SA requires positing an embedded clause that the second noun belongs to. The nature of the ambiguity is accomplished through using ACC, DAT, LOC, and ABL. All arguments with those CASE values require a verb to be interpreted under. Positing an embedded structure includes the processes of building a VP and a nominalization because the first conjunct is a noun and semantic equivalence is a constraint for conjunction. This means that not performing SA involves one process of positing an embedded sentence which would entail building a complex structure of a verb and a nominalization.

As a result, a probabilistic serial parser predicts a result compatible with performing SA over not performing SA under the assumption that it ranks the cost of positing an embedded structure higher than of performing SA. Performing SA is an update in feature values, but not performing SA is building up a complex structure.

4.2.4 Participants

The participants were 132 students from Boğaziçi University who are native speakers of Turkish. In exchange for their participation, they received 1 point to their overall course score with the consent of the course's instructor.

4.2.5 Materials

I used the environment I introduced in the previous section and altered the disambiguation and parallelism between the conjuncts. I provide the template for an experimental item in (6)('W' stands for 'word', abbreviated because of space limitations).

(6) [1W] CONJ1 and CONJ2-CASE [2W] PRONOUN [1W] MainVerb

The pronoun is the factor of Disambiguation with levels: Subject and Object. In Subject, *birbirlerin*-CASE 'each_other' disambiguates towards a no SA reading. In Object, *onlar*-CASE '3PL' disambiguates towards an SA reading. The factor Parallelism has two levels: Parallel and Non-parallel. In Parallel, the conjoiner is immediately followed by a noun. In Non-parallel, the conjoiner is followed by an adjective first and then a noun. In (7), I give partial sentences for all the experimental conditions.

(7) a. Subject, Parallel

. . . [baron] ve [şövalye-yi . . . kral] birbirlerini . . . dinle-yecek.
. . . baron AND knight-ACC . . . king each_other . . . listen-FUT
'. . . [the baron] and [the king who . . . the knight] will listen to each other . . . '

b. Subject, Non-parallel

. . . [baron] ve [cesur şövalye-yi . . . kral] birbirlerini . . . dinle-yecek.
. . . baron AND bold knight-ACC . . . king each_other . . . listen-FUT
'. . . [the baron] and [the king who . . . the bold knight] will listen to each other . . . '

c. Object, Parallel

. . . [baron ve şövalye-yi] . . . kral onları . . . dinle-yecek.
. . . baron AND knight-ACC . . . king 3PL . . . listen-FUT
'. . . the king who . . . [the baron and the knight] will listen to them . . . '

d. Object, Non-parallel

. . . [baron ve cesur şövalye-yi] . . . kral onları . . . dinle-yecek.
. . . baron AND bold knight-ACC . . . king 3PL . . . listen-FUT
'. . . the king who . . . [the baron and the bold knight] will listen to them . . . '

After every sentence, a statement was presented and the participants judge if the statement was true or false depending on the sentence they read. The statement targeted the theta role assignments. It had two types. One that was only true with SA (Object conditions), meaning that the first conjunct held theta role relation with the embedded verb. The other was only true with no SA (Subject conditions), meaning

that the first conjunct held theta role relation with the matrix verb. For the full list of sentences (items 1-40, fillers 101-180) and questions (items 1-40, fillers 101-180) see Appendix C

(8) a. Subject true (no SA)

Baron kral-ı … dinle-yecek.
Baron[NOM] king-ACC … listen-FUT[3SG]
'The baron will listen to the king …'

b. Object true (SA)

Kral baron-u ödüllendir-miş
King[NOM] baron-ACC reward-PRF[3SG]
'The king … the baron.'

4.2.6 Procedure

Participants were provided with a link to the experiment prompting them with a consent page. Upon giving consent, the participants went through 5 practice items and then they were prompted again for the beginning of the experiment. Each trial proceeded by the participants pushing the 'space' key, for each key stroke a word at the center of the screen appeared and by each key stroke it was replaced with the following word in the sentence. After the sentence was read, the participants were presented with a statement that was either true or false according to the sentence they read. They professed their decision by pushing 'Q' key for 'yes' and 'P' key for 'no' on the keyboard. The experiment only recorded word reading times, responses, and response times. After the experiment was done, the participants were redirected to a separate page where they provided their student information to be relayed to the course's professor for the extra credit. This is kept separate of the experiment results, keeping participant information and experimental data anonymous.

4.2.7 Results

The results were recorded onto a csv file and imported into R (Team, 2013) for data cleaning, aggregation, and analysis. The data consisted of 140714 data points. 1

subject with accuracy lower than 70% in filler items is excluded from the data. The trials which had a word with reading times outside 100-3000 milliseconds are considered as outliers and also excluded. These exclusions resulted in the loss of 8.17% of the data. In Figure 27, I give the average reading times per word with a representative sentence.

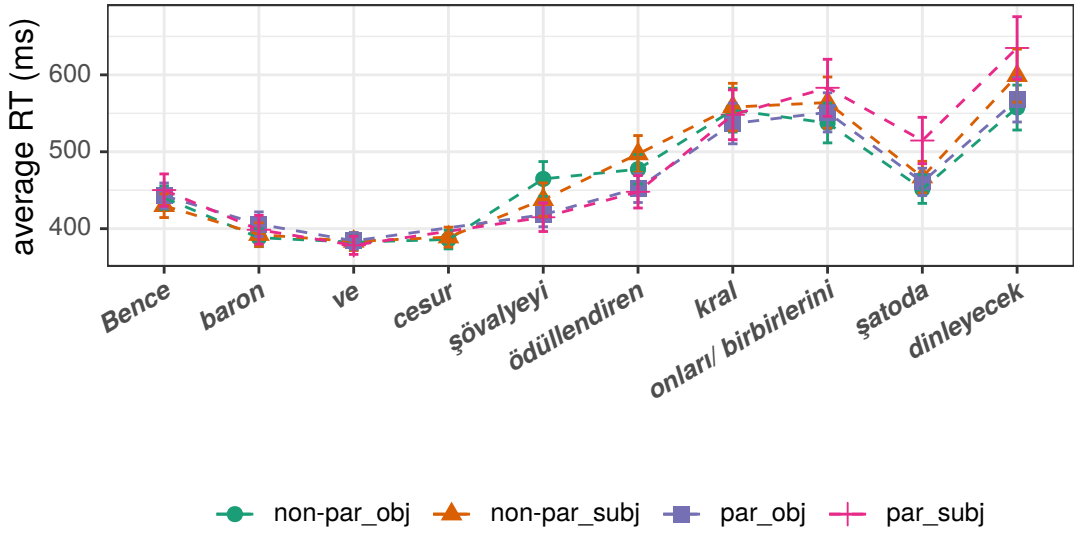


Figure 27. Third experiment, average reading times of words for all experiment conditions by Disambiguation(Subject, Object) and Parallelism(Parallel, Non-parallel)

The critical region in all the sentences is the Disambiguation word *onlar*-CASE or *birbirlerin*-CASE. The spillover region in all the sentences is the two words after the Disambiguation word. In the case of Figure 27 it is the two words *şatoda* 'at the chateau' and *dinleyecek* 'will listen'. I give the average RTs of critical and spillover regions in Figure 28. On average, Subject and Parallel conditions result in higher RTs.

For more inference in RTs in critical and spillover regions, I fit a regression model using brms package in R (Bürkner, 2017). I used sum contrasts for the predictors and controlled for the random effects for participant and experimental item. I give the results of the models in Figure 29. The model results indicate that Subject and Parallel conditions have a main effect of increasing RTs. They are more pronounced in the spillover region.

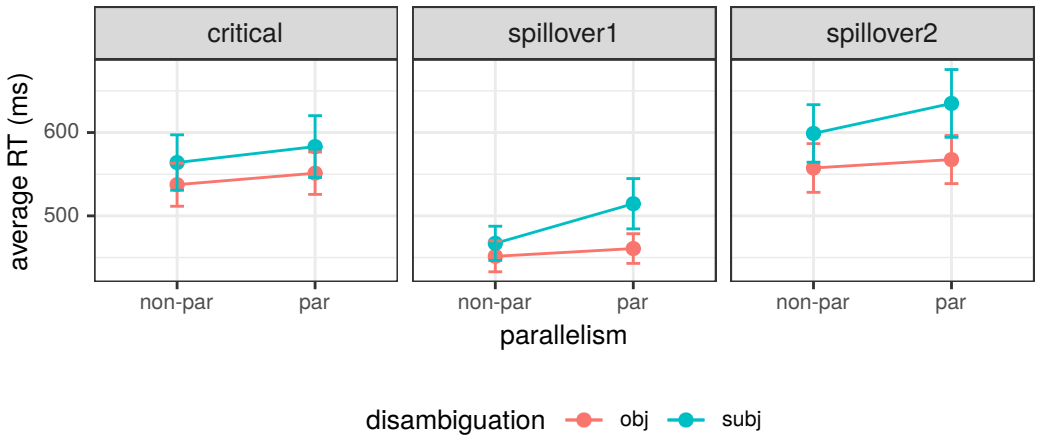


Figure 28. Third experiment, average reading times of critical and spillover regions by Disambiguation(Subject, Object) and Parallelism(Parallel, Non-parallel)

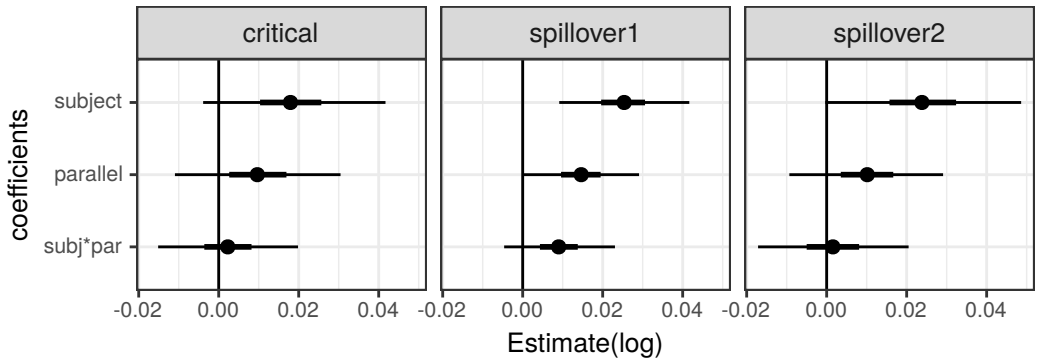


Figure 29. Third experiment, model results of RTs for critical and spillover regions with the predictors Disambiguation(Subject, Object) and Parallelism(Parallel, Non-parallel)

In Figure 30, I give participant accuracies grouped by experiment conditions and correct answer type. On average, participant accuracies are high in Object conditions and when the correct answer is 'yes'. There is an interaction between the correct answer 'no' and the Subject conditions where the accuracies are considerably lower.

For more inference in response accuracy, I fit a regression model using brms in R. This time, the correct answer type is added to the predictors. All predictors have sum contrasts and I controlled for random effects of subject and item. I give the model results in Figure 31.

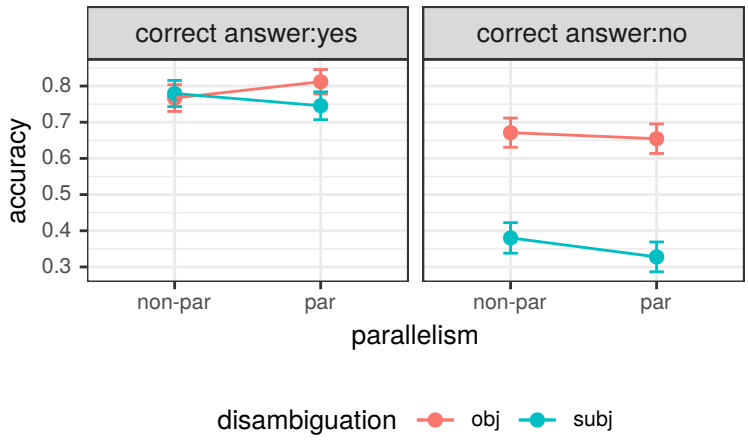


Figure 30. Third experiment, average participant accuracy by Disambiguation(Subject, Object) and Parallelism(Parallel, Non-parallel)

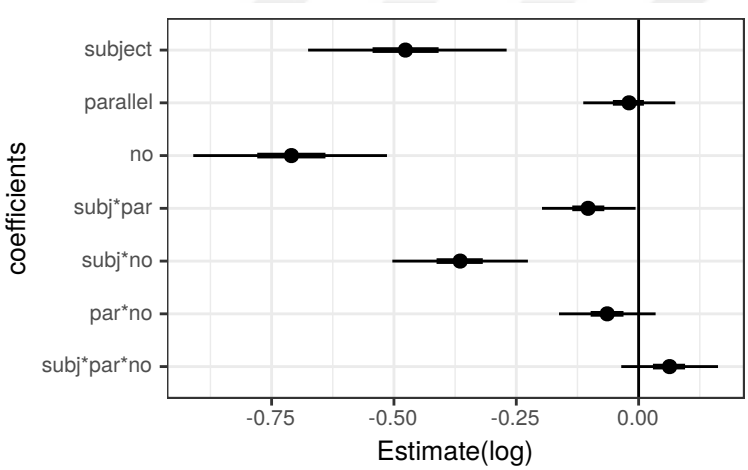


Figure 31. Third experiment, model results for subject accuracies fit to responses with the predictors Disambiguation(Subject, Object), Parallelism(Parallel, Non-parallel), and Correct Answer(yes, no)

4.2.8 Analysis

I evaluate the results of the experiment in two parts. In the first part, I analyze the changes in RTs. In the second part I analyze the changes in response accuracies.

4.2.8.1 Analysis of reading times

Subject conditions result in higher RTs than Object conditions. This means that the parser have gone through a process that costs extra effort in Subject conditions. These conditions require having no suspension of CASE. Increase in Subject conditions means that the initial reading was compatible with an SA interpretation but it was

changed. This indicates suspension taking place in local environments, no matter what the structural ambiguity in the sentence as a whole is. This is a Reanalysis effect directly related to SA and how the parser operates when it is possible to perform SA.

Parallel conditions display higher RTs than non-parallel conditions. There is no structural ambiguity that the effect can be attributed to. In both levels of Disambiguation, accessing a conjunction is required for establishing antecedents for the pronoun. There is an interaction between the levels Subject and Parallel in the first spillover word, suggesting an increase in difficulty. In Subject conditions, the conjunction needs to be accessed and then broken apart. After this operation, a new conjunction is formed. This first noun and the head noun of the relative clause are conjoined as subjects.

Parallel conditions do not have any contrast between the conjuncts whereas non-parallel conditions have the second conjunct modified by an adjective. This creates a contrast between the conjuncts. Marked conjuncts being more accessible for retrieval has been shown previously (Hofmeister & Vasishth, 2014) and similarity effects for establishing dependencies are also attested (see Jäger et al. (2017) for a review). In Subject conditions, the conjunction to be broken apart needs to be retrieved, and the first noun needs to be taken out the conjunction. Addressing the correct noun in memory becomes harder in parallel conjuncts. This breaking process may be an effect of $dechunking$ Martin & McElree (2011).

There is a main effect of Parallelism, relatively stable in all regions. It is more pronounced, as the interaction effect, in the first spillover word. I do not see an inherent reason for why parallel conjuncts increased difficulty. It is actually shown to facilitate processing in conjunctions (Frazier et al., 2000), yet here it displays an opposite effect. The parallelism tested in (Frazier et al., 2000) is not a target to be broken apart or establishing antecedent relations with.

The only thing common in the pronouns that are used for Disambiguation is their number marking. They are both marked PL but there is no plural noun among the possible antecedents. The pronoun number agrees with a complex number feature

that takes the number of conjuncts instead of the number markings on nouns. Plural agreement is not obligatory in Turkish for conjoined nouns so there is no incentive to form a PL value for a conjunction when it is formed. I speculate that the easier it is to form a conjunction, the harder it gets to address its parts for establishing a complex feature for number. This is the main effect that is observed in my experiment. Parallel conjuncts are easier to form, average reading differences on the second conjunct *şövalyeyi* in Figure 27 and a regression model with only Parallelism as the predictor (median log estimate -0.027, %50 CI -0.032–0.021, %95 CI -0.042–0.011) confirms the processing ease of parallel conjuncts. This makes it harder to access their parts in forming a complex feature for the conjunction since each of the conjuncts needs to be checked for the number feature. It even makes it harder to break the conjunction apart and form a new one.

4.2.8.2 Analysis of response accuracies

The participants were given a statement to judge depending on the sentence they read. This makes the statement a memory probe for which the participants search compatible readings in their memories. A match results in answering with 'Yes' and a lack of finding a match results in answering with 'No'.

Subject conditions decrease participant accuracies overall. In Subject conditions, there was a point of Reanalysis. Overall decrease in Subject conditions mean that either the Reanalysis was not carried out even if it was, the statement was still judged erroneously. There is an interaction between the level Subject and 'No' as the correct answer. This means that when the participants were supposed to answer with 'No' in Subject conditions, they performed worse compared to Object conditions or 'Yes' as the correct answer. This interaction can be attributed to matching the statement to a reanalyzed reading in the memory. When the statement is taken to be a memory probe, the participant had two readings formed, one that is actually true and one that was reanalyzed. The existence of both readings in the memory makes both statement types to have a match thereby decreasing accuracy

further when the statement is indeed false. This is in line with the studies that show readings being addressable in memory (Christianson et al., 2001; van Gompel et al., 2006; Slattery et al., 2013) even after Reanalysis.

When the statement was indeed false and the participants were supposed to answer with 'No', they performed lower in general compared to the statements that were indeed true. When the statement is taken to be a memory probe for finding a match in memory, answering with 'No' becomes the result of an exhaustive search that requires checking all available readings. This exhaustive operation might result in parser abandoning the search and give a random answer, possibly biased towards yes. Remember that not all statements are made about the theta role assignments and false statements only make up 1/4 of the questions. This reduces the chances of conditioning the parser for the task (Swets et al., 2008; Logačev & Vasishth, 2016).

Parallel conjuncts do not have a main effect and only have interaction effects with Subject and 'No' as correct answer. It reduced accuracy in both. The main effect of increased difficulty in reading times seem to have effected Subject conditions more than they did Object conditions. It was shown that Subject and Parallel conditions had an interaction in the first word of the spillover. Subject conditions included a process of Reanalysis. The difficulty of breaking the conjunction combined with the Reanalysis might have proven too much for the parser, and lead to misparsing hence the interaction effect. In object conditions though, this increased difficulty did not lead to misparsing and that is why a main effect of Parallel seems to be lacking (although the median estimate and %50 credible intervals are below zero indicating a relatively decrease in accuracy). All the effects of Subject and 'No' as correct answer, and interaction with parallel decreasing accuracies are compatible with good enough approach (Ferreira et al., 2001; Ferreira & Patson, 2007) that suggests language input is not strictly implemented during processing. Partially satisfied relations are taken to be enough if the required effort exceeds the resources that the parser is needed to allocate.

4.3 Discussion

The second experiment showed that suspension of a suffix is costly, yet this experiment has shown that it is a preferred operation. A deterministic serial parser can predict this, as long as it filters possible conjunctions for CASE match and carry out any process necessary to satisfy it to keep the structure minimal. A probabilistic serial parser can predict this result as well, considering that suspension takes less processing resources (thereby time) than positing an embedded clause. The results further indicate that the participants did not fully interpret the sentences when the processing cost proved higher than expected.

In the experiment, the ambiguity environments did not use only ACC to be reconstructed, there were examples of DAT, LOC, and ABL in similar numbers. These can fall into different categories of CASE (Woolford, 2006) and their category is only apparent when a verb is reached. Thereby CASE can play both a syntactic and a semantic role. If thematic roles are preemptively assigned by CASE, then the participants should have favored no SA reading. Some studies in German (Gorrell, 2000; Schlesewsky et al., 2000; Bader, 2000) show that ambiguous CASE markings on arguments receive preferred readings of subject over object. The preferred reading is compatible with an SOV ordering just like the canonical word order in Turkish. None of those studies employ an example of CASE ambiguity in a conjunction where both the subject (NOM) and the internal argument (¬NOM) CASE markings are available by means of SA. Another difference is that CASE is decomposable in Turkish, and no CASE marking is ambiguous. Even when the first conjunct was marked with NOM and canonical word order being SOV in Turkish, the participants favored a reading that is incompatible with the NOM or Subject interpretation. There is one crucial point in this experiment. To prevent information structure driven effects, I placed the nominative marked noun not in a sentence initial position, but following a speech act adverbial. This might have prevented the information like SOV word order to be used.

4.4 Conclusion

The results and the analysis indicate that people still perform SA of CASE even when it is made ambiguous. Conjunct parallelism do not regulate performing SA or not, but it effects the cost of Reanalysis. This experiment has shown that CASE information is overwritten for the sake of positing minimal structures, or structures that take less time to build. This means that the parser favors syntactically simple structures to morphologically complex operations.

The effects of CASE for processing ambiguities of conjunctions received very little attention in the literature. The only relevant study I could find was Traxler & Pickering (1996) where the CASE ambiguous 'you' in English is contrasted to the unambiguous pronouns for predicting the attachment for c-selection ambiguous verbs like 'recognize' that can have both a sentence and a noun as their internal argument. That study concludes in participants using CASE information rapidly and effectively. A similar but different story holds for this experiment, the CASE is updated in local environments of conjunction. Breaking this update is costly or even not done properly after a contradicting information is encountered.

CHAPTER 5

STRUCTURE OF SUSPENDED AFFIXATION

In this chapter, I present my analyses for SA. I use the inferences I have drawn from the empirical results and the theoretical considerations as well as my own native judgments. These analyses include a consideration for the exact machinery of performing SA. I later present theoretical analyses for the suffixes *ile/=(y)lA* and *-(y)Ip* and how they relate to SA.

5.1 Analysis of suspended affixation

In this section, I provide an analysis for SA and the considerations that should go into it. The empirical results and the theoretical considerations so far give the points in (1) about SA. In the following subsections, I provide the explanation for each of these observations and come up with a singular analysis of SA.

(1) i. SA is highly productive with inflectional suffixes

ii. *veya* 'or' hinders SA of CASE

iii. SA, pragmatics, and the information structure

5.1.1 Structural interpretation for suspended affixation

SA operates mostly in the inflectional paradigm. Other than an outright lexical sharing analysis (Broadwell, 2008), other analyses of RNR (Kornfilt, 2012) and ellipsis (Guseva & Weisser, 2018; Erschler, 2018) suggest that the suspended suffixes are either moved out or deleted from the word they were affixed to. Considering each inflectional suffix as a terminal node as in Kornfilt (2012) needs further explanation. For example, if both PL and POSS suffixes have their own terminal nodes, performing SA for only one of them should be possible when they are concatenated. If CASE had a terminal node of its own, SA of ACC should have been ambiguous just like the SA of PL or POSS. The sentences in (2) illustrate this point.

(2) a. Non separable SA of PL and POSS

kitap-lar ve kalem-ler-im
book-PL AND pencil-PL-POSS.1SG
'The books and my pencils'

'*My books and my pencils'

b. Unambiguous SA of ACC

Ahmet kitap ve kalem-i al-dı.
A[NOM] book AND pencil-ACC take-PST[3SG]
'Ahmet took the book and the pencil.'

'*Ahmet took a book[1] and the pencil'

The sentences in (2) and their possible interpretations should be all grammatical according to the RNR analysis of Kornfilt (2012) but this is not the case. Consideration into the environment of SA and the nature of the PL and POSS suffixes can clarify some points.

5.1.1.1 Explaining unambiguous suspension of CASE

First point to explain is why SA of CASE results in unambiguous readings. This can be captured by a well-formedness condition on the conjunction instead of the interpretation of SA. A bare argument with no CASE marking is of type D_{et}[2], a set of individuals. The argument with overt case marking is of type D_e[3], an individual. Conjoining a set of individuals and an individual is not semantically equivalent, thereby CASE SA is carried out by default to satisfy semantic equivalence (Munn, 1993). This results in an unambiguous reading. Another point that could strengthen the semantic equivalence as a well-formedness condition is the no SA reading in (3). In this example, SA of POSS is ambiguous. However, the first conjunct can't stay in a reading of set of individuals D_{et}. Even if the SA of POSS is not performed, the

[1]The article 'a' is used to denote a non-referential noun, not an indefinite one. That is why 'Ahmet took a book and the pencil' is a perfectly grammatical sentence on its own but it is not a possible interpretation of this sentence

[2]This is a semantic domain that takes individuals and returns truth values. It can have several individuals that can fulfill the function, that's why I refer to this domain as 'set of individuals'

[3]This is a semantic domain that has an individual, there is only one presupposed individual(singular or plural) in the context

second conjunct is shifted to an individual D_e by the POSS suffix. The first conjunct needs to be interpreted as an individual D_e instead of a set of individuals D_{et} to be semantically equivalent.

(3) *kitap ve kalem-im*
book AND pencil-POSS.1SG
SA: 'my book and my pencil'
No SA: 'the book and my pencil'
No SA: '*a book and my pencil'

5.1.1.2 Why are PL and POSS inseparable?

Second point is to explain the inseparable nature of PL-POSS in SA. Instead of positing distinct terminal nodes for each suffix, I propose to place these two suffixes under a single node. For example, the inseparable SA of PL-POSS can be captured by the small 'n' analysis of Öztürk & Taylan (2016). The analysis itself treats agreement markers belonging to DP layer since they establish referential and deictic nouns. This however does not hinder an analysis of placing PL-POSS on the same node. Compound markers (3SG) and agreement markers don't co-exist, and in all cases the PL precedes both (4).

(4) a. *ders kitap-(lar)-ı*
course book-(PL)-POSS.3SG
'course book(s)'

b. *ders kitap-(lar)-ım*
course book-(PL)-POSS.1SG
'my course book(s)'

Although the semantic interpretation of possessive agreement markers merits placing them on the 'D' head, I propose that the inability of compound marker and agreement markers to coexist is enough to posit them entering the structure in the same level.

This kind of behaviour is reminiscent of position class morphology (Inkelas, 1993; Stump, 1993). In such a representation, suffixes are assigned slots for insertion,

and they follow those slots even though their functional ordering is different than their surface form. If a position class morphology is adopted for Turkish, with slots for suffixes, SA can just work on deleting exponents on these slots. This would do away with the representation of PL and POSS on the same terminal node since SA would be an operation of morphology independent of their syntactic organization.

5.1.1.3 Other places where PL-POSS receives special treatment

SA is not the only place that PL-POSS or PL-AGR receive special treatment. In Turkish, the head noun of an object relative clause can be omitted (5). When the head noun is marked with plural and the headless relative clause is formed, instead of a suffix order of POSS-PL on the relativized verb, an order of PL-POSS appears as illustrated in (6).

(5) *sev-diğ-im (kişi) gel-di.*
like-PP-POSS.1SG person[NOM] come-PST[3SG]
'The person I like came.'

(6) a. *sev-diğ-im kişi-ler gel-di.*
like-PP-1SG person-PL[NOM] come-PST[3SG]
b. *sev-dik-ler-im gel-di.*
like-PP-PL-1SG[NOM] come-PST[3PL]
'The people I like came.'

Göksel (2005) provides an interesting example for SA of PL in headless relative clauses (7). This seems like a separable and non-rightward-bound SA of PL in the string of PL-POSS or PL-AGR. In (7), however, the PL and POSS are not originally affixed to the same noun. In their underlying form, POSS or AGR is affixed to the relativized verb, and the PL is affixed to the head noun.

(7) a. Full relative clause

dil-in-i bil-diğ-im ve anla-dığ-ım kişi-ler
language-POSS.2PL know-PP-1SG AND understand-PP-1SG person-PL

b. Reduced relative clause, No SA

dil-in-i *bil-dik-ler-im* *ve* *anla-dık-lar-ım.*
language-POSS.2PL know-PP-PL-1SG AND understand-PP-PL-1SG

c. Reduced relative clause, SA of PL

dil-in-i *bil-diğ-im* *ve* *anla-dık-lar-ım.*
language-POSS.2PL know-PP-1SG AND understand-PP-PL-1SG
'The people whose language I know and understand'

The observations in (5), (6), and (7) indicate two things. The first is that the ordering of the suffixes PL-POSS or PL-AGR require special treatment with or without SA. The second is that SA is performed before the surface ordering of the suffixes is formed.

5.1.1.4 How to fit suspended affixation to an RNR analysis

Now that the unambiguous CASE is handled by semantic equivalence of conjuncts and the inseparable suffixes are represented under one terminal node, RNR analysis can be entertained with a better picture. At this point, the analysis of a pure lexical sharing (Broadwell, 2008) (examined in §2.1.3) is out since it requires distinct terminal nodes for each suffix. The RNR analysis argues for performing an Across the Board (ATB) movement of the terminal nodes. One possible issue for this analysis is the order of movement for a suspension of PL-POSS-CASE. Figure 32 illustrates the structural representation for the SA in in (8).

(8) *Kitap ve* *kalem-ler-im-i* *bul-du-m.*
book AND pencil-PL-POSS.1SG-ACC find-PST-1SG
SA: 'I have found my books and my pencils.'

SA of only one suffix with an RNR analysis is straightforward in moving the head to a pseudo-specifier[4] position in the conjunction. It is not clear how RNR would handle moving more than one terminal node. If the target pseudo-specifier position attracts heads for suspension, the first candidate for movement would be the

[4]I am calling this a pseudo-specifier position and mark it with '*' because it is a non-phrase element of syntax acting as if a specifier phrase would do

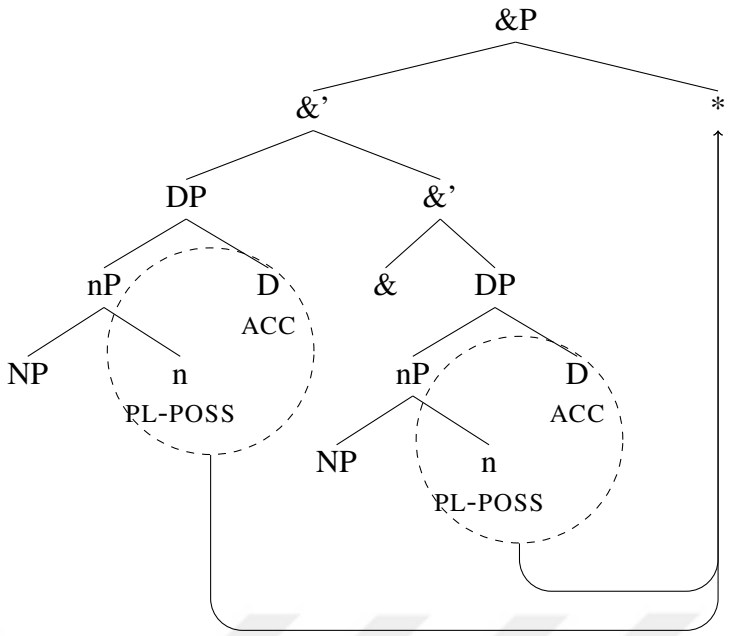


Figure 32. RNR analysis for multiple terminal nodes

'D' head. The second would be the 'n' head. This would derive an order of D-n at the pseudo-specifier position after movement, which is not the order that is observed in the example. For such a movement to take place in a correct order, an assumption of forming a complex head needs to take place. This complex head then serves as the target for movement.

There is another problem with a movement analysis. Most examples of SA are given in a conjunction with only two conjuncts. A movement analysis, in theory, should allow for SA of a suffix in only one conjunct when there are 3 conjuncts in the conjunction. The sentence in (9) illustrates this point. Performing SA only in one of the three conjuncts is ungrammatical (9a) and performing SA for all the conjuncts but the last one is grammatical (9b).

(9) a. **kitap, kalem-i, ve defter-i getir.*
book pencil-ACC AND notebook-ACC bring.IMP

b. *kitap, kalem, ve defter-i getir.*
book pencil AND notebook-ACC bring.IMP
'Bring the book, the pencil, and the notebook'

SA in (9a) should be possible in theory. The movement is only carried out for the conjunction of *kitap, kalem-i* 'the book, and the pencil' and the further CASE marked argument is conjoined just as the Figure 33 shows.

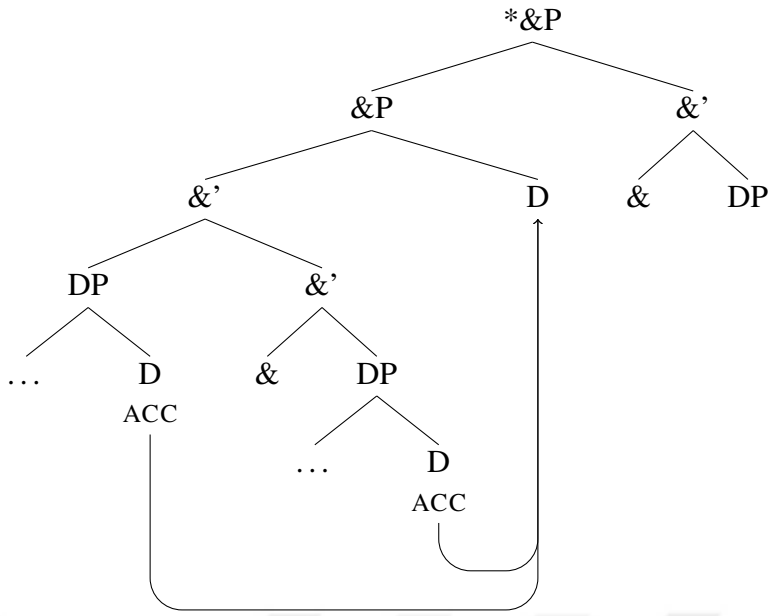


Figure 33. Movement analysis of one SA in multiple conjunctions

As a result of all these observations, RNR analysis requires two crucial constraints. The first is forming of a complex head for the target of movement and the second is the consideration of all conjuncts and a specification for where the suspension begins.

5.1.2 Proposal for SA analysis

I propose in line with Guseva & Weisser (2018), and Erschler (2018) that SA is a deletion of phonological exponents. It takes place in conjunctions. In Turkish, the rightmost terminal nodes are sources for SA. On the underlying order within the conjunct, a leftward process of deleting matching morphemes takes place. The deletion is performed for the terminal nodes not the individual suffixes. In Figure 34, I give my analysis for SA which progresses on terminal nodes for deleting morphemes with matching values. The deletion takes place before vocabulary insertion.

$$\underset{\text{deletion}}{\overleftarrow{\text{CONJ}_1 - \gamma - \not{\beta} \quad \text{CONJ}_2 - \delta - \not{\beta} \quad \cdots \quad \text{CONJ}_n - \alpha \quad -\beta}}$$

Figure 34. Final analysis of SA

This analysis is a variation of the ellipsis approach (Guseva & Weisser, 2018; Erschler, 2018). Turkish does not display mixed order of suffixes, which means that it does not require the specific machineries like D-lowering and K as case head that Guseva & Weisser (2018) provides. Base changing pronouns don't take part in SA, so positting an ellipsis after vocabulary insertion (Erschler, 2018) is not needed. The only change is the addition of using terminal nodes as target of deletion and not the actual morphemes themselves. In this deletion process, source matching terminal nodes can be deleted in the preceding rightmost nodes so long as they have the same feature values for the encoded suffixes. These terminal nodes do not need to be nodes of syntax, they can be individual points for exponent insertion[5]. Deleting exponents for terminal nodes instead of morphemes captures both the inseparable SA of PL-POSS and the lack of deletion for only person or number in AGR markers on verbs. The suspendable agreement marker *-Iz* is made up of first person and number plural morphemes. There is no separate deletion of person or number.

An analysis of RNR with the two specified constraints or the ellipsis analysis are both capable of capturing SA of inflectional suffixes and the inseparable SA of PL-POSS. RNR is strictly syntactic and movement is a frequently used operation to define if a process in language belongs to word derivation (morphology) or syntax. If SA of derivational suffixes are observed, the structural interpretation of SA can not stay solely in the domain of syntax. That is why instead of modifying RNR with constraints, an analysis of deletion should be adopted. Other than this difference, using an RNR analysis or a deletion one makes no clear cut differences for the structural interpretation of SA.

An important constraint for both analyses is the morphological word status of what is left after SA. No movement or deletion of terminal nodes are felicitous if they are the last ones that constitute a morphological word. As illustrated in (10), a

[5]Combining the insertion for PL-POSS or PL-AGR can be argued by Fusion (Halle, 2000) which requires a deep look into the agreement paradigms in Turkish, it is not pursued here because it falls a bit out of this study's scope.

suffix that forms a participle, thereby a morphological word from a verb, can not be suspended.

(10) a. Non-morphological word

**kitab-ı oku ve anla-malı-ydı-m.*
book-ACC read AND understand-NEC-PST-1SG

b. Morphological word

kitab-ı oku-malı ve anla-malı-ydı-m.
book-ACC read-NEC AND understand-NEC-PST-1SG
I should have read and understood the book.

5.1.3 Why *veya* 'or' lowers acceptability

The first experiment that mainly investigated the acceptability for the SA of derivational suffixes in the nominal domain showed an effect of the conjoiner *veya* 'or'. The conjoiner decreased the acceptability of CASE SA. On the other hand, the second experiment did not replicate similar effects in terms of reading times. If SA were to be affected by the conjoiner choice in the verbal domain, there should have been interaction effects. I address this issue by first making a difference between conjunction in the verbal domain and conjunction in the nominal domain. I later provide the differences that *veya* 'or' brings about and the ramifications of them for SA.

The main difference between conjunction of nouns and conjunction of verbs is the semantic denotations depending on affixation. SA in the verbal domain can only be performed up to a participle form. These participles form a semantic denotation that is equivalent to a sentence (a truth condition). This means that suspendable affixes on top of the participle do not change the semantic denotation but modify it. In SA of CASE, the remnant word after suspension can have a semantic denotation that is different from the other conjunct. This is the main difference of conjunction related to SA.

SA in the conjunctions formed with *ve* 'and' recover the semantic equivalence by making the CASE available for the unmarked conjuncts. The problem with *veya* 'or' is that it can have an exclusive reading which requires evaluation of the conjuncts separately. This evaluation process takes both conjuncts to be semantically equivalent before performing SA. Therefore there is a negative effect of *veya* 'or' for the acceptability of CASE SA but no interaction in SA in the verbal domain. The difference of exclusive reading in *veya* 'or' stems from pragmatics. In logic, the operators $\wedge$ and $\vee$ correspond to the lexical items 'and' and 'or' respectively. In Table 7, I give the truth conditions for both operators $\wedge$ 'and' and $\vee$ 'or'.

Table 7. Truth Value Calculations for Logic Operators $\wedge$ 'and', $\vee$ 'or'

And			Or		
p	q	p$\wedge$q	p	q	p$\vee$q
T	T	T	T	T	T
T	F	F	T	F	T
F	T	F	F	T	T
F	F	F	F	F	F

The operator $\vee$ 'or' can have the truth condition for the operator $\wedge$ 'and'. This is the reading where both arguments are True. This is an operation of logic. Languages use the logic calculations for conjunction but they are not only governed by them. According to Grice's maxims (Grice, 1989), the pragmatics in a language affect the interpretation of expressions. The two maxims are of importance here: Maxim of quality and maxim of quantity. Maxim of quality suggests that the language user produces expressions that are the most informative and not false for a given situation. Maxim of quantity suggests that the language user produces just enough and not more than what is necessary. Using $\vee$ 'or' in language might entail the following considerations:

- Logical $\vee$ truth conditions: both expressions are true, or only one is true
- If both expressions were to be true, $\wedge$ is enough and $\vee$ is unnecessary
- If $\vee$ is used instead of $\wedge$ then the qualified condition is: one of them is true

This pragmatic operation is what renders CASE SA with the conjoiner *veya* 'or' in the nominal domain. There is a way of canceling this pragmatic operation. Such an operation is cancelled in under negation, some quantificational determiners, and in questions. The exact ways of how implicatures are cancelled have a semantic discussion that falls out of this study's scope. In the experiment, the sentences were plain declarative sentences without a negation or a quantificational determiner. This enabled the pragmatic operations to take place, and render CASE SA less acceptable. In fact, while sifting through some data, I found an example from (Johannessen, 1998, p.24) that hosts a CASE SA with the conjoiner *veya* 'or', the catch is it is used in a question. I give the example in (11). In this example, there is SA of PL-CASE.

(11) *Elma veya armut-lar-ı ye-di-niz =mi?*
apple OR pear-PL-ACC eat-PST-2PL =Q
'Did you eat the apples or the pears?'

Adapted from Johannessen (1998)

While this interaction between the pragmatic operations and CASE SA is observed in the first experiment, the environments where the pragmatic operations are cancelled are not tested. The importance of this observation is that the interactions that the environment has affect the feasibility of SA.

5.1.4 SA, pragmatics, and the information structure

An important point for the discussion of SA is not only where it happens but also where it does not. The first and the second experiments showed that the favored environment for SA is a conjunction formed by the conjoiner *ve* 'and'. It does not mean that SA is infelicitous with *veya* 'or', it may require canceling pragmatic implicatures. (11) illustrates this point. It is not always grammatical to suspend suffixes in questions. If the question is an alternative one formed by the clitic *=mI* instead of a disjunctive formed by *veya* 'or', the question becomes ungrammatical (12).

(12) *Elma =mı (veya/*ve) armut-lar-ı =mı ye-di-niz?*
apple =Q (OR/AND) pear-PL-ACC =Q eat-PST-2PL
Intended: 'Did you eat the apples or the pears?'

The alternative question forces an exclusive reading, but does so with the clitics that change information structure. A different clitic *=dA* with a similar function can be used in declarative sentences together with the conjoiner *ve* 'and'. It too renders SA ungrammatical (13).

(13) *Ahmet ev-*(i) =de ve araba-yı =da al-dı.*
A[NOM] house-ACC =FOC AND car-ACC =FOC buy-PST[3SG]
'Ahmet bought both the house and the car.'

The observations of *veya* 'or' lowering acceptability and clitics like *=mI* and *=dA* rendering SA ungrammatical points to the close relation of SA and the information structure. If an exclusive reading is present or the conjuncts are focused, SA does not take place. Even though there are not apparent reading differences in sentences with SA, early observations of this phenomenon (Emre, 1945) and the ungrammaticality effects shown in the first experiment, in (12) and (13) place SA among other ellipsis processes. Such processes like Backwards and Forwards Gapping/Ellipsis also can not be performed for focused arguments. If in those processes the desired effect is to shift focus to arguments and thereby verbs and parts of sentences are omitted, SA is a process of focusing the elements of a conjunction independent of their inflection or morphological make up.

5.2 Suspended affixation and *ile/=(y)lA*

In this section, I present the clitic *ile/=(y)lA* in Turkish that serves several functions. My aim is to show how the conjoiner function of this clitic relates to SA. I argue that *ile/=(y)lA* is morphologically the conjoiner head but its phonological size includes the place where CASE is encoded. According to Göksel & Kerslake (2004) *ile/=(y)lA* can be used as a case marker and a conjoiner as in (14). Being a clitic, *ile/=lA* is outside the phonological word and thereby unstressable.

(14) a. Instrumental

Şişe-yi çakmak ile aç-tı.
bottle-ACC lighter INS open-PST[3SG]
'S/he opened the bottle with a lighter.'

b. Comitative

Ahmet ev-e Mehmet ile (birlikte) gel-di.
A[NOM] house-DAT M COM (together) come-PST[3SG]
'Ahmet came home (together) with Mehmet.'

c. Conjoiner

kitap ile kalem çok pahalı.
book AND pencil very expensive
'The book and the pencil is very expensive.'

The first function of *ile/=(y)lA* in (14a) is like a semantic case Woolford (2006) that seemingly does not have a case assigner. The second function of *ile/=(y)lA* in (14b) is like a semantic case that can have an overt or covert case assigner, a postposition, *birlikte* 'together'. The third function of *ile/=(y)lA* in (14c) is a conjoiner. I am only interested in the conjoiner function of the clitic *ile/=(y)lA* (AND, and =AND in glosses). I give an example of SA with *ile/=(y)lA* in (15).

(15) *Ahmet kitap=la kalem-ler-i al-dı.*
A[NOM] book=AND pencil-PL-ACC take-PST[3SG]
'Ahmet took the books and the pencils.'

'Ahmet took the book and the pencils.'

5.2.1 SA in *ile/=lA* constructions

SA of PL, or POSS in the environment of the clitic *ile/=(y)lA* is ambiguous like it is in a conjunction formed with *ve* 'and'. The clitic *ile/=(y)lA* allows for insertion of PL and POSS suffixes between itself and the noun it is attached to. It does not allow the insertion of CASE but it allows SA of them, as shown in (16).

(16) a. **kitap-lar-ım-ı=ylA defter-ler-i al-dı-m.*
book-PL-POSS.1SG-ACC=AND notebook-PL-ACC take-PST-1SG

b. *kitap-lar-ım=lA* *defter-ler-i* *al-dı-m.*
book-PL-POSS.1SG=AND notebook-PL-ACC take-PST-1SG
'I took my books and the notebooks.'

As a general constraint, SA takes place for the rightmost terminal nodes. If the rightmost terminal node does not match the suspended affixes, SA does not take place. In (17), all the second conjuncts have the rightmost PL-ACC.

(17) a. *Kalem=le* *kitap-lar-ı* *al.*
pencil=CASE book-PL-ACC take.IMP
'Take the pencils and the books.'

b. *Kalem ve* *kitap-lar-ı* *al.*
pencil AND book-PL-ACC take.IMP
'Take the pencils and the books.'

If the clitic *ile/=lA* in (17a) were to be a case marker, it would mismatch with ACC. This should have stopped SA of PL. This is not the case and both sentences in (17) are examples of SA. There is no SA environment in Turkish that violates the rightward-bound process of deletion, and positing *ile/=(y)lA* as an exception is not needed if an explanation that captures both the SA capability and inability of CASE insertion can be given. The examples in (17) would violate the rightward-bound nature of SA since POSS and PL suffixes before *ile/=(y)lA* would be subject to suspension but not *ile/=(y)lA* itself. I argue that, in its conjoiner function, *ile/=(y)lA* itself is a conjoiner head and not a case mark assigned by a zero conjoiner head.

5.2.2 What does *ile/=lA* conjoin?

The phrase that *ile/=(y)lA* conjoins is not marked for CASE, yet it can be marked for number and possession. The first approach to conjoiner *ile/=(y)lA* can use the insertable and non-insertable suffixes to determine the size of a conjunct for *ile/=(y)lA*. In §5.1.2, I proposed to place both number and agreement suffixes on the small 'n' head. If CASE can not be inserted before *ile/=(y)lA* but number and possession can be, then *ile/=lA* might be conjoining nPs. In Figure 35, I give a representation for *ile/=(y)lA* conjoining nPs.

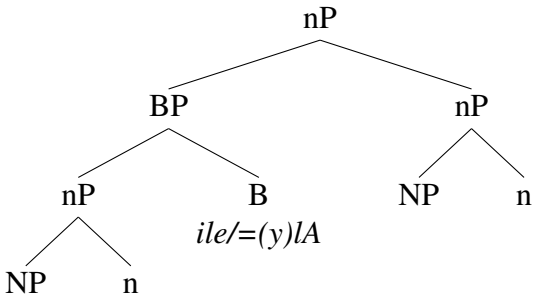


Figure 35. Representation of *ile/=(y)lA* as a conjoiner of nPs

This analysis argues for a small conjunction of two inflectional levels before a DP layer and after the lexical item. One issue with this analysis comes about when the conjuncts are modified with a modifier that requires a DP layer. In Turkish, there is a suffix *-ki* that is attached to LOC marked nouns and it either derives an adjectival modifier or a pronominal. I give the examples in (18) to show the difference of adjectival *-ki* than a normal adjectival modifier.

(18) a. *Ahmet küçük kitap bul-a-ma-dı.*
A[NOM] small book find-ABIL-NEG-PST[3SG]
'Ahmet bought some small book.'

b. **Ahmet araba-da-ki kitap bul-a-ma-dı.*
A[NOM] car-LOC-ki book find-ABIL-NEG-PST[3SG]

c. *Ahmet araba-da-ki kitab-ı bul-a-ma-dı.*
A[NOM] car-LOC-ki book-ACC find-ABIL-NEG-PST[3SG]
'Ahmet took the book in the car.'

The nouns that are modified with an adjective can be non-referential as in (18a), but nouns that are modified with *-ki* derived modifiers can not be non-referential (18b). This shows that *-ki* modifiers require a position where the noun is already referential, and according to Öztürk (2001) the DP layer is the place where referentiality is encoded. If the clitic *ile/=(y)lA* were to be analyzed as in Figure 35, *-ki* derived modifiers should have rendered (19) ungrammatical.

(19) *Ahmet masa-da-ki kitap=la vazo-da-ki çiçeğ-i getir-di.*
A[NOM] table-LOC-ki book=AND vase-LOC-ki flower-ACC bring-PST[3SG]
'Ahmet brought the book on the table and the flower in the vase.'

The structural interpretation of *ile/=lA* now has the following problem. The use of *ile/=(y)lA* in (17) and (19) are uses of the clitic as a conjoiner morpheme and it does not allow CASE insertion. The *-ki* derived modifiers require a DP layer so positing a conjunction of nPs is not feasible. Additional support for DP level conjunction in *ile/=(y)lA* comes from the nominalized sentences in Turkish. *ile/=(y)lA* can conjoin two nominalized sentences as in (20).

(20) *Ben-im ev-e gel-me-m=le sen-in uyan-ma-n*
1SG-GEN house-DAT come-NMLZ-1SG=AND 2SG-GEN wake_up-NMLZ-2SG
aynı an-da ol-ma-dı.
same moment-LOC happen-NEG-PST[3SG]
'Me coming home and you waking up did not happen at the same time.'

Following from all the observations, I argue that the inability to insert overt case markers before *ile/=lA* does not stem from the lack of a DP layer or whether *ile/=(y)lA* functions as CASE. It is rather based on the vocabulary insertion. I propose to consider *ile/=(y)lA* as a conjoiner like *ve* 'and' that can conjoin DP level nouns, and its phonological size includes the DP head and the BP head. I provide Figure 36 for a final representation of my proposal (ACC is just a placeholder, any other CASE is applicable). In this representation, I show the phonological insertion for the morphemes. The DP head is still morphologically encoded with CASE, but its vocabulary insertion is overwritten by the clitic *ile/=(y)lA* that serves as the BP head morphologically and syntactically. This is a process of Impoverishment, where a vocabulary item is inserted for morphemes that are not fully its subset.

This analysis is against an approach that uses subset principle where a vocabulary item is inserted for a place that it contains the morphemes for. Figure 36 places the vocabulary item for the clitic *ile/=lA* on 'D' and 'B' with granting it the morphological realization of only 'B'. This is solved by a procedure of Impoverishment (Bonet, 1991), where a specific vocabulary item does not contain all the morphemes it is inserted for. This means that *ile/=lA* always triggers an operation of impoverishment at vocabulary insertion, it morphologically represents 'B' but occupies the phonological space for both 'D' and 'B' similar to the conjoiner *-kwa* in

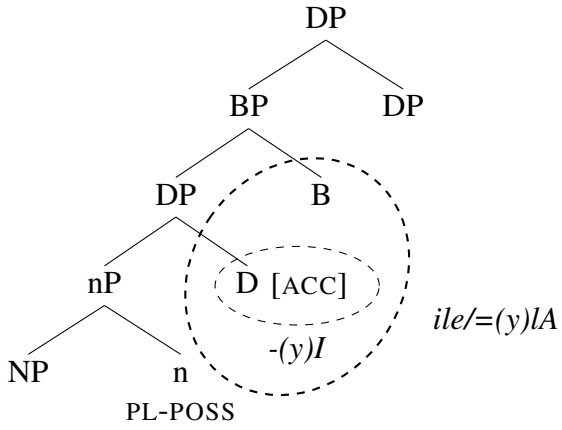


Figure 36. Conjoiner *ile/=(y)lA* phonologically occupying conjoiner head and CASE

Korean (Yoon & Lee, 2005). A position class morphology (Inkelas, 1993; Stump, 1993) in this case might not be helpful since the conjoiner head is not an inflection on the noun but a clitic that needs a phonological host.

5.3 Analysis of the suffix *-(y)Ip*

In this section, I discuss the status of the suffix *-(y)Ip* (PC in glosses). I give the structural interpretations that it should be evaluated under and the properties of the environment it forms. I argue for it to be evaluated as an environment of conjunction where SA beyond a morphological word is carried out.

5.3.1 What is *-(y)Ip*

The suffix *-(y)Ip* is used with verbs and only allows bare verbs, Voice, Mod_{Abil}, Negation, and the suffix *-(y)Iver* (I take this as Asp_{Con} (Cinque, 1999) and mark as CON in glosses) before it. In (21), I give a set of examples for *-(y)Ip*.

(21) a. Bare verb

Ahmet koş-up düş-tü.
A[NOM] run-PC fall-PST[3SG]
'Ahmet ran and fell.'

b. verb-CAUS

Ahmet şişe-yi dol-dur-up temizle-di.
A[NOM] bottle-ACC fill-CAUS-PC clean-PST[3SG]
'Ahmet filled the bottle and cleaned it.'

c. verb-ABIL

Ahmet mantıklı düşün-ebil-ip sorun-u çöz-dü.
A[NOM] sensible think-ABIL-PC problem-ACC solve-PST[3SG]
'Ahmet was able to think sensibly and solved the problem.'

d. verb-NEG

Ahmet ev-e gel-me-yip bekle-di.
A[NOM] house-DAT come-NEG-PC wait-PST[3SG]
'Ahmet did not come home and waited.'

e. verb-CON

Ahmet bulaşıklar-ı yıka-yıver-ip otur-du.
A[NOM] dishes-ACC wash-CON-PC sit-PST[3SG]
'Ahmet managed to wash the dishes and sat down.'

f. verb-ABIL-NEG-CON

Ahmet tutun-a-ma-yıver-ip düş-tü.
A[NOM] hold-ABIL-NEG-CON-PC fall-PST[3SG]
'Ahmet could not manage to hold on and fell.'

There are several arguments for its structural interpretation but they mainly boil down to converb adverbial (Demir, 2014; Underhill, 1976; Göksel & Kerslake, 2004), and converb conjoiner (Fokkens et al., 2009; Johanson, 1995; Kornfilt, 1997) analyses. In this subsection, I show whether *-(y)Ip* is a conjoiner or an adverbial. The sentences in (21) show that *-(y)Ip* can conjoin two predicates that do not match in their Voice, Modality, and Polarity features. One contrasting behaviour of *-(y)Ip* compared to other adverbial markers *-(y)IncA* and *-mAdAn* is given in (22). Under the same argument settings, *-(y)Ip* is unacceptable[6] unlike *-(y)IncA* and *-mAdAn* (PC, WHEN, and WO in glosses respectively).

[6]Contrasting subjects are grammatical with *-(y)Ip* but they require changes in information structure, otherwise they are unacceptable. Exact grammatical considerations for *-(y)Ip* constructions will be addressed in §5.3.5.

(22) a. *Ahmet koş-unca Mehmet düş-tü.*
A[NOM] run-WHEN M[NOM] fall-PST[3SG]
'When Ahmet ran, Mehmet fell.'

b. *Ahmet koş-madan Mehmet düş-tü.*
A[NOM] run-WO M[NOM] fall-PST[3SG]
'Mehmet fell before Ahmet ran.'

c. *??Ahmet koş-up Mehmet düş-tü.*
A[NOM] run-PC M[NOM] fall-PST[3SG]
Intended 'Ahmet ran and Mehmet fell.'

An objection to this observation can come from the adverbial suffix *-(y)ArAK* '∼ by Ving' (BY in glosses). It results in the same ungrammaticality as in (23).

(23) a. *Ahmet koş-arak düş-tü.*
A[NOM] run-BY fall-PST[3SG]
'Ahmet fell running'

b. **Ahmet koş-arak Mehmet düş-tü.*
A[NOM] run-BY M[NOM] fall-PST[3SG]

-(y)Ip deviates from *-(y)ArAK* in verb-manner relation. The verb marked with *-(y)ArAK* requires semantic compatibility with the main verb. If the derived reading with *-(y)ArAK* is not semantically compatible as a manner for the main verb, the expression receives an odd meaning. Verbs that are marked with *-(y)Ip* do not require such a compatibility of manner. Manner relations are usually carried out by adverbs and adverbial clauses. In (24), the suffix *-(y)ArAK* is bound by verb-manner interpretations just like any other adverb whereas *-(y)Ip* is not.

(24) a. *Ahmet koş-up uyu-du.*
A[NOM] run-PC sleep-PST[3SG]
'Ahmet ran and slept.'

b. *%Ahmet koş-arak uyu-du.*
A[NOM] run-BY sleep-PST[3SG]
'%Ahmet slept running.'

An additional contrast of *-(y)Ip* comes about in word order configurations. *-(y)Ip* does not allow a word ordering under same argument settings as an adverbial

suffix like *-(y)ArAK* would allow. (25) shows some word orderings for *-(y)Ip* and *-(y)ArAK*[7]. In these word orderings, the verb marked with *-(y)Ip* and the main verb need to stay as a unit for a grammatical sentence.

(25) a. i. *Ahmet koş-up gel-di.*
A[NOM] run-PC come-PST[3SG]

ii. **koş-up Ahmet gel-di.*
run-PC A[NOM] come-PST[3SG]

iii. *koş-up gel-di Ahmet.*
run-PC come-PST[3SG] A[NOM]
'Ahmet ran and came.'

b. i. *Ahmet koş-arak gel-di.*
A[NOM] run-BY come-PST[3SG]

ii. *koş-arak Ahmet gel-di.*
run-BY A[NOM] come-PST[3SG]

iii. *koş-arak gel-di Ahmet.*
run-BY come-PST[3SG] A[NOM]
'Ahmet came running.'

This difference in grammaticality does not mean that *-(y)Ip* has to be adjacent to the main verb, but it means that any word ordering needs to take the verb marked with *-(y)Ip* and the main verb as equivalent units. If the verb marked with *-(y)Ip* were to be a unit of modification for the main verb, all word order changes should have resulted in reading differences rather than ungrammaticalities. I argue that the observations made here distinguishes *-(y)Ip* from an adverbial forming suffix. In the following subsection, I lay out how *-(y)Ip* is taken to be a conjoiner.

5.3.2 What does *-(y)Ip* conjoin

In the literature where *-(y)Ip* is evaluated as a conjoiner (Fokkens et al., 2009; Johanson, 1995; Kornfilt, 1997), it is given the status of conjoining VPs. On first sight, the lack of any tense and agreement marker leads to evaluating *-(y)Ip* as a conjoiner of VPs. Figure 37 illustrates this analysis.

[7]Remember that word order changes are not free of interpretation in Turkish, they result in different information settings. See Öztürk (2001) for word order and change effects in Turkish.

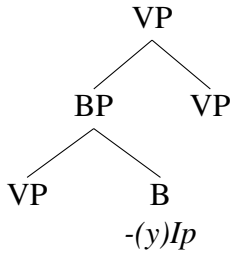


Figure 37. Early conjoiner analysis of *-(y)Ip*

Conjoining only VPs might be warranted given the lack of overt inflections for the *-(y)Ip* marked verb, but this analysis has couple of problems. First of which is the ability of *-(y)Ip* marked verb to have inflectional suffixes of Negation, and Modality. These should immediately elevate the representation of VP to a higher structure. Not all inflectional markers are represented by overt heads, but the existence of them can be addressed cross-linguistically. The observations of Cinque (1999, 2002) show that multiple inflectional levels for Tense, Aspect and Modality exist. These inflectional levels can have functional projections that take specific types of adverbs. These adverbs reside in the specifier position of the functional projections. For example, the two time adverbials *bugün* 'today' and *yarın* 'tomorrow' can occupy the specifier position of $\text{Tense}_{\text{FUT}}$. If they are both used in one sentence, they form a complex adverbial that means 'soon' as illustrated in (26).

(26) *Ahmet bugün yarın kitab-ı al-ıp gel-ecek.*
A[NOM] today tomorrow book-ACC take-PC come-FUT[3SG]
Ahmet will buy the book and come here soon.'

This is easily predicted by an analysis of VP conjunction for *-(y)Ip* and functional projection for $\text{Tense}_{\text{FUT}}$ since a VP can later be marked with a single projection of tense and both adverbs occupy the same position and form a compound. The *-(y)Ip* clause can have an adverb to itself that is different from the main verb. In (27), I provide an example where *-(y)Ip* marked verb and the main verb differ in their time adverbial. In (27), performing a conjunction of VPs require only one inflectional projection of $\text{Tense}_{\text{FUT}}$ but *-(y)Ip* clause can have its own time adverbial different than the matrix clause.

(27) *Ahmet bugün kitab-ı al-ıp yarın defter-i kapla-yacak.*
A[NOM] today book-ACC buy-PC tomorrow notebook-ACC wrap-FUT[3SG]
'Ahmet will buy the book today and will wrap the notebook tomorrow.'

Another functional projection that can be used to illustrate higher level of conjunction for *-(y)Ip* comes from speech act adverbials. The two speech act adverbials *dürüstçe* 'frankly' and *sinsice* 'deviously' result in a semantically odd reading if they are used in one sentence. (28) shows the resulting odd reading.

(28) *%Ahmet dürüstçe ve sinsice konuş-up davran-dı.*
A[NOM] frankly AND deviously talk-PC behave-PST[3SG]
Intended: 'Ahmet talked and behaved frankly and deviously.'

Placing one of the adverbs under the *-(y)Ip* marked verb and the other under the main verb does away with the odd reading in (28). If the two speech adverbials were to occupy the same inflectional level, the example in (29) should have been semantically odd.

(29) *Ahmet dürüstçe konuş-up sinsice davran-ıyor.*
A[NOM] frankly talk-PC deviously act-PROG[3SG]
'Ahmet is talking honestly but acting deviously.'

All the observations here show that *-(y)Ip* does not conjoin VPs but higher projections. According to Cinque (1999), speech act adverbials are used with the functional projection $\text{Mood}_{speech\ act}$ that is higher than Tense and Aspect projections. I argue that *-(y)Ip* is a conjoiner for full sentences. In the following subsection, I give my analysis for *-(y)Ip* conjunctions.

5.3.3 Analysis of *-(y)Ip*

Analyzing *-(y)Ip* as a conjunction that conjoins full sentences requires the explanation for missing and non-insertable suffixes. These suffixes range from aspect markers to person agreement markers. I propose that *-(y)Ip* is a result of vocabulary insertion after SA. The specific reason for why *-(y)Ip* is chosen instead of a free form conjoiner like *ve* 've' is a morphological one. In a conjunction of two sentences, suspension of suffixes on the verb is performed and a non-morphological word is left.

This results in the violation of the morphological word constraint. The verb after deletion of exponents can not stand on its own. That is why a bound form conjoiner like *-(y)Ip* is inserted for the conjoiner head instead of a free form conjoiner *ve* 've'. This way I combine both conjoiner function of *-(y)Ip* and the explanation for missing suffixes. I provide my analysis in Figure 38. In Turkish, there aren't overt suffixes for 'C' that can be suspended in *-(y)Ip* constructions, that is why they are not interpreted under SA.

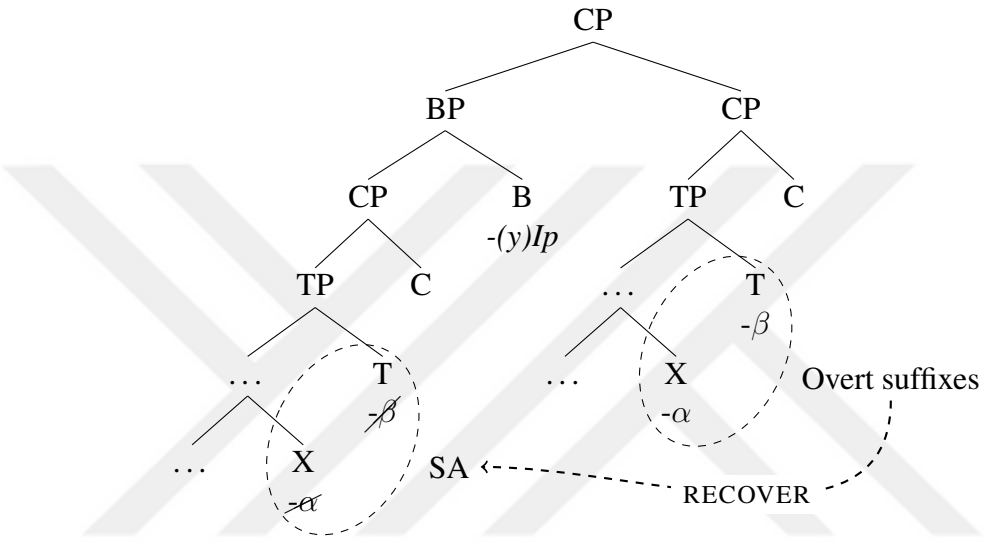


Figure 38. Structural analysis proposal for *-(y)Ip*

In (30), I provide multiple *-(y)Ip* constructions that are the results of being left with non-morphological words after SA.

(30) *Ahmet ev-e gel-ip soyun-up uyu-muş-tur.*
A[NOM] house-DAT come-PC undress-PC sleep-PRF-PROB[3SG]
'Ahmet has probably come home, undressed, and slept.'

In (31), I give the order of derivation that leads to SA beyond the morphological word and the multiple instances of *-(y)Ip*.

(31) i. Conjunction of n many sentences, with matching rightmost suffixes β

ii. Delete the matching nodes

$$V_1 - \beta \quad V_2 - \beta \quad \cdots \quad V_n - \beta$$

deletion

iii. The remnants are not morphological words, insert bound form conjoiner *-(y)Ip*

V_1-~~β~~*-(y)Ip* V_2-~~β~~*-(y)Ip* $\cdots$ V_n-β

One possible problem for a conjoiner *-(y)Ip* is its ability to co-exist with another conjoiner *hem . . . hem de . . .* 'both . . . and . . . ' that seemingly carries out the function of the conjoiner *ve* 'and'. I do not take *hem . . . hem de . . .* 'both . . . and . . . ' as a conjoiner but as focus particles that operate on the conjuncts. The counterpart *ya . . . ya da . . .* 'either . . . or . . . ' that serves as the focus particle for the exclusive *veya* 'or' is ungrammatical. I give the example in (32) to serve the point.

(32) a. *hem tez yaz-ıp hem de çalış-mak ist-iyor-sun.*
FOC thesis write-PC FOC PTCP work-NMLZ want-PROG-2SG
'(You) want to both write your thesis and work.'

b. **ya tez yaz-ıp ya da çalış-mak ist-iyor-sun.*
FOC thesis write-PC FOC PTCP work-NMLZ want-PROG-2SG

c. *ya tez yaz-mak ya da çalış-mak ist-iyor-sun.*
FOC thesis write-NMLZ FOC PTCP work-NMLZ want-PROG-2SG
'You either want to write your thesis or you want to work.'

In addition to its ability of co-existing with other conjoiner markers, *-(y)Ip* can co-occur with the free form conjoiner *ve* 'and' as in (33). These observations of *-(y)Ip* co-existing with other conjoiners do not render a conjoiner analysis obsolete. There are many cases where conjoiners are used for the purposes of changing information structure in a sentence. What is important is that in both (32) and (33), *-(y)Ip* is only grammatical in an environment where the interpretation of the sentence is equivalent to a conjunction formed by *ve* 'and'.

(33) *Ev-e gid-ip ve de anahtar-ı al-ma-mak tam bir aptallık.*
house-DAT go-PC AND FOC key-ACC take-NEG-NMLZ complete a stupidity
'Going all the way home and not taking the key is a complete stupidity.'

All the examples in the last two subsections distinguished *-(y)Ip* from adverbial markers and presented it as a conjoiner of sentences. With these observations at hand, I propose that *-(y)Ip* is a conjoiner that elevates the verb to a

morphological word status. It does not occupy the morphological slots for the suspended suffixes, it surfaces after the suspension of affixes to satisfy the morphological word constraint. In the following subsection, I discuss why SA seems to be obligatory in *-(y)Ip* constructions and why the environment of *-(y)Ip* is important for the discussion of SA.

5.3.4 Suspended affixation and *-(y)Ip*

A morphological word is defined if the last morpheme can terminate a sentence independent of agreement markers (Kabak, 2007). After SA in verbs, the conjoiner *'ve'* is selected if what is left is a morphological word and the conjoiner *-(y)Ip* is selected if what is left after SA is not a morphological word.

This means that insertion for the conjoiner is dependent on the morphological status of what is left after SA. I give a set of examples in (34) that show that SA is grammatical in verbs with non-morphological word status if the conjoiner is *-(y)Ip* and SA is grammatical in verbs with morphological word status if the conjoiner is *ve* 'and'.

(34) a. i. Non-morphological word, *ve* 'and'

**kitab-ı oku ve anla-malı-ydı-m.*
book-ACC read AND understand-NEC-PST-1SG

ii. Non-morphological word, *-(y)Ip*

kitab-ı oku-yup anla-malı-ydı-m.
book-ACC read-PC understand-NEC-PST-1SG
'I should have read and understood the book.'

b. i. Morphological word, *ve* 'and'

kitab-ı oku-malı ve anla-malı-ydı-m.
book-ACC read-NEC AND understand-NEC-PST-1SG
'I should have read and understood the book.'

ii. Morphological word, *-(y)Ip*

**kitab-ı oku-malı-yıp anla-malı-ydı-m.*
book-ACC read-NEC-PC understand-NEC-PST-1SG

The sentences in (34) show that the vocabulary item for the conjoiner head is selected after SA is performed. This also explains why the suffixes *-mA* and *-(y)Abil* can reside under the conjoiner *-(y)Ip* because they do not form morphological words. I give a set of examples in (35).

(35) a. ABIL

i. **kitab-ı oku-yabil ve anla-yabil-miş-im.*
book-ACC read-ABIL AND understand-ABIL-PRF-1SG

ii. *kitab-ı oku-yabil-ip anla-yabil-miş-im.*
book-ACC read-ABIL-PC understand-ABIL-PRF-1SG
'It seems like I was able to read and understand the book.'

b. ABIL-PRF

i. *kitab-ı oku-yabil-miş ve anla-yabil-miş-im.*
book-ACC read-ABIL-PRF AND understand-ABIL-PRF-1SG
'It seems like I was able to read and understand the book.'

ii. **kitab-ı oku-yabil-miş-ip anla-yabil-miş-im.*
book-ACC read-ABIL-PRF-PC understand-ABIL-PRF-1SG

c. NEG

i. **kitab-ı oku-ma ve anla-ma-mış-ım.*
book-ACC read-NEG AND understand-NEG-PRF-1SG

ii. *kitab-ı oku-ma-yıp anla-ma-mış-ım.*
book-ACC read-NEG-PC understand-NEG-PRF-1SG
'It seems like I haven't read the book and understood it.'

d. NEG-PRF

i. *kitab-ı oku-ma-mış ve anla-ma-mış-ım.*
book-ACC read-NEG-PRF AND understand-NEG-PRF-1SG
'It seems like I haven't read the book and understood it.'

ii. **kitab-ı oku-ma-mış-ıp anla-ma-mış-ım.*
book-ACC read-NEG-PRF-PC understand-NEG-PRF-1SG

One prediction of my analysis for SA where *-(y)Ip* is present is that ambiguous cases of SA should be possible if what is left after SA is still not a morphological word. I provide such an ambiguity in (36). In this example, SA of

NEG is optional since its existence or lack of it in the first conjunct does not change the morphological word status of the conjunct.

(36) *Ahmet ev-e gel-ip kitab-ı oku-ma-dı.*
A[NOM] house-DAT come-PC book-ACC read-NEG-PST[3SG]
'Ahmet did not come home and did not read the book.'
'Ahmet came home but did not read the book.'

If SA is performed for the suffixes NEG-PST[3SG] which is all the way to the bare verb itself, you get the first reading of (36). If SA is performed for PST[3SG], you get the second reading of (36). In both readings, what is left after SA is not a morphological word since neither can NEG nor a bare verb can terminate a sentence independent of agreement markers. This results in the selection of *-(y)Ip* as a conjoiner. Figure 39 represents the two readings of (36).

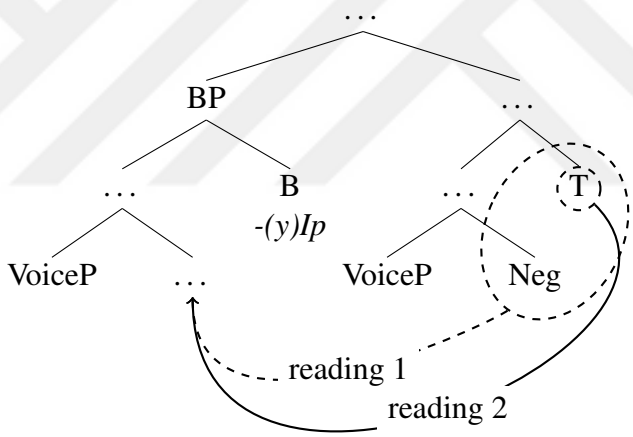


Figure 39. Representation of ambiguous *-(y)Ip*

The analysis I provided for *-(y)Ip* captures its properties and what it can conjoin. It is directly related to SA and the selection for a conjoiner in the conjunction environment. It allows for ambiguous readings observed in (36). It shows that *-(y)Ip* is a conjoiner that is affixed to non-morphological words and grants verbs the morphological word status. This analysis turns the morphological word constraint for SA into a condition that regulates the vocabulary insertion instead of being a

well-formedness condition for SA. In the following section, I address a grammaticality condition for *-(y)Ip* constructions that are not directly related to SA.

5.3.5 More on *-(y)Ip*

In the previous subsections, I have shown what the structural interpretation for *-(y)Ip* and its relation to SA is. There is one additional property of *-(y)Ip* constructions that falls out of the scope of this study, yet holds a crucial distinction for how SA is considered. I have provided (22) for arguing that *-(y)Ip* is different from other adverbial markers. That example hosts an unacceptable sentence formed with *-(y)Ip*. To show that it is acceptable under a free form conjoiner like *ve* 'and' I repeat the same example in (37) with an additional sentence.

(37) a. **Ahmet ev-e gel-ip Mehmet uyu-du.*
A[NOM] house-DAT come-PC M[NOM] sleep-PST[3SG]
b. *Ahmet ev-e gel-di ve Mehmet uyu-du.*
A[NOM] house-DAT come-PST[3SG] AND M[NOM] sleep-PST[3SG]
'Ahmet came home and Mehmet slept.'

In my analysis, I have argued for *-(y)Ip* to be considered as a conjoiner head after an SA beyond a morphological word is carried out. If this was purely the case, both sentences in (37) should have been equally acceptable. This on the surface refutes a conjunction analysis. The remedy requires an investigation into the sentences that *-(y)Ip* is acceptable with. *-(y)Ip* constructions include a necessary topicalization of at least one phrase that is shared in both conjuncts. The ungrammatical (37a) can be made grammatical by just adding a topicalized adverb that is shared by both conjuncts as in (38). Some native speakers might find it difficult to interpret (38). That is why I also give the example (39) that topicalizes an argument of the verb.

(38) *Tam o sırada Ahmet ev-e gel-ip Mehmet uyu-du.*
right that time A[NOM] house-DAT come-PC M[NOM] sleep-PST[3SG]
'Right at that time Ahmet came home and Mehmet slept.

(39) *kitab-ı Ahmet bul-up Mehmet oku-du.*
book-ACC A[NOM] find-PC M[NOM] read-PST[3SG]
'Ahmet found the book and Mehmet read it.'

This topicalization of argument is not limited to only one. Multiple arguments can be topicalized for *-(y)Ip* constructions to be acceptable. I give a relatively extensive list of sentences in (40).

(40) a. Topicalized Subject and Indirect Object

[Ali Deniz-e] Mehmet-i vurdur-up Naci-yi dövdür-dü.
A[NOM] D-DAT M-ACC hit.CAUS-PC N-ACC beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and beat Naci.'

b. Topicalized Subject and Object

[Ali Mehmet-i] Deniz-e vurdur-up Kadir-e dövdür-dü.
A[NOM] M-ACC D-DAT hit.CAUS-PC K-DAT beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and made Naci beat Mehmet.'

c. Topicalized Object and Indirect Object

[Mehmet-i Deniz-e] Ali vurdur-up Osman dövdür-dü.
M-ACC D-DAT A[NOM] hit.CAUS-PC O[NOM] beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and Osman made Deniz beat Mehmet.'

d. Topicalized Subject

[Ali] Deniz-e Mehmet-i vurdur-up Kadir-e Naci-yi
A[NOM] D-DAT M-ACC hit.CAUS-PC K-DAT N-ACC
dövdür-dü.
beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and made Kadir beat Naci.'

e. Topicalized Object

[Mehmet-i] Ali Deniz-e vurdur-up Kadir Naci-ye
M-ACC A[NOM] D-DAT hit.CAUS-PC K[NOM] N-DAT
dövdür-dü.
beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and Kadir made Naci beat Mehmet.'

f. Topicalized Indirect Object

[Deniz-e] Ali Mehmet-i vurdur-up Osman Naci-yi
D-DAT A[NOM] M-ACC hit.CAUS-PC O[NOM] N-ACC
dövdür-dü.
beat.CAUS-PST[3SG]
'Ali made Deniz hit Mehmet and Osman made Deniz beat Naci.'

(40) shows that *-(y)Ip* constructions require at least one gap for grammaticality even though the gaps do not correspond to the same order. Topicalizing is not the only requirement for an acceptable *-(y)Ip* construction. The order of the focalized arguments also matter. I give (41) for a version of (40d).

(41) *??[Ali] Deniz-e Mehmet-i vurdur-up Naci-yi Kadir-e dövdür-dü.*
A[NOM] D-DAT M-ACC hit.CAUS-PC N-ACC K-DAT beat.CAUS-PST[3SG]
Intended: 'Ali made Deniz kill Mehmet and made Kadir beat Naci.'

This property of *-(y)Ip* constructions presents a key point for SA. In no other environment does SA occur so closely related to the changes in information structure. Performing SA beyond a morphological word is closely related to performing also a drastic change in the information structure by ways of topicalizing an argument or a phrase.

5.4 Conclusion for the structure of suspended affixation

The following points make up a general summary of the theoretical consideration that are made in this chapter. They are based on how morphemes are treated in the deletion process and how the environment is analyzed.

- The structural interpretation of SA requires adjustments to the existing analyses provided for ellipsis (e.g. RNR) or a new one that solely operates for the morphological deletion process. Addressing the morphemes for a movement, or deletion is the key to structurally representing SA.
- SA in the conjunction of headless relative clauses show that it is performed before a full linear order of morphemes is formed.

- The interpretation of the SA environment and the properties that surround the vocabulary insertion of the clitic conjoiner *ile/=lA* require taking an operation like Impoverishment into account.

- The constructions formed with *-(y)Ip* show that SA can be performed even though what is left is not a morphological word. The morphological word constraint for SA can be explained by a selection of vocabulary item for insertion of the conjoiner instead of hindering SA altogether. A morphological word requires the insertion of a free form *ve* 'and' and a non-morphological word requires the insertion of *-(y)Ip*.

- SA can not be performed on focused arguments as the alternative question clitic *=mI* and the focus clitic *=dA* hinder suspension.

CHAPTER 6

CONCLUSION

In this thesis, my primary aim was to investigate the interactions and core workings of SA. I used empirical and theoretical devices to better represent SA and its relations. I did not have a small and fixed set of problems for which I engage in finding solutions. The topic itself on the other hand is very specific and the number of languages it is observed in is few. I realized that the literature has fixated on only the suspended part and not the environment. That is why my primary objective became pinpointing the space that SA occupies in Turkish. I investigated the type of morphemes that can take part in SA, the environment SA is used in and what it can bring for a study of sentence processing in Turkish. Answers to the questions in (1) can be found in my thesis, in the order they are presented:

(1)
i. What are the analyses for SA in Turkish, and similar processes in other languages? Some form of sharing for Turkish is prominent, ellipsis in other languages like German, Mari, Ossetic, and Korean.

ii. What type of affixes can be targeted by SA? Mostly inflectional, relative frequency of a suffix increases acceptability.

iii. Does the type of conjoiner have an effect in performing SA? *veya* 'or' with pragmatic implicature lowers acceptability in the nominal domain and focus clitics hinder SA.

iv. Does SA create environments for testing notions like Reanalysis? Yes, it results in participants preferring structurally simpler constructions and performing a morphologically complex operation like SA.

v. How does an informed analysis of SA look like? Constraints for RNR analysis or a morphology specific deletion analysis.

vi. Is SA beyond a morphological word possible? Yes, if the vocabulary insertion for the conjoiner is changed from a free form conjoiner *ve* 'and' to a suffix *-(y)Ip*.

My observations indicate that SA in Turkish is highly reserved for inflectional suffixes. It is not necessarily hard to process. Other than its main function, it can be used to create structural ambiguities that lead to increased processing difficulty with disambiguations that contradict it. It can also cause lasting effects even after reading the sentence is completed. SA is a process of ellipsis that target terminal nodes instead of individual morphemes. SA being optional or successful is dependent on its environment, which is conjunction. The suffix *-(y)Ip* can be considered as an example for SA beyond a morphological word although it is not typically warranted. In the following sections, I propose some empirical considerations that could be used to further investigate the claims I made, or the points that arise from the experiments I conducted.

6.1 Pragmatics and Suspended Affixation

In the experiments and the descriptions provided for SA, it is not clear what function it serves. There is no prominent reading difference resulting from performing or not performing SA. One point is the question of why *veya* 'or' reduces acceptability for SA of ACC. The analysis I provided focuses on the interaction between the use of a conjoiner and pragmatics. It suggests the reading of '$\wedge$' (and) to be present. This can not be achieved by *veya* 'or' because in the environment I used, it interacted with pragmatics and lost the reading of *ve* 'and'. A further research into this point can be made by using *veya* 'or' in different environments like conditionals, quantificational determiners, and questions. This means that the environment of SA is placed under another environment and the argument I make can be further investigated.

6.2 Why use only two conjuncts?

In the beginning of my thesis, I asserted that SA is possible with more than two conjuncts, but the literature revolves around two conjuncts. According to my observations, SA of derivational suffixes is not viable and SA does not have too much processing cost. Yet I made these observations using only two conjuncts for the

environment of SA. The same points need to be tested with increased number of conjunctions. Examples for SA of derivational suffixes can be found in a corpus, yet these examples usually involve more than two conjuncts. SA may be used as a strategy to avoid repetition of derivational suffixes. That is why those examples are found in the corpus. The processing cost is low, maybe because the process of retrieving the suffix and implementing it for only one conjunct is not labor intensive for a substantial increase in processing difficulty. These are some of the points that makes it worth looking into SA with numerous conjuncts.

6.3 Why diverge on both empirical and theoretical grounds?

In my thesis, I made use of both the empirical and theoretical tools to provide an argument or support a point. In issues that are novel and oriented towards answering a question, I used empirical tools. They provide me with how a variable interacts with a process that I am after and how it can be explained. A simple yes and no session with myself as a native Turkish speaker was not enough to capture the fine points or variation of the phenomenon. These can be related to the effect of a conjoiner change, the effects of incremental changes in suspension, and many more. I used theoretical grounds to argue for or against a formal analysis provided for SA, and how to characterize a clitic *ile/=lA* or a suffix *-(y)Ip*.

6.4 My experience in writing a thesis

Throughout the process of writing my thesis, I tried to compartmentalize my tasks. The nature of my thesis and my goal of majorly exploring SA made it more suitable for such a way of studying. I was able to make myself engage with my thesis in different ways and shed different lights on the problems. I decided what topic to study early on, and to my surprise it bore fruit and offered an array of different aspects that I can approach piece by piece. My thesis is not a single line going from one dot to the other. I like to think of it as the collection of the concentric circles around SA and what they interact with.

APPENDIX A

EXPERIMENT 1: ACCEPTABILITY ITEMS

1_Ahmet herşeyi biliyormuşçasına ve/veya anlıyormuşçasına konuşuyor sağda solda.
2_Her şeye rağmen herkesi kabullenircesine ve/veya severcesine davranmak insanı insan yapar.
3_Çok duygulanıp gözlerim yaşarırcasına ve/veya kızarırcasına gülmek istiyorum.
4_Sevilmeyen kişiler inatçı ve/veya yalancı insanlardır.
5_Bu devirde insancı ve/veya toplumcu davranış sergilemek nadir görülüyor.
6_Tartışmalarında duyuduğumuz Trumpçı ve/veya Hillaryci yorumlar tam olarak gerçeği yansıtmıyor.
7_Gezegenler listesinden çıkan Pluton gezegenimsi ve/veya göktaşımsı özellikler taşıyor.
8_En çok satılan şeker ağızda vanilyamsı ve/veya nanemsi bir tat bırakan.
9_Bu tarz olaylar insanın içinde öfkemsi ve/veya nefretimsi duygular doğuruyor.
10_Doktora gittiğimizde belimdeki beşinci ve/veya altıncı kemiklerin zedelendiğini öğrendik.
11_Sıraya geçen insanlardan birinci ve/veya ikinci sıradakiler aç kalacak.
12_Buraya yerleşen göçmenlerin ikinci ve/veya üçüncü nesilleri Türkçeyi öğrenmiş olacak.
13_Buraya ne zaman gelsek vanilyalı ve/veya çikolatalı dondurmayı mutlaka yeriz.
14_Bu saatte pizza söyleyeceksen biberli ve/veya sucuklu pizza söyleme lütfen.
15_Aldığım elbisenin üzerinde noktalı ve/veya çizgili motifler varsa ayakkabı bulmak zor olur.
16_Bu yasa tasarısı tartışmasız ve/veya itirazsız kabul edilmiş mecliste.
17_İnsanların dayanabileceği susuz ve/veya yemeksiz gün sayısı belli.
18_Seksenlerde başlayan yağsız ve/veya şekersiz yiyecekler tüketme trendi çok uzun sürmedi.
19_Sabah okul zili çalınca öğrenciler üçer ve/veya dörder sıraya dizilirler.
20_Bu mağaza pantolonları beşer ve/veya altışar raflara diziyor.
21_Masa bacaklarını yedişer ve/veya sekizer paketler halinde saklıyoruz.
22_Aslına bakılırsa kalemi ve/veya defteri çok pahalıya almışsın.
23_Yarın köyden gelecek turşuyu ve/veya ezmeyi hemen yeyip bitirmezsem iyi olur.
24_Geç saatlerde yürüdğüm yolu ve/veya sahili hiç unutmadım.
25_Bu yarışta Alman ekibi ikincilik ve/veya üçüncülük kupasını kıl payı kaçırdı.
26_Başkalarına karşı beslediğimiz dostluk ve/veya düşmanlık hisleri bizi mutlaka etkiliyordur.
27_Pazara gidip beş kiloluk ve/veya altı kiloluk paketler halinde patates alıp geldim.
101_Öğretmenler odasından yükselen sesler bazı öğrencileri endişelendirdi.
102_Sayfalarını kurcaladığı kitabı bir kenara koyulup yazmaya devam etti.
103_Eğer uzlaşma sağlanırsa Suriyede yeni anyasa oluşturma sürecine geçilecek.
104_Her gün çekiçle ve kazmayla çalıştığına elleri bir hayli nasırlıydı.
105_Devlet tiyatrolarının salonları sezon boyunca doluyor ve bilet bulmak çok zor.
106_Bu çiçek kırılgan ve narin bir yapıya sahip o yüzden yetiştirilmek çok zor.
107_Amasra'ya giderken bir süre ağaçlarla çevrili bir yoldan geçersiniz.
108_Elektrikli araç üretimi son yıllardaki en yüksek seviyesinde ve hala artılmakta.

109_Gıda zehirlenmesi yaşayan askerler acilen hastaneye kaldırılıp tedavi altına alınacak.
110_Hareketlerinde bir sorun göremeyen dansçı hocasına sitem olduruyor.
111_Müziğe kendini kaptıran seyirciler hep bir ağızdan sözleri tekrar ediyorlar.
112_Katıldığı bir programda kendisine yöneltilen soruyu saçma denip geçiştirdi.
113_Hong Kong bu aralar göstericiler ve polis arasındaki çatışmalara şahit oluyor.
114_Ağır kayıplar veren ittifak devletleri savaşta yeni bir cephe açtırılmak istiyorlar.
115_Kaş göz hareketi yaparak garsona sürpriz pastayı getirmesini işaret etti.
116_Masasının gizli bölmesinde her ihtimalde karşı bir silah bulunduruyordu.
117_İki Şehrin Hikayesi hak ettiği gibi MEB ilk yüz eser listesinde yer almaktadır.
118_Berberler birçok kültürde kilit olmasa da önemli bir rol oynanmaktadır.
119_Hristiyan demokratların Almanya ve Avrupa birliğindeki başarısını biliyoruz.
120_Birçok kez anayasa değişikliği gidilen Türkiye referandumlara yabancı değil.
121_Hiç değilse yaşadığını biliyorsun, bu bile yeter bazen insana.
122_Kimyasal sızıntı nedeniyle fabrika acilen tahliye oldurulmak zorundaydı.
123_Dolapta bulduğu birkaç malzemeyle kendisine kahvaltı hazırlayıp yedi.
124_Eski Türk filmlerinden fırlama çizgili bir pijaması vardı ve ona giyinip uyurdu.
125_Günlük doldurması gereken belgeleri birike birike bir yığın haline gelmişti.
126_Yapımı devam eden projeyi mali yetersizliklere dolayı sonlandırdı.
127_Yeni aldığı traktörü bir hevesle çalıştırıp tarlasına doğru yol aldı.
128_Planları istediği gibi giderse ona güvenilen herkes memnun olacak.
129_Bekarlar partisi düzenlemek isteyen damada gelin izin vermedi.
130_Kaynağı belli olmayan bilgilere göre birçok kişinin evi izlendirilmiş.
131_Yöre insanının her sene düzenlediği festivale bu sene büyük isimler de katılıyor.
132_Haber ajanslarından alınan bilgiye göre yangına zamanında müdahale olunulmamış.
133_Diğer milletler tarafından kabul görmeyen gruplar marjinalleşmeye eğilimlidir.
134_Yapılan değişikliklere karşı gelinmek anlaşılabilir ancak kabul edilemez.
135_Çocuklar top oynarken hiç kimseyi ve hiçbir şeyi duymuyorlar ki.
136_Su ve hava kirliliği ile mücadele konusunda belediye sınıfta kalınmış durumda.
137_Öğrenciler için sağlanan aylık kart imkanı herkes tarafından olumlu karşılandı.
138_Sınır ihlallerine karşılık verinmek her ülkenin özgün hakkı ve ayrıcalığıdır.
139_İç savaştan kaçan göçmenlerin yığıldığı şehirler hizmet vermekte zorlanıyor.
140_Son on yıldaki ağaçlandırma faaliyetleri meyvelerine vermeye başladı bile.
141_Dünya genelinde kabul gören Birleşmiş Milletler birçok sorumluluk üstlenmektedir.
142_Madde kullanımına mücadele kolluk kuvvetlerinden sosyal hizmetlere kaydırılmalı.
143_Eskinin taş plak şarkıları günümüzde dijital ortamda daha iyi muhafaza ediliyor.
144_Müzik ve sanata olan merakı onda her zaman hobi olarak kalınmış ve ilerlememiştir.
145_Ders başlamadan önce sınıf defterini dolduran öğretmen bir yandan yoklama aldı.
146_Takviminde boş kalan günleri kendine hediye saydırılan çok yoğun bir insandı.
147_Vakit buldukça arkadaşlarıyla dolaşıp vakit öldürüyordu aklı sıra.
148_İzleyenlerin hayal dünyasını genişleten filmler listesi oluşturunmak lazım.
149_Özenle her gün yazdığı günlüğünü seneler sonra bulup sevinmişti kadın.
150_Kardeşlerinin ayakkabılarına götürüp çamura atan yaramaz çocuk buydu.

151_Yaptıklarımı dikkatlice izlerseniz püf noktasının ne olduğunu anlarsınız.
152_Geride bıraktığı ailesi ve anılarını birkaç ay sonra unutulup yeni bir hayata başladı.
153_Mesleğe ilk atıldığında çırak olan Mehmet artık bir marangoz ustası olmuştu.
154_Yaklaşan oğlunun sesini duyunca uzağı göremeyen gözleri yaşarınmıştı birden.

APPENDIX B

EXPERIMENT 2: SELF PACED ITEMS

B.1 Sentences

1_Eski mektupların satırlarında çok koşarmışsın veya gülermişsin diye çok bahsin geçiyor.
2_Eğlencelerin odağı olan partiler düzenlermişsin veya tertiplermişsin diye duydum ben başkalarından.
3_Önceden Sezen Aksu'nun şarkılarını dinlermişim veya ezberlermişim ama şimdi hiçbirini hatırlamıyorum.
4_Ünlü dizi Süper Babayı izlermişiz veya severmişiz çünkü bu ailemizin eğlencesiymiş.
5_Ağacı kırar diye ona kızarmışız veya bağırırmışız ki ağaca hiç tırmanmasın.
6_Bu dersin ödevlerini zamanında yapsaymışım veya gönderseymişim hoca tam puan verecekmiş.
7_Yazıcıdan çıkan belgeyi ceketime koysaymışım veya korusaymışım hiç de ıslanmayacakmış aslında.
8_Böreğin piştiği küçük fırını izleseymişiz veya gözetleseymişiz şimdi yanık börek yemezdik.
9_Genç yaşlarda düzenli şekilde beslenseymişim veya yaşasaymışım daha uzun ömür sürermişim.
10_Arsadan elde edilen madeni işleseymişiz veya satsaymışız çok fazla para kazanırmışız.
11_Hocanın her söylediğini dikkatlice dinleyecekmişiz veya özetleyecekmişiz çünkü bunlar sınavda gerekliymiş.
12_Arabayı yağmurdan korumak için boyatacakmışsın veya kaplatacakmışsın ki araba su geçirmesin.
13_Siparişi verilen bu aletleri monteleyecekmişsin veya taşıyacakmışsın sahipleri gelip görmeden önce.
14_Güvece atılacak bu sarımsakları dilimleyecekmişim veya ezecekmişim ki sadece tadı kalsın.
15_Doktorun tavsiyesine göre gözlerimi dinlendirecekmişim veya ovalayacakmışım ki kan dolaşımı hızlansın.
16_Hurdacıya gelen teknolojik aletleri kurcalamalıymışız veya incelemeliymişiz ancak bunları yapmakta geciktik
17_Bu Hindistan cevizlerini henüz kırmamalıymışım veya yememeliymişim bu yüzden biraz bekledim.
18_Üzerinde toz biriken masayı yıkamalıymışım veya silmeliymişim diye mırıldandım kendi kendime.
19_Bu makinenin içindeki dişlileri sökmeliymişiz veya çıkarmalıymışız ki nasıl çalıştığını öğrenelim.
20_Tasarruf yapmak için fırını kullanmamalıymışız veya açmamalıymışız çünkü fırın çok yakıyormuş.
21_Dışarı çıkmak gerekirse diye hazırlanıyormuşuz veya bekliyormuşuz ama dışarda yağmur yağıyor.
22_Kuşların senelik göç güzergahını izliyormuşuz veya belirliyormuşuz ki çevre düzenlemelerine uyalım.

23_Resmi törende yürüyen askerlere bakıyormuşuz veya şaşırıyormuşuz çünkü çok düzenli yürüyorlardı.
24_Sayfaları pörsümüş anı defterine yaşıyormuşum veya eğleniyormuşum diye usulca not düşüyorum.
101_Kitap almaya giderken karşıma çıkan adama garip bir şekilde bakarak geçtim.
102_Buralara gelerek kendini tehlikeye atmak için çok gençsin desem bana inanırdın.
103_Her günü iple çekerek yaşamak sanırım mutlu olmanın en büyük sırrı.
104_Akşama rus salatası yapmak için pazardan havuç ve uzun turşu aldım.
105_Dolapta birkaç gündür bekleyen zeytinleri bir an evvel sofraya koyalım bence.
106_Kırmızı ışıkta geçen aracın plakası kameralardan çok net bir şekilde gözüküyordu.
107_Ekonomiyi takip ederken dikkat edilmesi gereken en önemli husus değişkenlerin çokluğudur.
108_Everest dağını tırmanmak gerçekten de yetenek ve cesaret gerektiren bir iştir.
109_Solunum yollarında açığa çıkan iltihaptan dolayı yoğun bakım ünitesinde günlerdir bekletiliyor.
110_Karışık ızgara menüde yer alan en pahalı yemeklerden sadece göze çarpanıydı.
111_Matbaadan çıkan yeni basım kitaplar yayınevinin istediği kalitede olmadığından geri gönderildi.
112_Bilgisayar çağında yaşadığımız için bunu hayatımızdaki vazgeçilmezler listesine artık eklememiz gerek.
113_Çok yürümekten ayaklarına kara sular inen coğrafya öğretmeni mola işareti verdi.
114_Bodrum katındaki duvarları nem alan yurtta tadilat çalışmaları günlerdir devam ediyor.
115_Çatı yalıtımının sağladığı enerji tasarrufu yalıtım yaptırmayı maliyet açısından ekonomik yapıyor.
116_Ülkesini savunurken şiddete tanık olan askerler akıl sağlıklarını korumakta güçlük çekiyor.
117_Resimlerinde gökyüzünü hiçbir zaman maviye boyamayan ressam dünyaca ünlü bir sanatkar.
118_Mantar panoya asılacak hatırlatmaları takip ederseniz hangi gün ne yapacağınızı bilirsiniz.
119_Ellerini sıcak sudan soğuk suya sokmayan insanlar risk almak nedir bilmiyorlar.
120_Kitaptaki karakterleri anlayabilmek için satır aralarını çok dikkatli okumak bile yetmiyor.
121_Geri dönüşüm için biriktirilen plastik ve menşei ürünler yeterince iyi saklanmıyor.
122_Elektrik üretiminde sürdürülebilir kaynaklara geçmek kadar tüketimde verimi arttırmak da önemlidir.
123_Çöp kutularını devirerek temizlikçileri sinir eden kedi sonunda sokağı terk etmiş.
124_Fabrikalarda alınacak yeni güvenlik önlemleri resmi gazetede yayımlanarak bugün yürürlüğe girdi.
125_Maden işçilerinin greve gitmesi kömür üretiminde ciddi bir düşüşe neden oldu.
126_Güney Amerika ülkelerindeki yüksek suç oranı ekonomi geliştikçe giderek azalmaya başladı.

127_Kaliforniyada evsiz insanlar sayısı gün geçtikçe artmasına rağmen görevliler önlem almıyor.
128_Uçağa binerken adım attığınız yere dikkat edin çünkü orada boşluk var.
129_Kitaplara düşkün olduğundan ne zaman kitapçının önünden geçsek mutlaka içeri girer.
130_Yanıp sönen ışıkları takip ederseniz yolun sonunda çalışmanın olduğu alandan çıkarsınız.
131_Tadilat parasını toplamak için bir araya gelen köylüler kendi aralarında anlaşamadı.
132_Anotasyon işlemi için gerekli olan kotayı tamamlamak için durmaksızın çalışmak gerekiyor.
133_Yoğun bakıma alınan trafik kazası kurbanı bütün müdahalelere rağmen hayatta kalamadı.
134_Üniversite sınavında yüksek puan almak kadar doğru tercih yapmak da önemlidir.
135_Doğu yakasını kırıp geçiren kasırga arkasında çok büyük mali hasar bıraktı.
136_Sızma zeytinyağını ve sirkeyi ince ağızlı şişe kullanarak salataya yavaşça ekleyiniz.
137_Dünyanın dört bir yanını dolaşan Barış Manço benim en favori şarkıcım.
138_Düğün yeri olarak seçilen salonun bahçesi ve ışıkları herkes tarafından beğenildi.
139_Cam kavanozları salatalık turşusuyla doldurup soğuk bir yere kaldıralım ki bozulmasınlar.
140_Kemençe çalmaya çalışmak gitar çalmaktan çok da farklı bir yetenek gerektirmiyor.
141_Bozuk duş başlığını değiştirirken ayağı birden kayıp küvetin kenarına kafasını çarptı.
142_Kulpları düşen dolabın kapağını açmak için parmağını araya sokup geriye çek.
143_Uçurumun kenarından denize doğru baktığın zaman karşında gördüğün manzara çok güzel.
144_Çocuk sandalyenin ucuna oturup ileri geri sallanırken annesi öteki odadan bağırdı.
145_Ellerine kırmızı saç boyası bulaştığından musluk başlarını ve kapıları dirseğiyle açtı.
146_Pazar yerini geçtikten sonra karşında gördüğün bankamatiğin hemen yanında seni bekliyorum.
147_Anlaşmanın tarafları birkaç farklı hususta ortak bir kanıya varmak için buluştu.
148_Dibi delinmiş şişeyle su taşımaya çalışan çocuk eve geldiğinde şişe bomboştu.

B.2 Questions

1_correct_Bahsin eski mektuplarda geçiyor.
2_correct_Partiler eğlencenin odağıydı.
3_correct_Şarkılar Sezen Aksu'nundu.
4_correct_Ünlü dizi Süper Baba idi.
5_correct_Ağacı kırarım diye kızıyorlar.
6_correct_Dersin ödevi zamanında yapılacak.
7_correct_Belge yazıcıdan çıkmış.

8_correct_Fırın küçükmüş.
9_correct_Genç yaşta düzenli yaşanmalıymış.
10_correct_Maden arsadan elde edilmiş.
11_correct_Hocayı dikkatlice dinleyecekmişim.
12_correct_Arabayı yağmurdan koruyacakmışım.
13_incorrect_Bisikleti monteleyecekmişsin.
14_incorrect_Güvece biber atacakmışım.
15_incorrect_Tavsiyeyi komşum vermiş.
16_incorrect_Hurdacıya bozuk aletler gelmiş.
17_incorrect_Fındıkları yememeliymişim.
18_incorrect_Pencerenin üzerinde toz birikmiş.
19_incorrect_Kabloları sökmeliymişim.
20_incorrect_Ocağı kullanmamalıymışım.
21_incorrect_Dışarda kar yağıyor.
22_incorrect_Kuşların senelik beslenmesini izliyormuşuz.
23_incorrect_Öğrencilere bakıyormuşuz.
24_incorrect_Günlüğe not düşüyormuşum.
101_correct_Garip bir şekilde adama baktım.
102_correct_Çok gençsin desem inanırdın.
103_correct_Mutlu olmanın bir sırrı var.
104_correct_Rus salatası için turşu aldım.
105_correct_Dolapta bekleyen zeytinler var.
106_correct_Araç kırmızı ışıkta geçmiş.
107_correct_Değişken çokluğu önemlidir.
108_correct_Dağ tırmanmak cesaret gerektirir.
109_correct_Solunum yollarında iltihap var.
110_correct_Karışık ızgara en pahalı ürün.
111_correct_Yeni basım kitaplar kaliteli olmamış.
112_correct_Bilgisayar çağında yaşıyoruz.
113_correct_Coğrafya öğretmeni mola verdi.
114_correct_Yurtta tadilat çalışması var.
115_correct_Çatı yalıtımı ekonomik.
116_correct_Askerler şiddete tanık oluyor.
117_correct_Ressam gökyüzünü maviye boyamıyor.
118_correct_Hatırlatmalar mantar panoya asılacak.
119_correct_İnsanlar risk almak nedir bilmiyor.
120_correct_Satır araları dikkatli okunmalı.
121_correct_Geri dönüşüm plastiği iyi saklanmıyor.
122_correct_Enerji verimini arttırmak önemlidir.
123_correct_Kedi çöp tenekelerini deviriyor.
124_correct_Güvenlik önlemleri yürürlüğe girdi.
125_incorrect_Altın üretiminde düşüş oldu.
126_incorrect_Suç oranı artıyor.
127_incorrect_Evsiz sayısı azalıyor.
128_incorrect_Otobüse binerken dikkat edin.
129_incorrect_Kişi teknolojiye düşkün.
130_incorrect_Yolda kaza var.
131_incorrect_Köylüler tadilat yaptı.

132_incorrect_Anotasyon kotası yok.
133_incorrect_Kazazede hayatta.
134_incorrect_Yüksek puan almak zordur.
135_incorrect_Doğu yakasında kuraklık olmuş.
136_incorrect_Zeytinyağı dolmaya eklenecek.
137_incorrect_Zeki Müren favori şarkıcım.
138_incorrect_Evin bahçesi var.
139_incorrect_Kavanozlar domatesle dolu.
140_incorrect_Ut çalmak gitara benzer.
141_incorrect_Su vanası bozuk.
142_incorrect_Dolabın kapağı düşmüş.
143_incorrect_Karşıdaki ev çok güzel.
144_incorrect_Çocuğun babası bağırdı.
145_incorrect_Ellerine duvar boyası bulaşmış.
146_incorrect_Berberin yanında bekliyorum.
147_incorrect_Karşılaşmanın tarafları buluştu.
148_incorrect_Leğenin dibi delikmiş.

APPENDIX C

EXPERIMENT 3: SELF PACED ITEMS

C.1 Sentences

1_Bence baron ve (cesur) şövalyeyi ödüllendiren kral birbirlerini/onları şatoda dinleyecek.
2_Sanırım hemşire ve (zavallı) hastayı gören doktor birbirlerine/onlara ameliyatı hatırlatacak.
3_Umarım muhabir ve (endişeli) görevliyi duyan bakan birbirlerini/onları toplantıda uyaracak.
4_Mesela antrenör ve (utangaç) dansçıyı tanıyan sporcu birbirlerini/onları yarışmaya kaydedecek.
5_Sözde adam ve (acemi) garsonu farkeden kadın birbirlerini/onları restoranda ağırlayacak.
6_Öte yandan akademisyen ve (unutkan) sekreteri uyaran rektör birbirlerini/onları törene çağıracak.
7_Anlaşılan kuyumcu ve (çaresiz) dönerciyi dolandıran hırsız birbirlerini/onları polise ihbar ediyor.
8_Allahtan öğretmen ve (çalışkan) öğrenciyi unutan müdür birbirlerini/onları okulda görüyor.
9_Belli ki yazar ve (eski) editörü arayan şair birbirlerine/onlara sokakta sesleniyor.
10_Neyse ki adam ve (sakar) çırağı çağıran çilingir birbirlerine/onlara kapıyı gösteriyor.
11_Anlaşılan hostes ve (genç) yolcuyu beğenen pilot birbirlerini/onları uçakta gözetliyor.
12_Aslında hamal ve (kurnaz) tezgahtarı bulan sütçü birbirlerini/onları pazarda kandırıyor.
13_Bu arada yarışmacı ve (şirin) sunucuyu eleştiren seyirci birbirlerini/onları salondan çıkardı.
14_Demek ki şehzade ve (temkinli) veziri dinleyen padişah birbirlerini/onları savaşa uğurladı.
15_Mesela subay ve (dikkatsiz) çavuşu fırçalayan general birbirlerine/onlara dikkatlice baktı.
16_Ne yazık ki profesör ve (azimli) asistanı araştıran dekan birbirlerini/onları projeden vazgeçirdi.
17_İyi ki veznedar ve (iyimser) cerrahı kandıran yatırımcı birbirlerini/onları satıştan caydırdı.
18_Aslında büyükelçi ve (şaşkın) çevirmeni bekleyen başbakan birbirlerini/onları görüşmeye davet etti.
19_Sözde müzisyen ve (alımlı) modele yaklaşan aktör birbirlerine/onlara duyuruyu okuyacak.
20_Kısacası oyuncu ve (uzun) kameramana seslenen yönetmen birbirlerine/onlara sahneyi izletecek.
21_Umarım yatırımcı ve (yorgun) işçiye bakan mühendis birbirlerini/onları planlarla bilgilendirecek.
22_Bence fotoğrafçı ve (geçimsiz) berbere bağıran gözlükçü birbirleriyle/onlarla kahvede karşılaşacak.

23_Belli ki asker ve (kaygısız) bekçiye kızan komutan birbirlerine/onlara kışlayı gösteriyor.
24_Yani kasap ve (çevik) elemana güvenen pazarcı birbirlerine/onlara dükkanı emanet ediyor.
25_Öte yandan marangoz ve (konuşkan) ustabaşına takılan mimar birbirlerinden/onlardan siparişi alıyor.
26_Neyse ki çiçekçi ve (güleç) rehbere danışan turist birbirlerine/onlara hediyeyi seçtiriyor.
27_Allahtan matbaacı ve (özensiz) teknisyene gücenen yayımcı birbirlerini/onları atölyede gördü.
28_Maalesef muavin ve (özenli) biletçiye karışan şoför birbirlerini/onları güzergahtan vazgeçirdi.
29_Demek ki madenci ve (ılımlı) müfettişe ulaşan tüccar birbirlerini/onları telefonla aradı.
30_Üstelik denizci ve (durgun) balıkçıya inanan kaptan birbirlerinden/onlardan rotayı öğrendi.
31_Nedense avukat ve (insaflı) hakime güvenen patron birbirlerinden/onlardan güvence istedi.
32_Yani manav ve (saygılı) delikanlıdan bahseden terzi birbirleriyle/onlarla dalga geçiyor.
33_Nedense piyanist ve (hevesli) seyirciden utanan şarkıcı birbirlerini/onları sahneye çağırıyor.
34_Üstelik kadın ve (sakin) muhtardan çekinen köylü birbirlerini/onları yemeğe buyur ediyor.
35_İyi ki hizmetli ve (hırslı) yöneticiden korkan aşçı birbirlerine/onlara tarifi verdi.
36_Kısacası kiracı ve (dalgın) kapıcıdan bıkan emlakçı birbirlerine/onlara daireyi gezdirdi.
37_Hiç değilse futbolcu ve (taraflı) hakemden usanan direktör birbirlerini/onları yönetime şikayet etti.
38_Sanırım çiftçi ve (sinirli) çobandan kaçan imam birbirleriyle/onlarla meydanda karşılaştı.
39_Maalesef papaz ve (bilgili) rahibeden uzaklaşan filozof birbirlerini/onları tartışmaya zorladı.
40_Hiç değilse hizmetçi ve (ihmalkâr) kiracıdan huylanan tesisatçı birbirlerine/onlara tadilatı tarif etti.
101_Kilitli eve giden sevimli kadın gerisin geri döndü.
102_Karmaşık sokakta yalnız kalan çaresiz adam çok korktu.
103_Kitabını ve defterini unutan çocuk okula geç geldi.
104_Gereksiz konuları merak eden adam fazlasıyla vakit kaybediyor.
105_Sabırsız öğretmeni gören okul müdürü hemen çocuklara seslendi.
106_Sıcakkanlı aşçıya bakan görevli temizliğe biraz yardım etti.
107_Daireyi ve binayı temizleyen kapıcının maaşına zam yapıldı.
108_Yeni ameliyat olan hastayı hemşire çok fena azarladı.
109_Görüşmeye geç kalan öğrenci ödevini zamanında teslim edemedi.
110_Feci kazada ve sonrasında yaralanan olmaması insanları rahatlattı.
111_Emekli öğretmen karşı karşıya kaldığı garip durumu anlayamadı.
112_Arabasını alan ve işlerini bitiren adam gereğinden fazla yoruldu.
113_Defterleriyle kalemlerini evde unutan küçük çocuk durmadan ağladı.

114_Elektrik faturası ve benzin ücretlerinin arttığı bir dönemdeyiz.
115_Şişenin kapağında gördüğü acayip yazıyı dikkatlice okumaya çalıştı.
116_Masasında veya arabasında dağınık bir kağıt parçası bulunamadı.
117_Aşçı pişirdiği yemekleri müdüre ve hizmetliye gururla gösterdi.
118_Korkan hayvanları ahıra götüren çoban az daha ölüyordu.
119_Şarkının notalarını karıştıran tecrübeli piyanist ne yapacağını bilemedi.
120_Maçı kaybeden takımdaki futbolcular değerlendirme yapmak için bekliyorlar.
121_Pistte kalan lastikler uçağın kaza yapmasına sebep olmuş.
122_Kırmızı çizgileri olmayan sporcu çalışmalarını çok sert sürdürüyor.
123_Ahmetle dalga geçen çocuk sonunda hak ettiğini buldu.
124_Çaresiz kalan aşçı depoda kalan son sebzeleri pişirdi.
125_Dinlenmeksizin çalışan işçiler çoktandır mola vermek için sabırsızlanıyor.
126_Yırtılmış gömleklerini tamir ettirmek için terziye gitmiş olmalı.
127_Olay yerine gelen polisler öncelikle şüphelinin eşkalini belirledi.
128_Yaya geçidinde kırmızı ışığın yanmasını beklemeyen şoförler vardı.
129_Sayfalarını karıştırdığı kitabı bir kenara koyup uyumaya başladı.
130_Görevliler elektrik hattını tehlikeye sokan ağaç dallarını kestiler.
131_Çığ tehlikesinin yüksek olduğu yollarda karayolları önlem almalı.
132_Fotokopi makinasının mürekkebini değiştirmek için yeni kartuş gerekli.
133_Muavinin tarif ettiği yol üzerinde dinlenme tesisi yok.
134_Hostes uçuş başlamadan önce güvenlik yönergelerinin hepsini anlattı.
135_Çiçekçinin sattığı laleler çok çeşitli renk ve türlerden.
136_Balıkçılar derneğinin yaptığı duyuruda kotalar protesto ediliyor.
137_Gerekli izinleri alan maden şirketi kazı çalışmalarına başladı.
138_Sporcuları çalıştıran antrenör takımının performansından pek memnun değil.
139_Çevirmenlere iş veren şirket maaşları doğru zamanda yatırmamış.
140_Boyadığı tabloları sergiye çıkaran ressam fazlasıyla gururlanıyor.
141_Yaz tatilini geçirmek için gittiği tatil yerinden esmerleşerek geldi.
142_Karpuzu tamamen püre haline getirdikten sonra yavaşça karışıma eklemelisin.
143_Ateşi yükselen bebeği hastaneye yetiştirmek için hemen arabaya koştuk.
144_Konuyla ilgili açıklama yapması beklenen bakan toplantıyı terk etti.
145_Okulda ve kursta işlenen konuları dikkatlice takip etmek zorundasın.
146_Projeye dahil edilen konuları not almak en öncelikli işimiz.
147_Mühendisler odasının hazırladığı rapora göre inşaatın zemini düzgün yapılmamış.
148_Haberlerde adı geçen dönercinin ürünlerinde birçok katkı maddesi bulunmuş.
149_Son yıllardaki seller giderek daha fazla zarara sebep oluyor.
150_Kaptan gemideki insanları ve kargoyu korumak için demir attı.
151_Yeşil ışığın yanmasıyla hızlanan araba ve motosiklet feci çarpıştı.
152_Kırık sandalyeleri tamir eden marangoz çok çalıştığını söylemekten çekinmiyor.
153_Kelebeğin türünü üstündeki şekiller veya kanadının şeklinden anlamaya çalışabiliriz.
154_Atık sularla kirlenen ve hırpalanan dereyi temizleme işlemleri yetersiz.
155_Yatırımcılar kentsel dönüşüm kapsamında yıkılan yerleri fırsat olarak görüyor.
156_Film sahnesinde yeterli rolü olmayan oyuncu senariste içten yakındı.
157_Kuyumcunun getirdiği bileziklerin işlemeleri gelinin ailesi tarafından çok beğenildi.
158_Fotoğrafçı tek başına çektiği tüm fotoğrafları arkadaşlarıyla internetten paylaştı.

159_Hep beraber gittiğimiz piknikte oynadığımız oyunları çok net hatırlıyorum.
160_Sekreterin kaybettiği dosyaları tek başına arayan profesör çok sinirlendi.
161_Kitapları yerine dizmekten yorulan kütüphaneci insanlardan sessiz olmalarını istiyor.
162_Köşeleri eskimiş çantasını koluna geçiren doktor acilen yola çıkıyor.
163_Tezgahtarın önündeki kumaşlara bakmak isteyen müşteri sesini duyurmaya çalışıyor.
164_Çırağın yanlış bağladığı kabloları düzelten teknisyen çok vakit kaybetti.
165_Vezirin tavsiyelerine kulak asmayan padişah orduyla birlikte sefere çıktı.
166_Hastanın ameliyatı sırasında gelişen durumdan ötürü cerrah operasyonu bitirdi.
167_Dersi biten öğrenciler tatillerini geçirmek üzere ailelerinin yanına gidecek.
168_Hizmetli camların temizliğini bitirdikten sonra oturma odasının temizliğine başlayacak.
169_Işıkları düzgün yanmayan binanın elektrik hattında problem olduğu anlaşıldı.
170_Burada yaşayan köylüler kahveyi kavurduktan sonra elleriyle saatlerce dövüyorlar.
171_Turistleri dolandıran rehberleri yakalayan polis basına açıklama yapmaktan kaçındı.
172_Haftasonu partiye gidecek öğrenciler yanlarında yiyecek ve içecek getirmeli.
173_Sokaklarda dolaşan çocukların sağlıklı büyümesi için oyun parkları yapılmalı.
174_Programın yazılı olduğu ajandayı unutan sekreter kendine çok kızdı.
175_Veznedar bankaya gelen müşteriye imzanlaması gereken belgeleri usulca uzattı.
176_Sokak üzerindeki olağan devriyeye takılan hırsız birden kaçmaya başladı.
177_Tasarımlarını arkadaşlarına gösteren çizer giysileri hemen dikmek istiyor.
178_Yola çıkmadan önce hazırlıklarını tamamlayan kaptan geminin yükünü azalttı.
179_Şehirdeki toplum düzenine katkıda bulunması amacıyla halk kursları açılıyor.
180_Deprem sonrası oluşan hasarların tespiti için mahalleye uzmanlar gönderildi.

C.2 Questions

1_subject correct_Baron kralı dinleyecek.
2_subject correct_Hemşire doktora ameliyatı hatırlatacak.
3_subject correct_Muhabir bakanı uyaracak.
4_subject correct_Antrenör sporcuyu yarışmaya kaydedecek.
5_subject correct_Adam kadını ağırlayacak.
6_subject correct_Akademisyen rektörü törene çağıracak.
7_subject correct_Kuyumcu hırsızı ihbar ediyor.
8_subject correct_Öğretmen müdürü görüyor.
9_subject correct_Yazar şaire sesleniyor.
10_subject correct_Adam çilingire kapıyı gösteriyor.
11_subject correct_Hostes pilotu gözetliyor.
12_subject correct_Hamal sütçüyü kandırıyor.
13_subject correct_Yarışmacı seyirciyi salondan çıkardı.
14_subject correct_Şehzade padişahı uğurladı.
15_subject correct_Subay generale baktı.
16_subject correct_Profesör dekanı vazgeçirdi.
17_subject correct_Veznedar yatırımcıyı caydırdı.
18_subject correct_Büyükelçi başbakanı görüşmeye davet etti.

19_subject correct_Müzisyen aktöre duyuruyu okuyacak.
20_subject correct_Oyuncu yönetmene sahneyi izletecek.
21_object correct_Mühendis yatırımcıya baktı.
22_object correct_Gözlükçü fotoğrafçıya bağırdı.
23_object correct_Komutan askere kızdı.
24_object correct_Pazarcı kasaba güvenmiş.
25_object correct_Mimar marangoza takılmış.
26_object correct_Turist çiçekçiye danıştı.
27_object correct_Yayımcı matbaacıya gücenmiş.
28_object correct_Şoför muavine karıştı.
29_object correct_Tüccar madenciye ulaştı.
30_object correct_Kaptan denizciye inanmış.
31_object correct_Patron avukate güvendi.
32_object correct_Terzi manavdan bahsetti.
33_object correct_Şarkıcı piyanistten utandı.
34_object correct_Köylü kadından çekiniyor.
35_object correct_Aşçı hizmetliden korkuyor.
36_object correct_Emlakçı kiracıdan bıkmış.
37_object correct_Direktör futbolcudan usanmış.
38_object correct_İmam çiftçiden kaçmış.
39_object correct_Filozof papazdan uzaklaşmış.
40_object correct_Tesisatçı hizmetçiden huylanmış.
101_correct_Kadın kilitli eve gitti.
102_correct_Adam sokakta yalnız kaldı.
103_correct_Çocuk defteri unutmuş.
104_correct_Adam vakit kaybediyor.
105_correct_Öğretmen sabırsızmış.
106_correct_Görevli temizliğe yardım etti.
107_correct_Kapıcı binayı temizlemiş.
108_correct_Hasta yeni ameliyat olmuş.
109_correct_Öğrenci görüşmeye geç kalmış.
110_correct_Yaralı olmaması insanları rahatlattı.
111_correct_Öğretmen durumu anlamadı.
112_correct_Adam işlerini bitirmiş.
113_correct_Çocuk durmadan ağladı.
114_correct_Benzin ücretleri artıyor.
115_correct_Şişenin kapağında yazı var.
116_correct_Kağıt parçası bulunamadı.
117_correct_Aşçı yemekleri gösterdi.
118_correct_Hayvanlar korkmuş.
119_correct_Piyanist notaları karıştırmış.
120_correct_Takım maçı kaybetmiş.
121_incorrect_Uçak kaza yapmamış.
122_incorrect_Sporcu çalışmalarını rahat sürdürüyor.
123_incorrect_Ahmet çocukla dalga geçmiş.
124_incorrect_Aşçı depodaki etleri pişirdi.
125_incorrect_İşçiler mola verdi.
126_incorrect_Gömlekler sağlammış.

127_incorrect_Polisler öncelikle olay yerini inceledi.
128_incorrect_Hiçbir şoför ışığı beklemedi.
129_incorrect_Defteri kenara koydu.
130_incorrect_Görevliler kabloları kesti.
131_incorrect_Belediye önlem almalı.
132_incorrect_Mürekkebi doldurmak için kartuş gerekli.
133_incorrect_Yol üzerinde dinlenme tesisi var.
134_incorrect_Hostes bazı yönergeleri anlattı.
135_incorrect_Çiçekçi gül satıyormuş.
136_incorrect_Balıkçılar yasağı protesto ediyor.
137_incorrect_Şirket keşif çalışmalarına başladı.
138_incorrect_Antrenör performanstan memnun.
139_incorrect_Şirket doktorlara iş veriyor.
140_incorrect_Ressam tabloları satmış.
141_correct_Birisi yaz tatiline gitmiş.
142_correct_Karpuzu püre halinde eklenmeli.
143_correct_Bebeğin ateşi yükselmiş.
144_correct_Bakandan açıklama bekleniyormuş.
145_correct_Konuları takip etmelisin.
146_correct_Proje konuları not edilmeli.
147_correct_Mühendisler odası rapor hazırlamış.
148_correct_Ürünlerde katkı maddesi varmış.
149_correct_Sellerin verdiği zarar artıyor.
150_correct_Kaptan demir attı.
151_correct_Araba ve motosiklet çarpıştı.
152_correct_Marangoz sandalye tamir ediyormuş.
153_correct_Kelebeğin kanatlarında şekil varmış.
154_correct_Dere temizliği yetersizmiş.
155_correct_Yıkılan yerler varmış.
156_correct_Oyuncu senariste yakınmış.
157_correct_Kuyumcu bilezik getirmiş.
158_correct_Fotoğrafçı fotoğrafları paylaşmış.
159_correct_Oynadığı oyunları hatırlıyormuş.
160_correct_Sekreter dosyaları kaybetmiş.
161_incorrect_Kütüphaneci kitap dizmemiş.
162_incorrect_Çantaların köşesi yeni.
163_incorrect_Giysiler tezgahtarın önünde.
164_incorrect_Çırak kabloyu doğru bağlamış.
165_incorrect_Padişah vezirin sözünü dinledi.
166_incorrect_Cerrah operasyona devam etti.
167_incorrect_Öğrencilerin dersi bitmemiş.
168_incorrect_Hizmetli misafir odasını temizleyecek.
169_incorrect_Binanın elektrik hattında sorun yok.
170_incorrect_Köylüler kahveyi kavurmuyor.
171_incorrect_Polis rehberi yakalayamamış.
172_incorrect_Öğrenciler yiyecek getirmemeli.
173_incorrect_Sokaklarda çocuklar dolaşmıyor.
174_incorrect_Sekreter ajandayı unutmamış.

175_incorrect_Banka müdürü belgeleri uzattı.
176_incorrect_Hırsız sakince yürüdü.
177_incorrect_Çizer giysileri başkasına diktirecekmiş.
178_incorrect_Kaptan geminin yükünü arttırdı.
179_incorrect_Halk kursları kapatılıyor.
180_incorrect_Mahalleye erzak gönderildi.

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